Design and Development of an Android and Web based Application for Teacher-Student Communication.

A project report submitted to the department of computer science and engineering,
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By

Md. Abul Hasan   Student Id. -123412
Nurul Amin   Student Id. - 123408

Supervised by

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Mahmudun Nabi   And   Ashraful Alam Khan
Lecturer,   Lecturer,
CSE Department, IUT   CSE Department, IUT

Department of Computer Science & Engineering (CSE)
Islamic University of Technology (IUT)
Organization of the Islamic Cooperation (OIC)
Gazipur, Bangladesh
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CERTIFICATE OF RESEARCH

This is to certify that the work presented in this paper is the outcome of the research carried out by the **Md. Abul Hasan** and **Nurul Amin** under the supervision of Mahmudun Nabi and Ashraful Alam Khan, Lecturer, Department of Computer Science and Engineering, Islamic University of Technology (IUT), Gazipur. It is also declared that neither this research paper nor any part thereof has been submitted anywhere else for the award of any degree or any judgment.

Authors

_____

Md. Abul Hasan
Student Id. - 123412

_____

Nurul Amin
Student Id. - 123408

Signature of Supervisors:

_____

Ashraful Alam Khan
Lecturer
Department of CSE, IUT

_____

Mahmudun Nabi
Lecturer
Department of CSE, IUT

Signature of the Head of the Department:

_____

Prof. Dr. M. A. Mottalib
Head, Department of CSE, IUT

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Hope that our work will help you all.

Dated Gazipur,   Md. Abul Hasan
Islamic University of Technology (IUT)   Nurul Amin
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<u>Abstract</u>

Absence of any online centralized communication system among teachers and students in Bangladesh. This state of art inspires us to design and develop on complete system for concerned users at Islamic University of Technology (IUT). Where they can share their study materials and communicate with each other using smart devices. Teacher-Students communication is an important aspect for improving learning procedure. Though we have different kinds of social communication system, but each of every system developed for some specific purpose. So this project is appropriate cloud communication and storage system where we can explore a lot of features of the teacher student communication. Our target users are teachers and students where they can share study tutorials, working schedule and event management. Analyzing the state of the art development platform, our proposed system has been developed on web based and android platform.

This project stores and manages all the courses information, daily lectures, different test schedules quizzes test, lab tests, assignments, presentations or viva. And also students performance record, contest events etc, users will get notification on respective their events. There is a similarity with social networking web sites facebook with our project, however only teachers and valid students can share materials with each others.

We mainly focused on improvement of teacher-students communication to improving learning procedure.

Keywords

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Chapter 1: Introduction

1.1   Overview

Communication is the important way to improve the teaching learning process. It is the exchanging the information by speaking, writing, or using mediums that means sending or receiving information from one person to another. It two-way process of reaching mutual understanding, in which participants not only exchange information, news, ideas and feelings but also create and share meaning. In general, communication is a means of connecting people.

Teacher-students Communication (TSC) is an online web based application project with android application. Which is help to connecting teacher and students for purpose of teaching learning purpose? The main objective is to develop the teacher student's communications that covers the aspects of course and student management. This project store and manage all the courses information and all examinations schedules such as quiz tests, lab tests, assignments, presentations or viva. And also Students performance record, contest events etc, users will get notification according to the course works. Its likes social networking facebook style but here teachers and valid students can share with each others about purpose of improving teaching learning system.

Using this web and android application teachers can share all the tutorials, reference books and all study materials for each class and also they upload class test result, quiz test result, mid and final result, assignment, presentation corresponding to course. Students can also share their study materials; they can also submit their assignment to respective teacher. And also teachers and students can make their daily activities in their user accounts that is help to both for individual task managements

1.2   TSC Description :

TSC is a system in which admin, teachers, and students are connected through an environment where each of them is allocated its basic needs and facilities. The system provides a user friendly interface for each of the parties to get access to and work in the system.

It is a networking environment where authenticated users can log in to search for or provide a specific topic. Users are provided an area to organize and publish their study

materials. Whenever a lectures or a book is published, students can get access to them for documentation purpose.

TSC is a forum/group space. Users post their questions which may be answered by some other users of the system and also it is a Student management system. Schools and Universities are allocated interfaces for better management and an easy communication way to the top managers.

1.3   Problem Statement

The main problem is sharing the tutorials, announcement of different quiz test, lab test, assignment, presentation. Though we have more existence social networking system and media to share study materials are like:

- ✓ File transfer protocol (ftp),
- ✓ Electronics mail (E-mail),
- ✓ Facebook,
- ✓ Twitter,
- ✓ What's Apps
- ✓ Tango
- ✓ LinkedIn etc,

Which are providing the different kinds of facilities, but that technology is developed for some specific purpose not especially for teaching learning? So that has some problems to use in teaching- learning purpose are:-

❖ File Transfer Protocol (FTP):
- This is intra network facilities where teacher and students cannot access from any where the ftp facilities. Because it has local server only for local area. So when user will go outside they cannot get their essential study materials.
- Every users need to search their essential course materials from ftp by his own responsibility.
- Access Permission Problem: Here every user can upload and delete the course materials.

❖ Electronics Mail (E-mail):

We have different kind of email facilities like Gmail, yahoo mail, hotmail etc. which is used to sharing the message. In this case we have some problem for sharing the learning materials which are:

- When teacher want to send tutorials for a group of students then need the every students email address which is time consuming for teachers.
- Students need to check always the email whether teachers are sent the tutorials or not!
- Email address is used for multipurpose, In that case users need to search all email from his inbox which is also time consuming.

❖ Social Networking:

- Concentration breaks
- Scattered the tutorials list
- Time consuming to search the course based notification or messages

1.4 Advantages of TSC

The System leads to the following advantages:

☑ Time saving: Using the system, visiting the sites of the system becomes easy. It reduces the physical movements of the governing board through all the different departments and/or sites of the system.

☑ Direct Interaction: Getting information from system`s sites is automated. provide easy transfer the required data to the system`s manager with a mouse click and at the real time.

☑ Reducing Management Cost: Saving data and information on hard copies is expensive. Also moving these papers to the proper locations in the system is more costly.

☑ Education Control Capability: The system is the gateway of the education system. It offers different kinds of data that can help the system managers to improve the education system of the region.

☑ High processing Capability: Many operations that may take much time will be efficiently conducted faster.

☑ Security: As data is digitally manipulated, we can enhance a better security process. Also using database backup regularly, we can prevent data from incident, natural disasters, and technical problems.

☑ Convenience: Working with the system become more convenient to managers, teachers, and students.

☑ Scalability: The system is able to run all the time and supports changes. New facilities can be easily implemented.

1.5 Motivation

In teaching learning situation to evaluate and increase learning ability of every students have to face the different types of test such as class tests, quiz tests, assignment, presentation, lab tests, midterm and final, for different subject where sometimes they have to faced the problem with various tests in single day. Specially before starting the midterm examinations pupils have to sit for different examination or tests. So they need to manage their different examination schedules. Still now they are doing manually that is why may be some students forget their different schedules lack of reminders the scheduled.

And also students and teacher each have different extra-tasks; extra-activities, co-curricular activities, and different contests such as inter university programming competition, intra-university competition, annual athletics, indoor and outdoor gaming competition, debate competition, where they have to manage their schedule. In this case they have to note in their daily notes. For this reason we are motivated to create teachers students communication and schedule management system to reducing the memorizing the task. To easily participated the different activities.

1.6 Scopes

Now a day's maximum number of students and teachers are involved with using internet and smart phones and computers, both can easily exchange information, news, ideas and feelings but also create and share meaning using various medium. So it give us opportunities for communicate with each others.

1.7 Research Contribution

As we mentioned above, TSC is an android and web based software with the capability of handling management and learning issues. But we need to know more about its contributions in this education system. The academic management system being web based can be accessed from anywhere in the world which enables the student , teachers and the management be in touch with each other at all times. This is an efficient way to build an information system as well as a communication system. Not only these points. Just think about when a teacher needs to submit a student result. In the absence of such a web based system, he has to waste a lot of time going to the site for such a simple task. Well, in this situation, we can let this teacher submit this class performance through the web .TSC contains a set of applications that support several tasks. With the help of these applications, the daily needs for students, teachers, and the management are meet. Students are allowed to download tutorials, ask questions, visit their academic records, and use the messaging system. In the management side, the system allows several applications such as result processing, student information system, course management, teacher's management, and this project will provide also various facilities for teachers and students to improve teaching learning systems by sharing various events. This application will also help to students to keep various events track for their different activities, where they will get notification from teacher for various news which is automatically remind to the students and also teachers based on their academic activities.

1.8 Target Users

Our target users are teachers and students under the formal academic institution for sharing their knowledge and course related activities to increase teaching learning performance and also they are both can communicate with each other's using TSC. In this web application each user has unique identification for find out the valid users.

1.9 Benefits

A social networking site can be a good way to make connections with people with similar interests and goals. They can be a way to connect with or "meet" people that a student may not have had the opportunity to before including other students, staff, actually and even alumni. Thanks to social networking sites, meeting someone in person has become a thing of the past. Making friends and renewing old ones is easy. Thus, meeting people and staying connected with classmates and friends is a major benefit of social networking sites. Social networking sites offers campus surveys, "party" or event listings

and other information that communicates the "pulse" of a campus culture. Therefore, they can be a great way to understand and stay connected to your campus community as a whole. Some social networking sites offer advertising to its subscribers. Social networking sites offer students the opportunity to create a positive self-image.

- Portability and mobility: Because of the small size and lightweight of wireless devices, students find them convenient to use and carry with them.
- Flexibility: Students and educators can access the server from almost anywhere. This includes while traveling or waiting in a queue.
- Remote Accessibility: Both users' student and teacher can add or update information remotely from any places.
- Ease of use: Using a PDA provides a larger screen than a mobile phone only. Also, it is convenient for user input.
- Convenience: Whenever students need to contact teachers or urgently need information from the internet. In particular, an users can accessing the server through internet connecting the network using a modem.

Chapter 2: Literature Review

Related Works Introduction:

Carsten Ullrich et al. in [6] described about design structure of mobile learning and the interaction facilities that can be provided. Akio Koyamat et al. in [7] propose a mobile education system (MES) and an extended mobile HTTP (MHTTP) protocol. It supports the student's learning by downloading the teacher agent (TA) into the student's cellular phone. The MHTTP is a protocol extended from the HTTP in order to deal with problems caused by HTTP for the cellular phone network. But the work has not supported the Multimedia contents. Since now a day's multimedia contents plays a main role in learning, absent of that will reduce the reality of learning. Xin Bai in [8] suggests transferring learning contents through FTP and HTTP protocols. He also added some ideas to develop learning contents with interoperability. Jian Chen et al. in [9] deal with intelligent mobile learning platform along with 3G and data mining techniques. Still it should be improved to support the high quality real-time video and audio transmission with low cost, high-speed downloads of digital learning resources and real time display, variety of mobile devices and operating system platforms, demand of all types of learners for personalized information and retrieval of digital learning resources. Jian Li at [10] summarizes the characteristics and models of traditional mobile learning, analyses the features of cloud computing and clarifies the superiority of mobile learning model development in cloud computing environment. It deals with two kinds of mobile learning models: one is autonomous mobile learning model, and another is reception mobile learning model.

Hong-qing Gao et al. in [12] the model of mobile learning based on hadoop is proposed and its functional modules is analyzed. He describes about how the learning materials, which are stored in the hardtop cloud can be retrieved and provided to the viewer. Luo Zhong et al. in [13]. Discuss the characteristics and key techniques of 3G mobile learning based on cloud services. His research mainly focuses on mobile learning mode including active mode, passive mode and hybrid mode. Then personalized learning method and resource integration approach are applied and analyzed. At last, he proposes to employ cloud computing to mobile learning and build basic framework and simulation application for 3G mobile learning based on cloud services.

2.1 Project aims

- ☑ Provide a web-based site which would ensure the maximum needs of the users
- ☑ Facilitate teachers and students to share study materials.
- ☑ Provides the examination schedule (Quiz test, lab test, presentation...)
- ☑ Provide a easy channel for communication between teacher and students
- ☑ To provide an update of information regarding the everyday class.
- ☑ To provide an easy way to the students and teachers to find out the others.
- ☑ Provide facilities which can be customized of the student study.

2.2 Basic Features

- ☑ Build a dynamic online application system based on the different faculties.
- ☑ To create platform for sharing comments
- ☑ Provide each member his or her own complete mailing system and profile windows
- ☑ Provide a system forum to each department for sharing ideas.
- ☑ To provide information's regarding the courses and student results
- ☑ To enable lecturer to provide his or her student results online.
- ☑ To let student to see his or her semester results

2.3 Features Selection

In teaching learning system there are two types of users are teacher and students and also super admin who provide the user registration permission and offered the particular courses. They can share their information, news, ideas using online. And also they will get few advantages using android application. These features are categories two types of user one is for students and another is for teacher, and also both will get some offline facilities. Two Major Features are:

1. Online features for teacher and student
2. Offline features for teacher and student

2.3.1 Online Features for Students

- o Student will get the notification about the different schedules such as quizzes, assignment, presentation, and viva.
- o They will get daily lectures topics and note references links
- o Asking questions to teachers/FAQ

- o Online chatting with teacher
- o They will know about their course performance
- o Download references books and tutorials.
- o Set individual routines

2.3.2 Offline features for students
- ✓ Create notes for different activities and events
- ✓ They will know about the different schedules.

2.3.3 Online features for teachers
- ✓ Uploading the daily lectures topics and references links
- ✓ Review the questions and reply the answers.
- ✓ Online chatting

2.3.4 Offline features for teachers

- ✓ Create notes for different activities and events
- ✓ Make individual routine schedules.
- ✓ They will know about the different schedules which are extracted from online server to android apps.

2.4 Using Mobile Devices to Enhance Teaching-Learning Process

Mobile devices can enhance teaching learning process and students' learning capabilities. The use of mobile devices such as tablet computers will not automatically increase teaching-learning process, but their use should make investigations, writing, and publishing more effective and may even save students time. We have explored some of the possibilities of using "tablets" and "Smartphone" to aid the teaching learning progress. I've intended. Now with "**apps**" and "the cloud" using this Android applications and cloud teacher and students can share their study material from anywhere and anytime.

2.5 Modules of TSC

A system module is a system unit designed to solve a specific problem of the system. TSC module has the same idea. TSC module combines together functions and/or methods to develop one entity of the system. The following options are the main modules of TSC.

1. Management the study materials
2. Examination schedule announcement management module
3. Published the books or lecture topic
4. Messaging system module

5. Online exchange module (groups/other question & answers, file upload & download)
6. Management information module
7. Data encryption & access control module

2.6 TSC User Types

Every system has users; TSC also has three types of users. Basically the system handles the following user types:

1. Administrator user
2. Super users (Teachers)
3. Public users (Students)

2.6.1 Administrator

Carry out the update and the control of teachers and students and offered the courses. Admin deal with the technical issues of the system and ensures that no flow is corrupted in the system. For a secure system design, we have single admin who entry the students list and teachers list and also courses as well as update and maintenance it.

2.6.2 Super Users

They are those users who are in the teachers of the system. By distributed system, we means that as the system is used in several departments of universities, these remote subsystems are to be maintained and controlled by admin. They are password protected users with a high quality of authentication algorithm. The goal of such an authentication is to ensure that only consistent data and information flow in the system.

2.6.3 Public Users

Students are the public users in this system. By this system student get the facilities which are provide by the Admin and super users. For activate the students accounts they need permission from Admin panel. If admin panel entry the students identification number than they can activate their user accounts. Based on this identification super admin offered the different semester courses after that they will get facilities based on this offered courses.

Students can only download the study materials they can't delete are edit the uploaded files. They can access these facilities from anywhere any time using their Smartphone also. From this system students will know the recent examination date and upcoming academic activities and also get their individual performance, they can also asking the problem to respective teachers.

2.7 TSC Users Tasks

As mentioned in above sections, the TSC system allows different types of users to interact with the system features. The following sections present the tasks that every user, except public user, can perform.

2.7.1 Administrator Tasks

The administrator ensures that the system is running properly. He also has the control of the system users such as teachers and students and he also control the courses. Admin offered the semester courses to the users. Without courses offered teachers and students will not get the courses in there course list in this website. After offered the semester courses teachers and students will get respective courses. Without entry users identification number users (teachers and students) cant registered.

Overall our website activities are such as course management, users managements.

2.7.1.1 Course Management:

The admin can management the different courses for different semesters. They can include the different courses and offered the course for specific semester. They include the course details like course code, course titles, credit, and authors. The administrator can view courses list, students list and teacher's lists.

2.7.1.2 Users Accounts Management:

This system is a strict private user environment where a number of users can share files, messages, experience. As it is private, the owner has to add some other users, and, all of them, share a common authentication to access on the system.

- ☑ The administrator can view the list of the existing groups, their content and can also alert the group owner for any data which violates the terms of use of the System or even delete either the entire group or the concerned data and sends a message to the group owner showing why his data or group has been deleted.
- ☑ Can enable a private (but not necessary to be private) data to be accessed by the search engine whenever it is necessary (like an education resource file). In this case he has to go through the list of existing groups.
- ☑ Accessing the main tasks of TSC requires authentication. Authentication is created when someone registers from the register page. Whenever a new user has been created the administrator is informed.
- ☑ The administrator is the one who can create a super user.
- ☑ The administrator can delete a user account for some reasons.

- ☑ The administrator can categorize accounts base on some criteria(department)
- ☑ The administrator can send notifications and messages to all or a specific group of users.
- ☑ The administrator has the full control over all the accounts to avoid any law violation.

2.7.1.3 System Maintenance:

The system maintenance is a key in the management of the system. Whenever a system is well maintained, the efficiency of the system increases. Maintenance is done using a set of programming techniques defined in the system. Such kind of techniques includes:

1. System Update: The system must be updated regularly (information on home pages, colors, pictures, and even new functionalities).

2. Recording failures (some pages may fail to display or some system`s functions may stop working perhaps due to code failure). So the system must be able to record those problems and send notifications to the administrator. Failure of any system`s function can also be acknowledged by the user of that function.

3. Database Backups: One of the most important points in system maintenance is database backups. System backups may be done daily, weekly, monthly. But large is the system backup, more is the system exposed to risks (Database shut down, Attacks. etc)
In addition to the above tasks, the administrator can access public data, make group, participates in the TSC activities (questions & answers, news, documentation, search).

2.7.2 Super Users (Teachers) Tasks:

Teachers are the super user. They access the maximum facilities. They can upload and download the lectures notes and can delete or modified it. And also announced the examination schedule. They can also publish the different test performance.

2.7.2.1 File Management:

- ☑ Now that different types of users are created, they may exchange files through their groups, upload files to the file holder (then available to all users either explicitly or by search), and finally some of them download the available files. As users may make mistakes in naming files (give a name which is not related to file content), the administrator will rearrange those files to make search easier. Arrangement of files includes the definition of file name based on the topic field

(example: computer_science_algorithm_fifo.pdf) and file types sorting (word files, power point, text, PDF etc).

☑ In the other hand whenever a file is no longer required or violates any of the system rules, the super user can remove it.

☑ The super user can upload and download files as well.

2.7.2.2 Different Examination Announcement:

Super user can announce the different quiz test, lab test, assignment date, presentation date to the students. Students will get notification about recent notice. He will just give the course code, exam date and time, venue, exam syllabus.

2.7.2.3 Performance Published:

Super admin can published the different courses different test marks like for quiz test, lab test, assignment submission, presentation marks. From this system student will get the notification about their recent published performance for corresponding subjects. So that if is there any confusion or mistake in any courses student can comments for each courses whether it will make easy evaluation for the teaching learning system.

2.7.2.4 Users *Posts:*

☑ The super user can check a post is valid or remove it otherwise.

☑ The super user can send notifications to students

☑ The super user can redirect a post which seems to be more interesting to most visited page like home page and user interface. The user should be asked to share the post prior the redirection.

☑ The super user can remove or notify the user to remove a post which is no longer required or the user should be given options on the duration of the post.

2.7.2.5 Comments:

Comments are points of view about objects. In TSC, objects are of two kinds: Articles & Posts. Users can write a comment which can be seen by all or some of the TSC users. The super user can temporarily check the submitted comments for validation and if necessary delete them. Comments can be removed after a certain amount of time either by the super user for an accessible comments or the group leader for a private group.

2.7.2.6 Messages:

1. Messages are point to point or point to multipoint text messages. In most of the cases, messages are private. But because of different purposes (criminal or violation control), the administrator can access them.

2. Another messaging key is when a message has to be sent to all users or a group of users. The super user can explicitly define the way a message can reach the proper destination.

2.7.2.7 Feedbacks:

Feedback is a type of message showing the feeling of a user of a particular system. In TSC, users are allowed to send feedbacks to the system super user to inform him that a bug has been found or simply to show how users are satisfied.

2.7.2.8 Opinions:

Opinions are almost similar to feedbacks but here the user is allowed to propose something that may increase the usage and the importance of the system. The author has to describe his opinion so that the administrator can easily get the idea on that opinion.

2.8 Basic Tasks

1. Edit student information (add, modify, or remove).

2. Manage student information (search, categorize (class, department, count)

3. Published class performance

4. Discussion with each others

5. Use the messaging system

6. Access manager's help

7. Document (online posts download, upload)

8. Use search engine

9. Database backups (Institution data and information, others data are automatically encrypted).

2.9 System Complexity and limitation

In the previous section we mentioned that the TSC system has a diversity of functions which enhance the system existence. In this section, our main goal is to demonstrate the

difficulties we encounter due to the complexity of the system. Basically every system has its difficulties. The TSC complexity is based on the fact that we need a system capable of handling an unlimited number of different departments each with a large number of applications , all controlled by a single entity. We refer this complexity as multiple departments' complexity. Another complexity exists when we need to define the boundaries of each TSC user type known as multiple user sign up complexity. The main difficulty over this kind of complexity is limit every user type so that he/she cannot access more expected. We once again recall that the number of functionalities of the TSC grows according to the different types of users we have. We have limitation of cloud storage to store the files.

2.10 One-to-one contact

Most of the University students own www.facebook.com account and also hotmail and yahoo so after many days of discussions and sending message messages we discovered that most of them will be so happy for us to implement a space network by which they can communicate easily in the same time ,that why we decided to implement the system of chat for all University members and also we have seen that it will be better to implement again un system forum in each department which can help mostly the student to share ideas regarding their courses ,training and so on. This system becomes more useful in many universities to ensure the development of the student ideas. Not only that space member which anyone can share but also a private mailing system that every member can send to or receive from any other student or member either belong in University or other university.

2.11 Using Tablet, Mobile Computing in the Field

As noted above, Smartphone and tablets are increasingly used by students for everyday social life and can be used effectively in the field (Welsh et al. 2013), whether Internet connected or not. Smartphone's can be used for teaching learning purpose. Data can be collected in digital notebooks, digitally processed in the field, shared, and backed up through distributed computer (on "the cloud").

2.12 Method

To build up our Application we have followed the following process of fig 2 software engineering process.
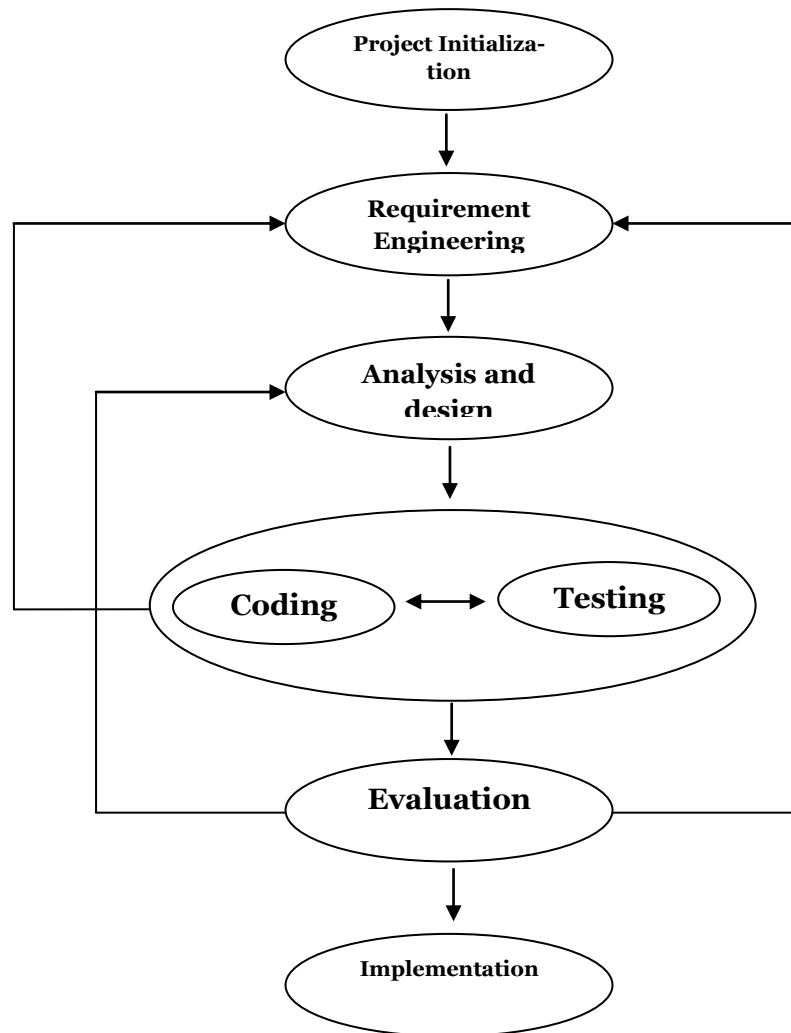
Fig 2: software engineering Process

Chapter 3: **Proposed Method**

3.1 Overall Concept

The Target users are teachers, students and an administrator. For every department has limited number of students. Departments offered the Course to The students of semester where involved with departments faculties. Here course teacher can share the course materials, and announcing the different examination schedules and published the student's performance using web application and android application from any-where. Both types of users have to the communication device like Smartphone or laptop with internet connection to access these facilities. Any of devices using teachers and students can use this system which is helping to improve learning process.

The basic structure is showing teacher share something from his office, where students can easily knowing getting easily either using web application or smart devices from any places.

Example: A teacher upload the lecture his class lecture sheets whether students can easily downloading that lecture sheets. Though we have communication and sharing technology that has no specific for teaching learning purpose.

Fig 3: Basic Structure

3.2 The World Wide Web

The World Wide Web was designed originally as an interactive world of shared information through which people could communicate with each other and with machines. Since its inception in 1989 it has grown initially as a medium for the broadcast of read-only material from heavily loaded corporate servers to the mass of internet connected consumers.

Finally, a goal of the web was that if the interaction between person and hypertext could be so intuitive that the machine-readable information space gave an accurate representation of the state of the people`s thoughts, interactions, and work patterns, then machine analysis could become a very powerful management tool seeing patters in our work and facilitating our working together through the typical problems which beset the management of large organizations.

3.3 Web Application Concept

A web application is an application that is accessed over a network such as the internet or an intranet. The term may also mean a computer software application that is hosted in a browser controlled environment or coded in a browser supported language and reliant on a common web browser to render the application executable. In these recent years web applications become more popular due to the flexibility the web offers to its users.

Nowadays, almost all computerized applications are accessible through the web. The web supports different types of applications: communication, information, learning, radio, video, and so on. Our main focus is to demonstrate how the web and web applications help in the field of education. As briefly discussed before, the web provides the students, teachers and researchers, a very efficient way to deal with education. This becomes possible as the web can be widely used everywhere in the world.

3.4 Choosing the World Wide Web

The web constitutes today the portal of communication. Hosting a website in the web means giving access to the site through the internet. As our system requires an efficient way to communicate, we need to the require the web platform which is provided the facility among the teachers, students, and the management. Also some other reasons bring us to link the TSC system to the web. The main reason is that TSC is a system which is spread in many areas, probably in different countries. All what we need is to establish a connection between all its institutions and the head office.

3.5 Web Facilities

No doubt the internet plays an important role for the success of our system. As several applications on the web, this system gained the internet facilities to build a community and a system management on the web. The internet has many impacts that we cannot list all of them here but we will just present the most important ones.

3.6 Time Management

One of the important things that we have to consider in the real life job management is how much it takes to perform a given task. That is we have to find a way to do job so that we can save time and do the job more perfectly. If we mention the term job here it is to make people understand the concept of time saving. The system contains several applications that may be done separately from each other. In a previous section we gave an example about a teacher needing to submit some student class performance and exam schedule. In this example we mention that going on the education site to submit this result is time consuming. We have to take care about the convenience of the system users. Also we need to improve the working process.

All these factors are to be considered when designing a new system so that any system user will fill it more convenient and increase the processing power. Waiting for all the teachers to submit the student's class performance script in hard copies is not efficient. In addition to this , we will need a large amount of time to enter this hard copy script we need more times and also announced the exam schedule it take times it possibilities forget about exam schedule. In the other hand, students need to move on. They don`t have to wait for a longer duration of time to get their class performance. Finally what about the administration itself. Do we need to travel all the ways to get information from the institutions? It`s a great job!!! Per consequent all what we need is to have a system capable to handle all these requirements.

3.7 Processing Power

How do we do handle data processing is a main question that has to be answered before any system is built up. We have to make things very easy to manage.

Let take again the class test performance as an example. When the marks are given as hard copies, it may content some errors that the manager may not be able to identify directly. Once this mark is input in the system, the information becomes inconsistent and many problems may rise up. Also processing an input data is not like doing all the process alone. For a small number of records it is not difficult, but think when we have

millions of records, is it easy to manage? Because from here students can comments place drought about their marks. Which is making easier to find out errors?

Another one is Examination (quiz test, lab test, assignment...etc) schedule announcement, traditionally class teacher announced the date and time in classroom in this case those who are absent in class may be he missed the date. Another problem is students are noted this schedule in note where they need to check whether exam is available or not, But in our system teacher can announce the exam date and time with venue using system and all related students get notification about the exams. System will provide automatically exam schedule based on date.

3.8 System Availability

Among all the benefits we get from the web is that the system is available all the time and accessible from anywhere in the world. This is a very important point to consider. System users can work, submit queries, and get information at any time as the system runs 24 hours. Beside the web facility, another issue to make the system available is to prevent the system from a single point of failure. Otherwise the system failed to fulfill its objectives in general. Some of the sources of the system failure are power shutdown and. To prevent the system from any power shutdown, we need to host it in a safe place where power is supplied all the time. That is a solution. The denial of service is a very dangerous attack due to a huge number of unnecessary requests resulting into a system crash. All what we need is to save our system. To do so, the decision to use the web as the medium has to be decided after some important questions are answered. These questions help the system administrators to choose the web server to host the system.

3.9 Architecture of TSC:

The main objective of TSC is to provide the information from the centralized shared resources at anytime and anywhere. Our proposed architecture for sharing the events and information and stored the self activates is given in Fig. 1. It incorporates communication between teacher and students. The user can access the Data center using internet. The authentication server will manage the authorized access to the Data Center,
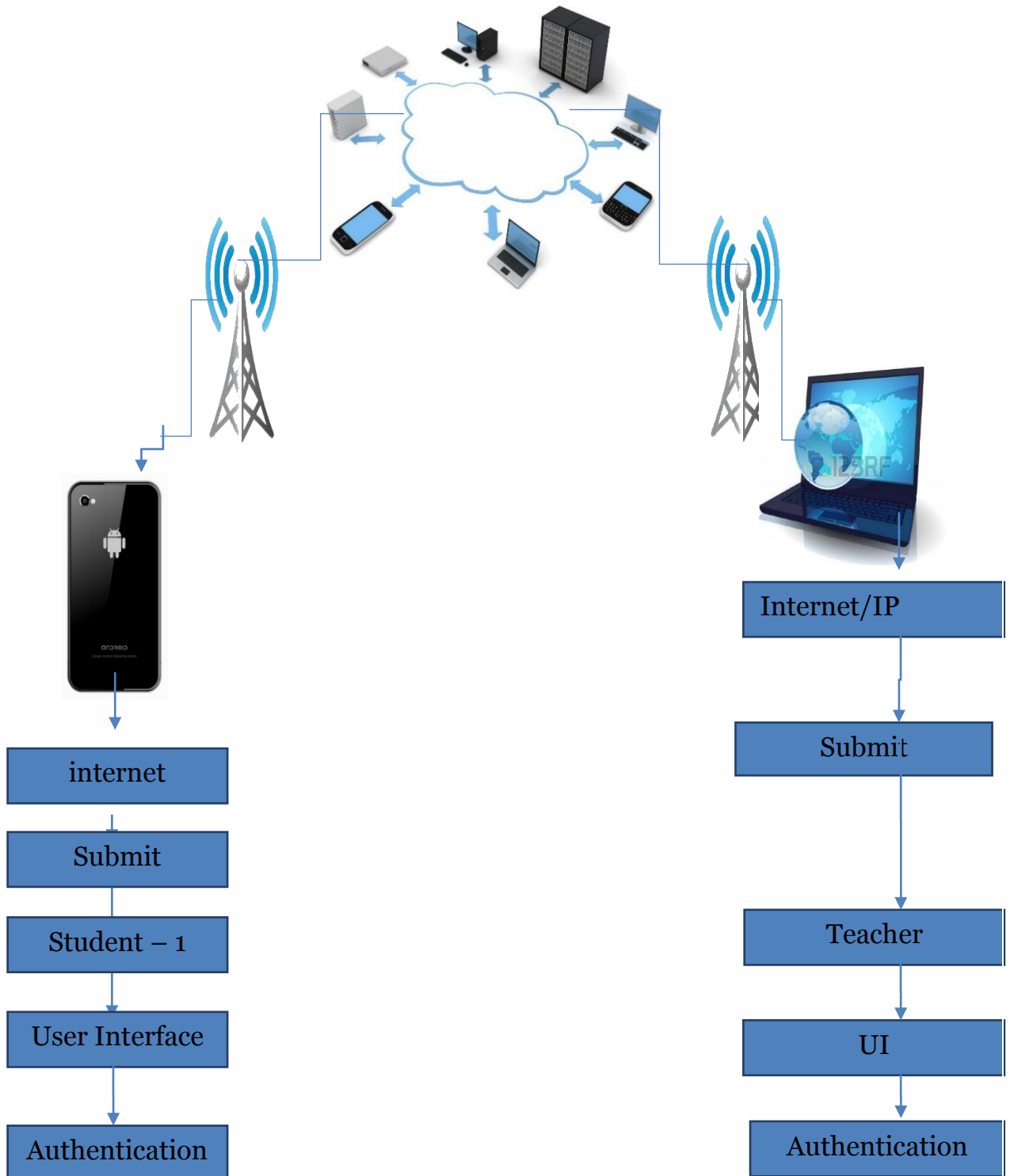

Fig 4: Architecture of TSC

3.10 Prototype of TSC

In this communication protocols, two methods of communication will follow Online chatting system and messaging systems. Student can asking questions to the teachers and teachers can reply the answer corresponding to questions. Although they can interact by SMS, teachers cannot give their answers on first time. In online chat based mode if a teacher wants they can reply instantly or either further times based on their comments. Here also teacher can upload daily delivered lecture uploaded to the server with lecture heading and lecture contents and references and quizzes marks, exam schedules. Clients or students can see uploaded lectures and different quizzes schedules. These prototypes are divided into four levels are:

Level 1: Teacher as admin and students as clients.

Level 2: Network technology

Level 3: User access interface

Level 4: Data server, this are show in fig. prototype of communication layered view.
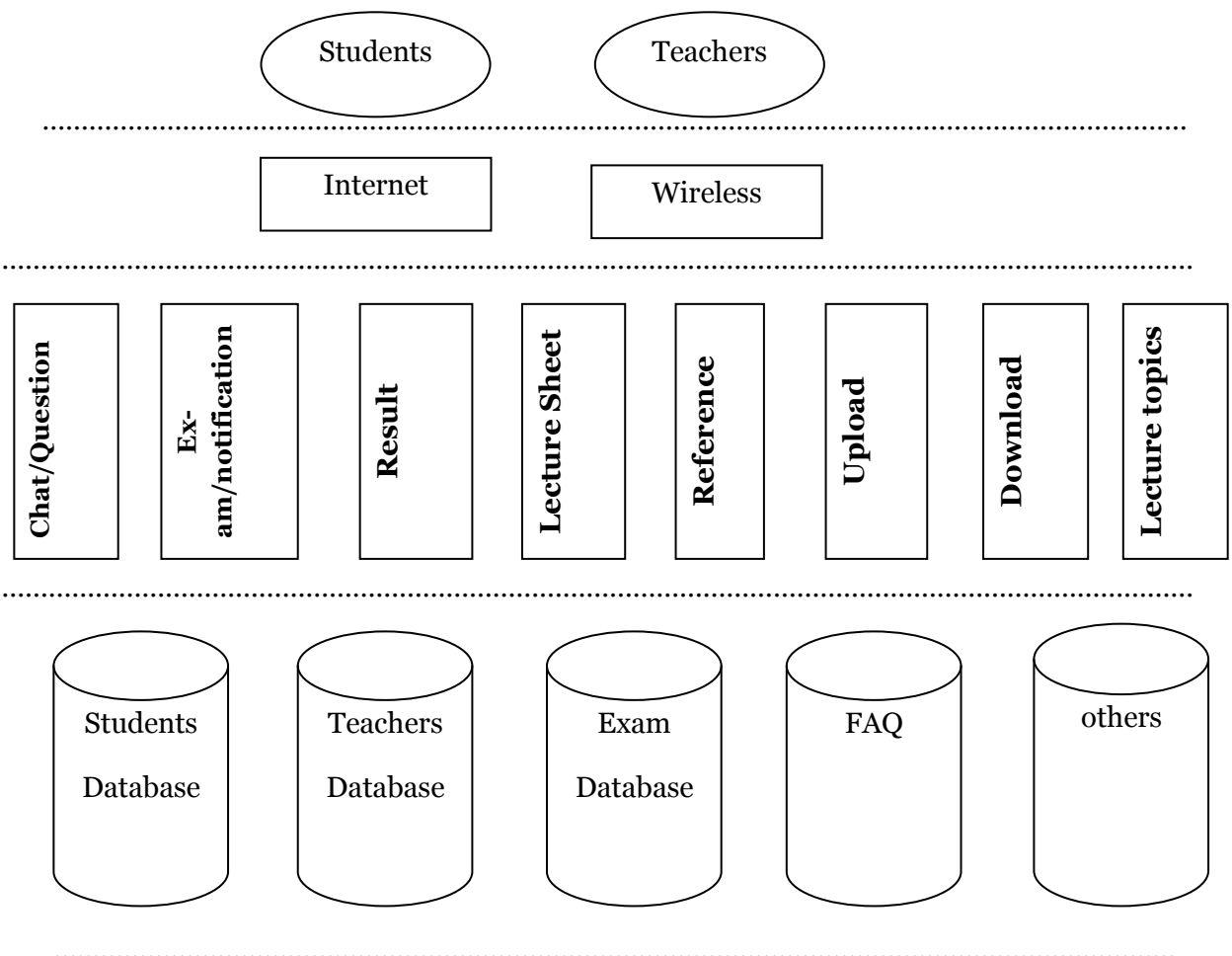
Figure 5: - Prototype of communication layered view

Chapter 4: Functionalities and Design
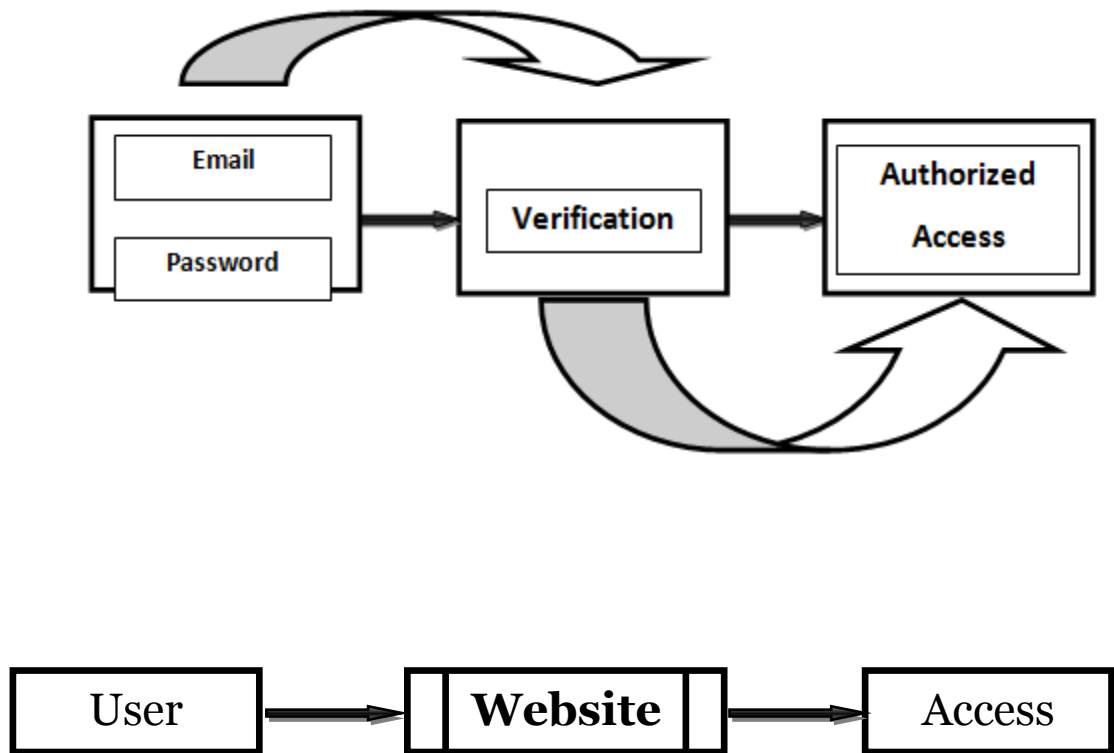
4.1 Data Flow Diagrams

Fig 6: User Verification Interface

User have to give their Email and Password than system will verify the given email and password if its correct than system will provide the system access permission either user can not access the system. Every user has validity by the Administrator. If Administrator provide the permission to the user then he can registration for accounts.

4.2 Registration Process

Each user (teacher and student) get a unique identity number by the their administrator. If their administrator when provide this identity number to the user than they can activate the user registration for accounts.
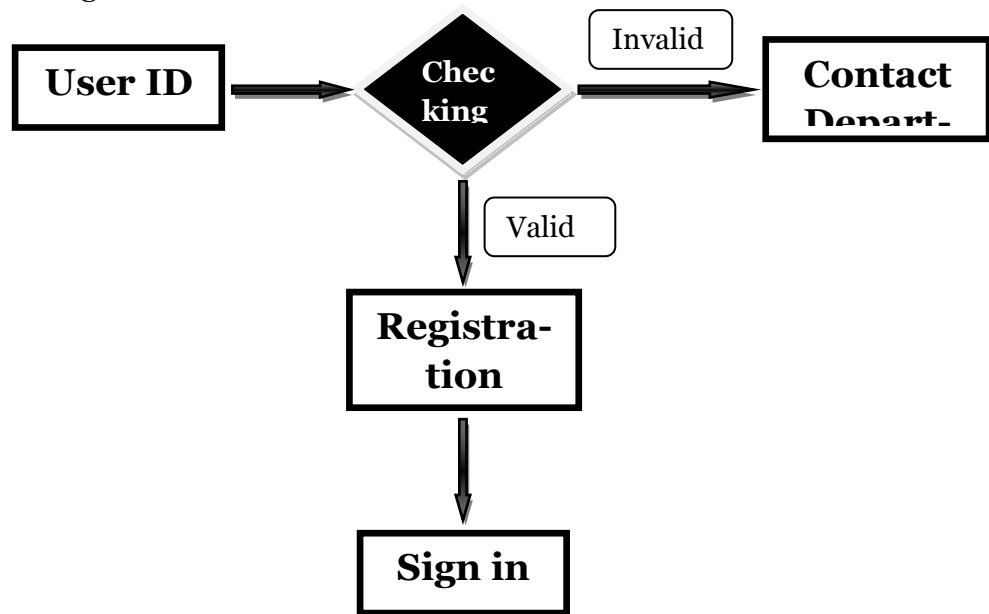
Fig 7: Registration Process

4.3 Admin process

Administration manages the users (teachers and students) and also offered the courses to the users. Teachers and students cannot take course without permission of Administrator. After assign the courses to the users they get facility by this TSC Application.
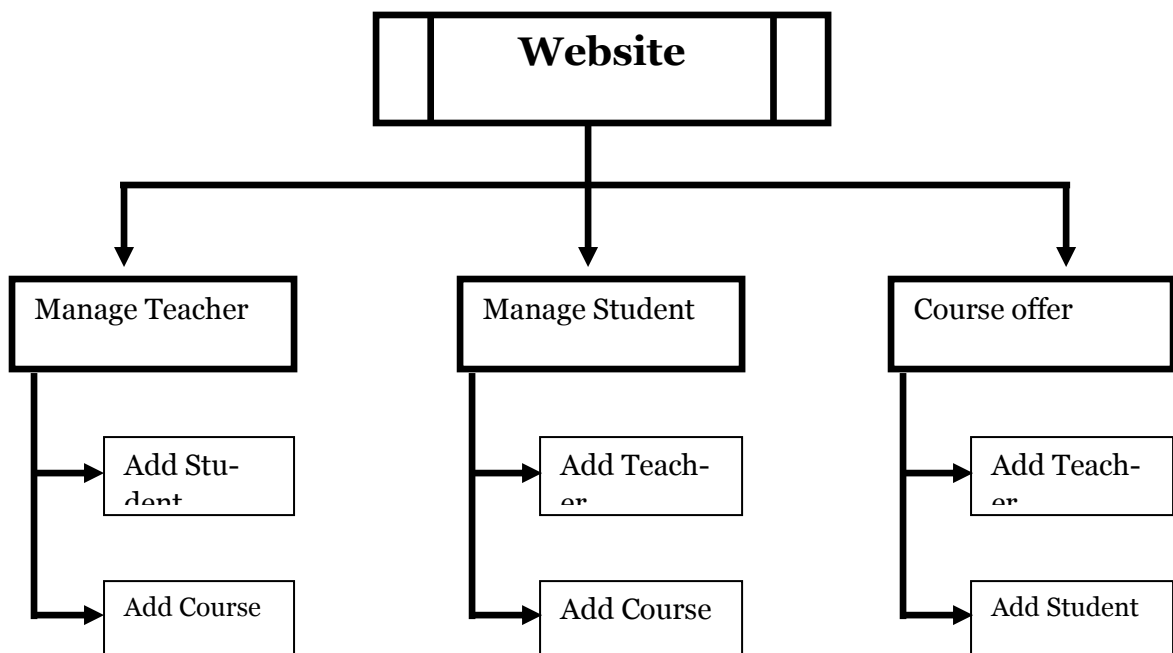
Fig 8: Administration Activates

4.4 Database Design

Here we are using central database for cloud storage of information, and different lectures uploaded by respective course teachers and also class test schedule and class test marks and assignment by students to course related teachers instead of hard copy. From cloud storage user can access the information any where any places. If students sometimes missed their classes in that case if they will stay in their home they will access their daily class lectures updated. Also they can set their class schedule and also personal activity in android phone in android slit database.

Fig 9: ER Diagram

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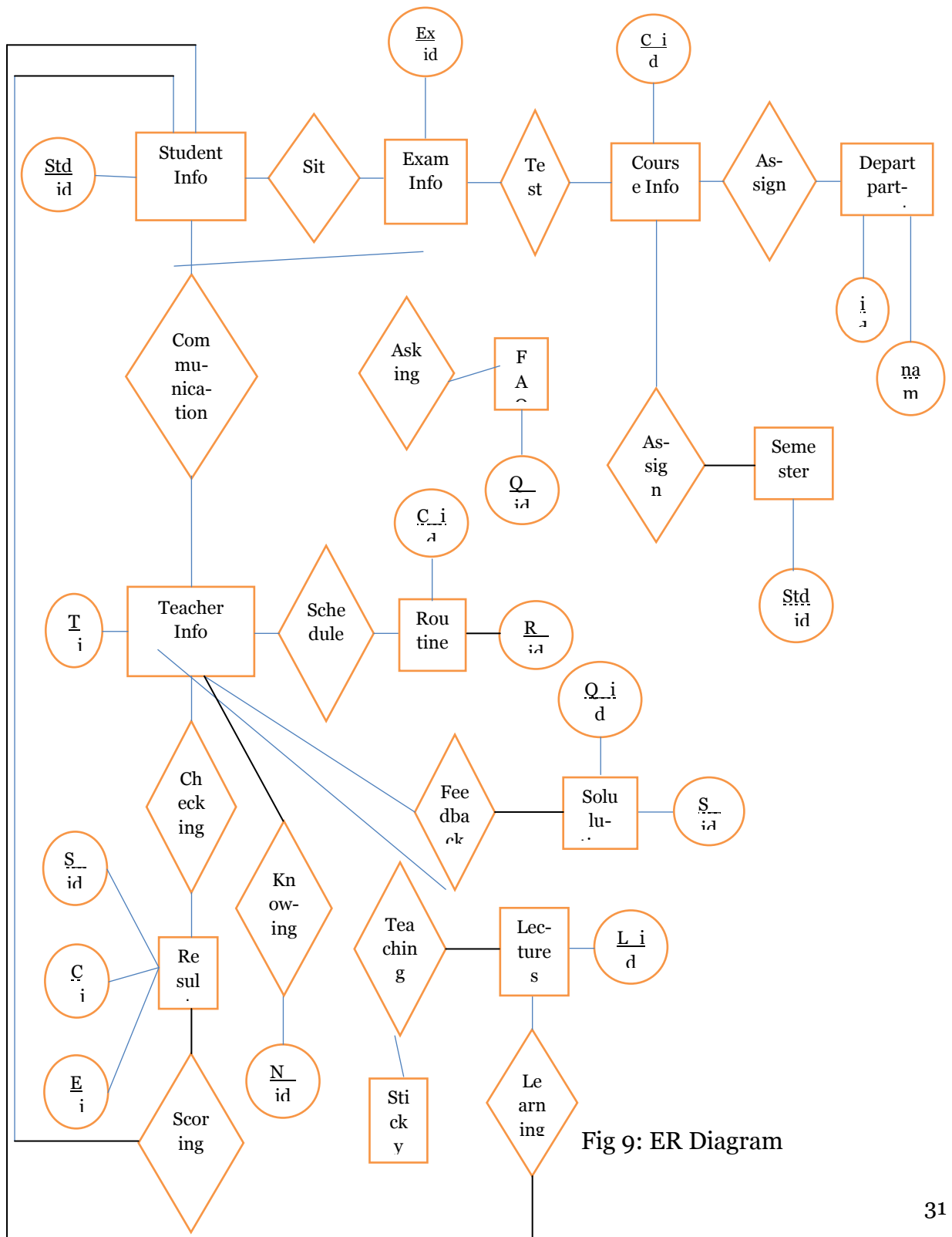
4.5 Lecture details

Teacher cans entry the daily lecture contents using android to the server. Teachers have all rights. Beside these, He can submit, update, and delete information, lecture contents, marks, subjects and messages.
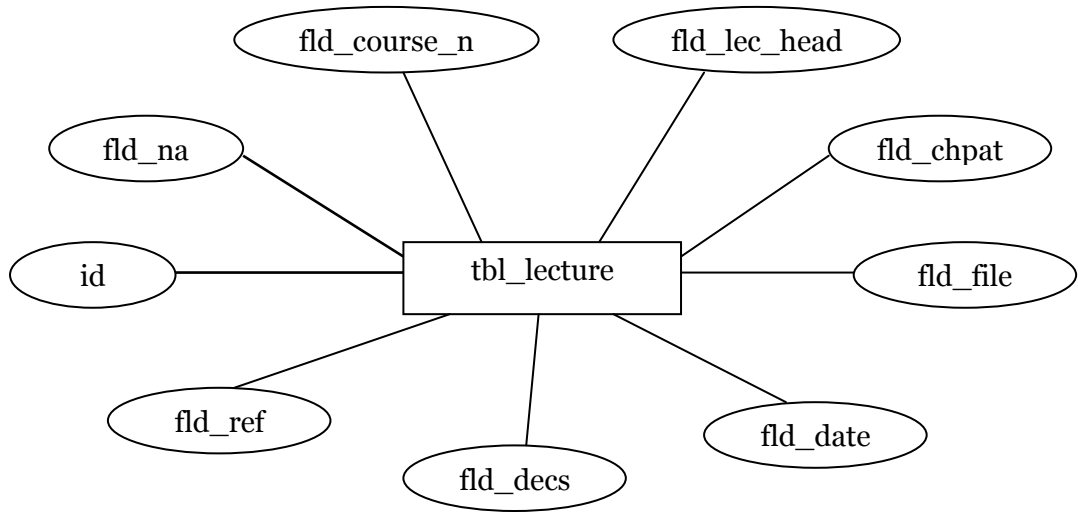

Fig 10: Lecture details entity and attributes

4.6 Exam schedule details

In this table it stores the different examination schedule such as course code, course title, examination date and time, venue, syllabus, references.
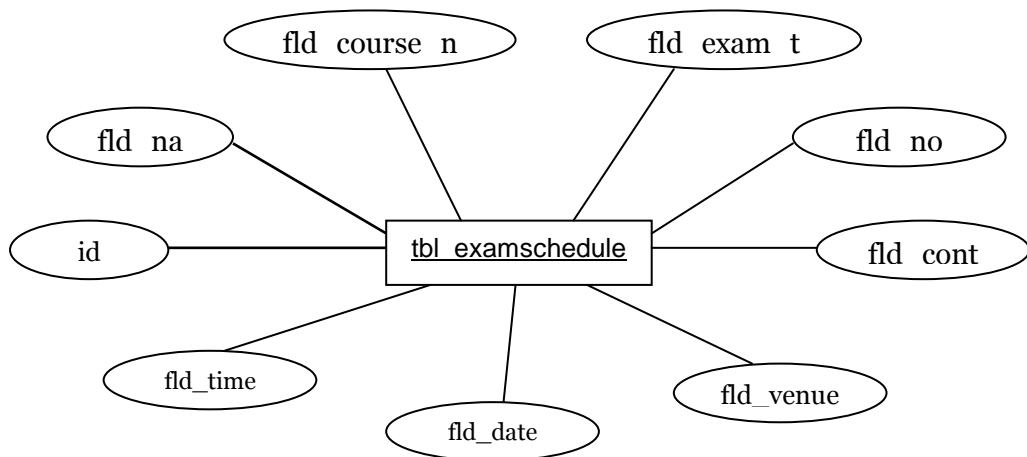

Fig 12: Lecture details entity and attributes

4.7 Performance details

In this database table stores students class performance like quiz test, lab test, assignment marks, and presentation performance like quizzes, and so on.
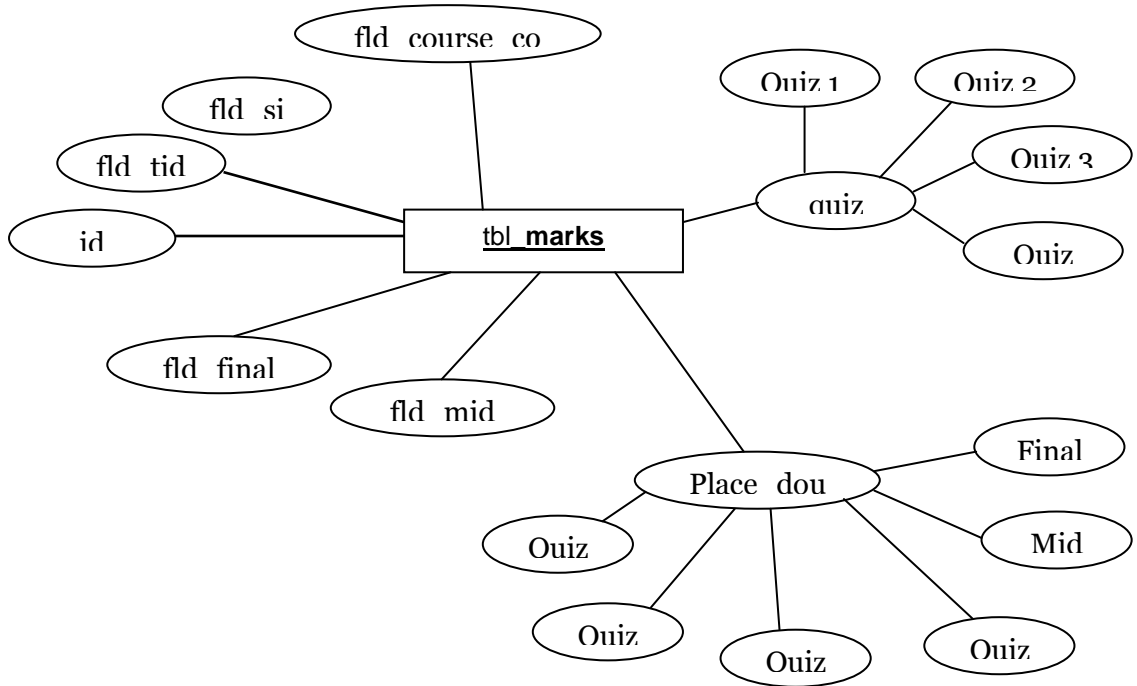

Fig 13: Performance details entity and attributes

7.8 Admin details

This entity is used to stores the offered courses for the teachers and students with user's id, course id, course title and department.
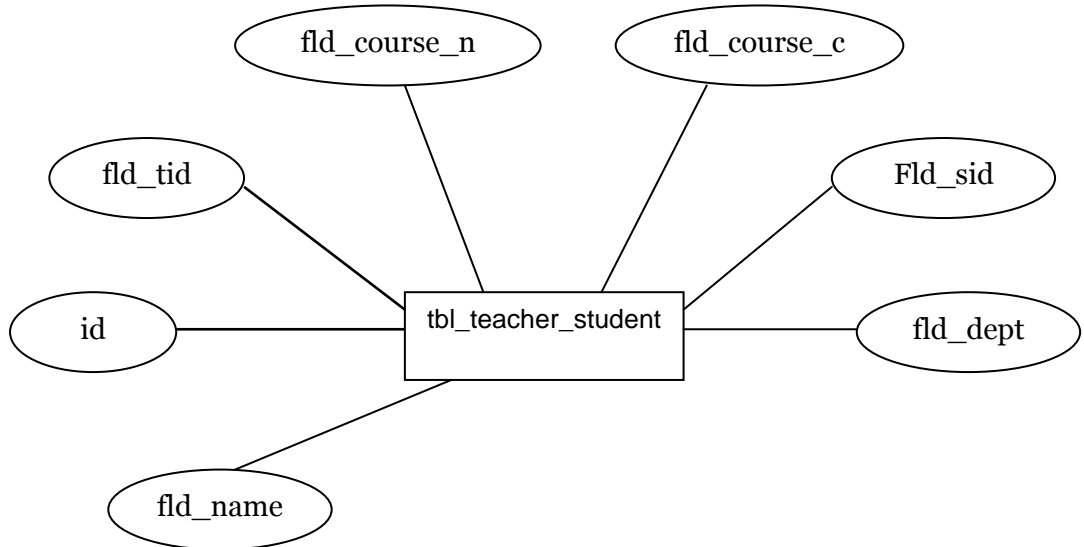

Fig 14: Lecture details entity and attributes

4.9 Personal details

In this table store the user personal details, like user identification number, name, department, address and so on.
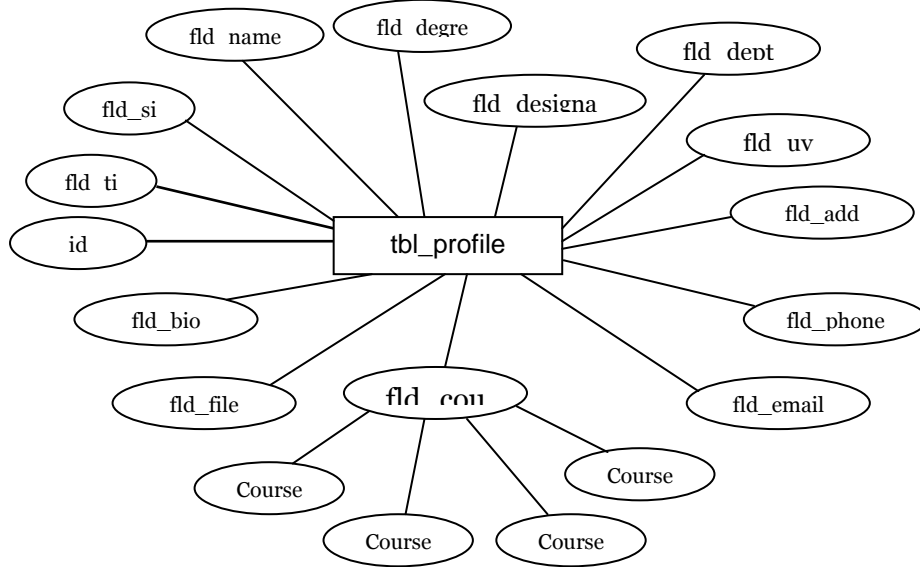

Fig 15: Lecture details entity and attributes

4.10 Discussion details

To store questions and answer by the teachers and students both entities are used. Based on corresponding questions teachers can give feedback than students will get the answers.
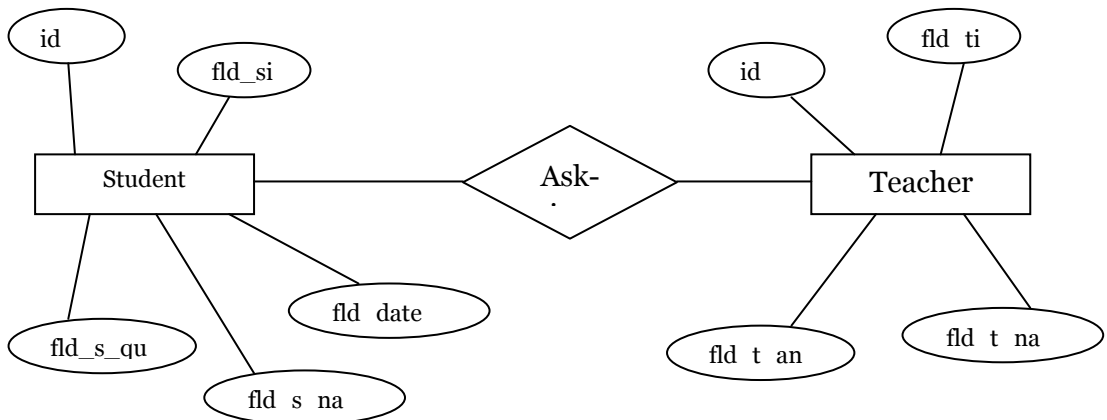

Fig 16: Lecture details entity and attributes

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4.11 Activity Diagram

This activity diagram represents the examination schedule management for the teachers and students. Teacher announced the examination based on these students will get the notification based on courses. Based on date system will show the schedule to the users.
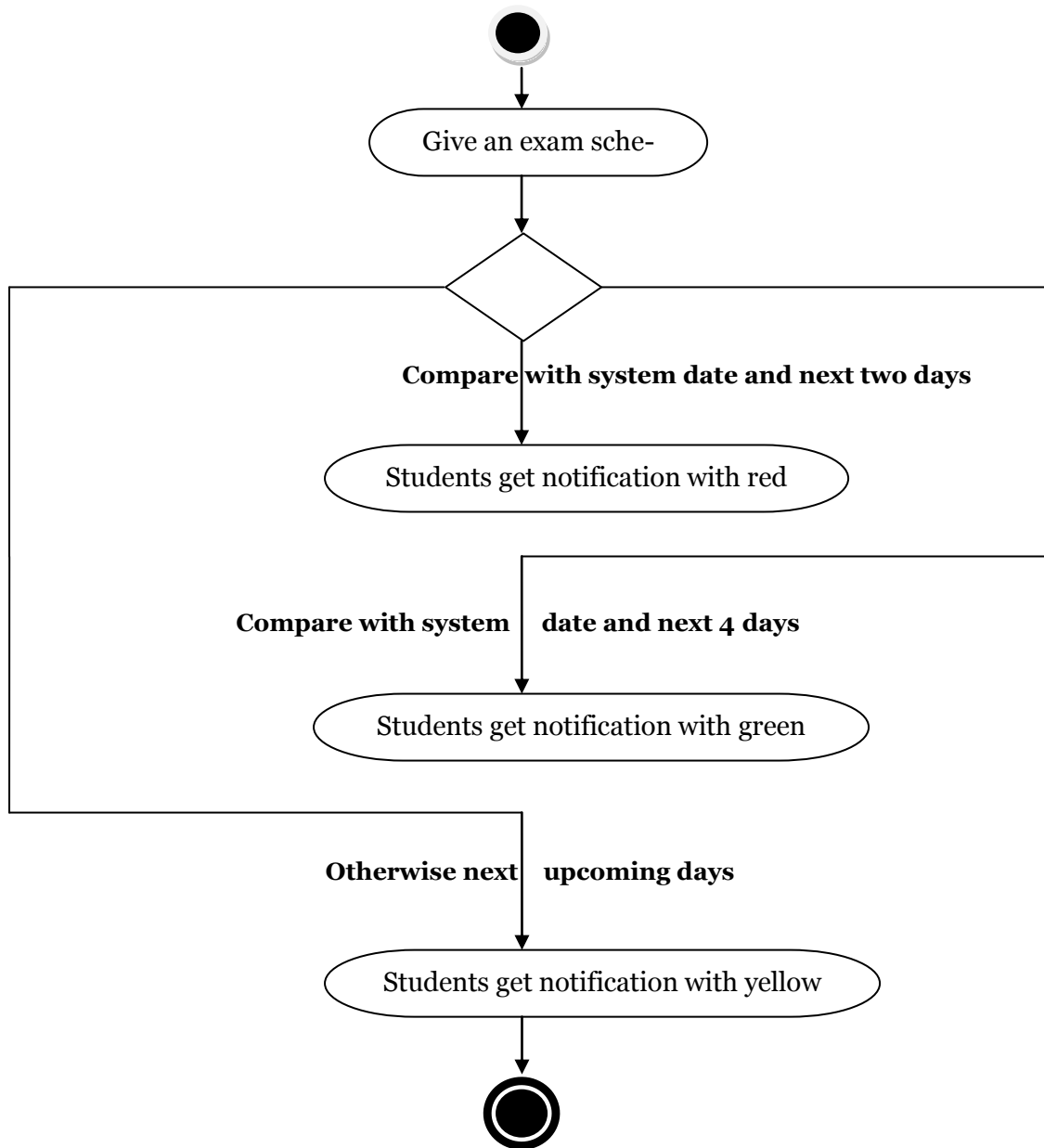

Fig 17: Lecture details entity and attributes

4.12 Use Case Diagram

Use case diagram shows the relationship between actors and use cases of the system. A use case represents a coherent piece of functionality of that system can provide.
An actor is the direct external user of system. In our software based teaching assistance system, actors are:

✈ Teachers
✈ Students
✈ Administrator

Here stick man icon denotes actors, with name being placed below. Solid lines connect actors with use cases.
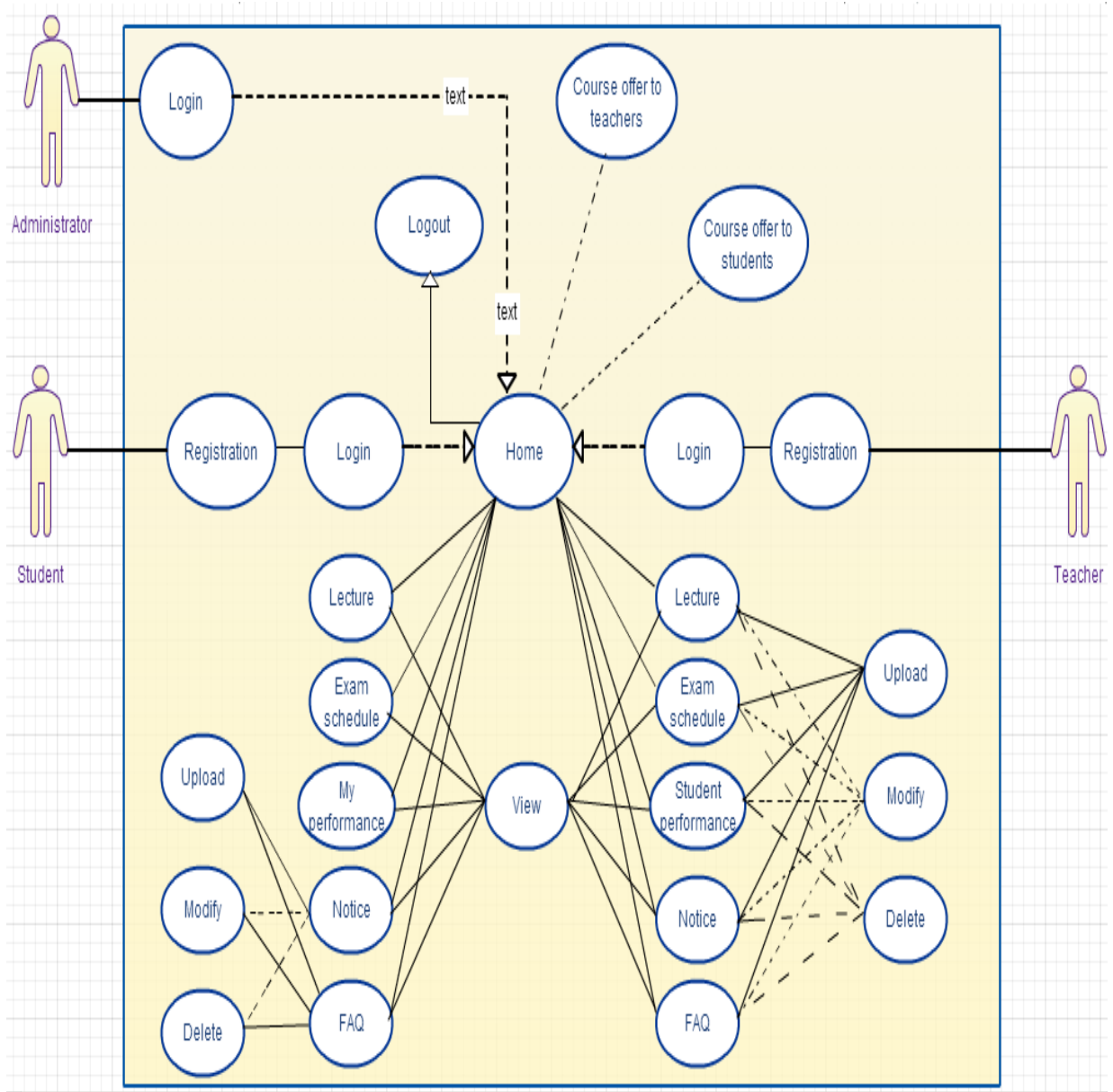

Fig 18: users used case diagram

Chapter 5: Development Tools and Technologies

5.1 Android

Android used for developing Android Application for Android OS based Smart phones.

5.2   PHP

PHP for Hypertext Preprocessor, it is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. Distinguishes PHP from something like client-side JavaScript is that the code is executed on the server, generating HTML which is then sent to the client. The client would receive the results of running that script, but would not know what the underlying code was. We used PHP to validate form data before we submitted it to a server and also for extracting data from database. We use PHP for inserting and extracting data from data base.

5.3   MySql

MySql is currently the world's most popular and widely used open source database technology and data storage system. MySql offers great reliability and ease of use. It is free, and comes with free documentation as well as thousands of programmers that share their code that relates to communicating with a MySql database. MySql database as a container that holds string (text based) data. Images, media files, audio files, and things of that nature really should not be stored in a database. The trick is to put those files on the server in folders and just reference their name and path in the database. Here are a few of the types of applications PHP and MySql can help us:

     i.   Custom dynamic database driven websites

    ii.   Ecommerce and custom online store programming

   iii.   Entire dynamic websites

   iv.   Client and customer information

5.4   HTML and CSS

HTML is short for Hyper Text Markup Language and is a language used to create electronic documents, especially pages on the World Wide Web that contains connections called hyperlinks to other pages. Every web page you see on the Internet, including this

one contains HTML code that helps format and show text and images in an easy to read format. Without HTML a browser would not know how to format a page and would only display plain text with no formatting that contained no links. We used Hypertext Markup Language (HTML) for designing the web different web pages for user and admin panel and also used Cascading Style Sheets (CSS) for styling the different pages.

5.5 And Also

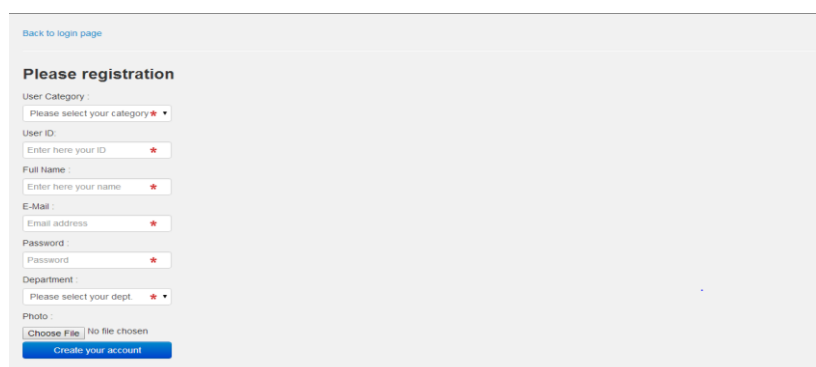   i. JavaScript

    ii. Pencil for Android User Interface design

    iii. Microsoft Visio 2007

    iv. Microsoft Office

    v. Graphics Design tools

    vi. Adobe Photoshop CS

    vii. Adobe Illustrator 8.0

    viii. Paint

Chapter 6: Software Implementation

So far, in chapter 6, we discussed about some applications provided by the software. For now, we will focus on how these features are implemented and what is needed for this implementation. The code portion is left to a later section.

6.1 User Registration Form

This site will be access only authorized user. At first user should be registration to access this site. That's user id provided by administration but when user haven't any valid id they can't registration. It protected the invalid user registration.
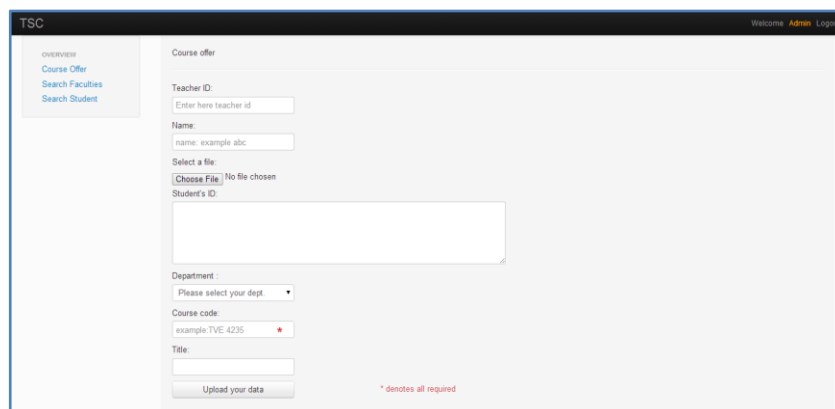

Figure 19: User registration form

6.2 Admin User Interface

The admin panel is responsible for course offer to the respective teacher and students. Administration also assign course to the teacher. Teacher has only two subjects and one lab of each semester and carried out the whole semester. Students have several subjects beside with lab and also optional subject by his demand.

Figure 20: Admin features

6.3 Teacher Home page Interface

When as a teacher login he will go to his home page and he get some notification from his students and he will easily reply those notifications. Also he will see some events those are important for upcoming days and he easily remember those things and try to do it.
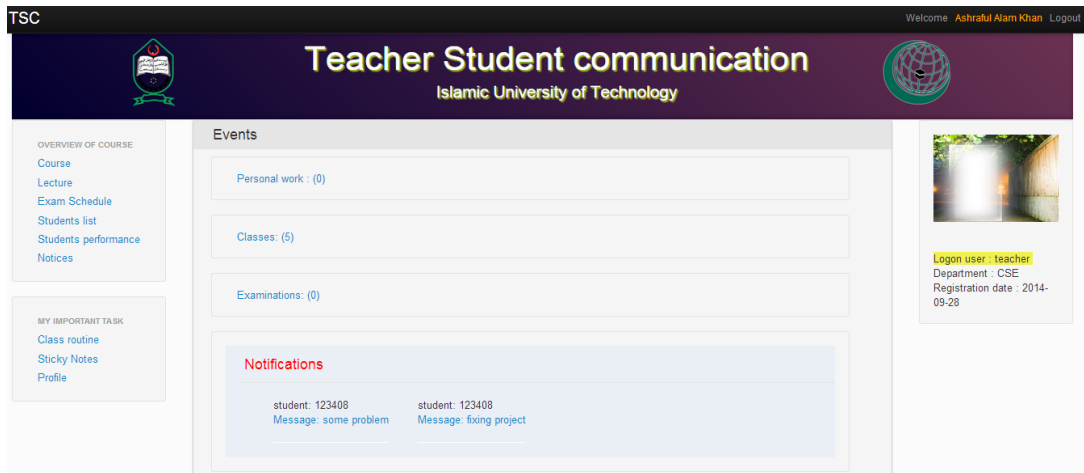
Figure 21: Teacher home interface

6.4 Teacher Lecture View Interface

The teacher can view lecture those he already uploaded but when he think necessity to modify he can. Those he uploaded lecture also students can view and download those he needs.
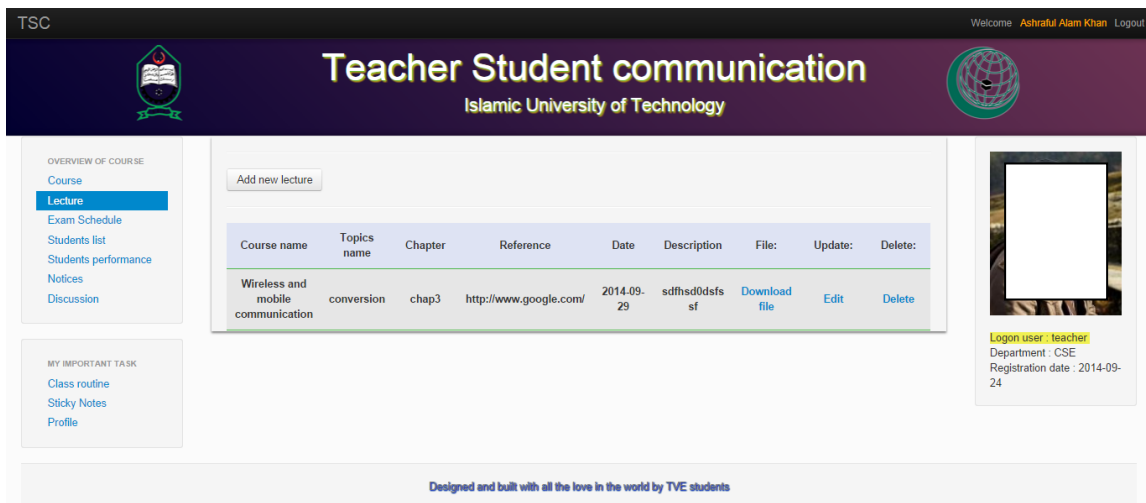
Figure 22: Teacher lecture view interface

6.5 Teacher Lecture Upload Interface

Teacher can frequently upload his daily lectures those are helpful for teacher and students. Those students are missed those class they can easily check and also download from this site and students easily concentrate his study.

Figure 23: Teacher lecture upload interface

6.6 Teacher Lecture Update Page Interface

Teacher will see his lecture and he think to change something that's why this page will help to teacher to modify his lecture. Also students gets actual lecture to read for better performance. Teacher when update his lecture then students get notification on his home page then students collect of this lectures.

Figure 24: Teacher lecture upload interface

6.7 Teacher Exam Schedules Interface

Teacher easily upload his exam schedules and he can easily check but sometimes students don't interested to sit for exam to schedule date then teacher can easily change that date and students got this message. Teacher can get notification of this those exam schedule are coming of next two days those schedules will be red color on his page and those days will be held after next four days those color will be green and remaining days will be yellow color.

Figure 25: Teacher exam schedules interface

6.8 Teacher can see Students Performance Interface
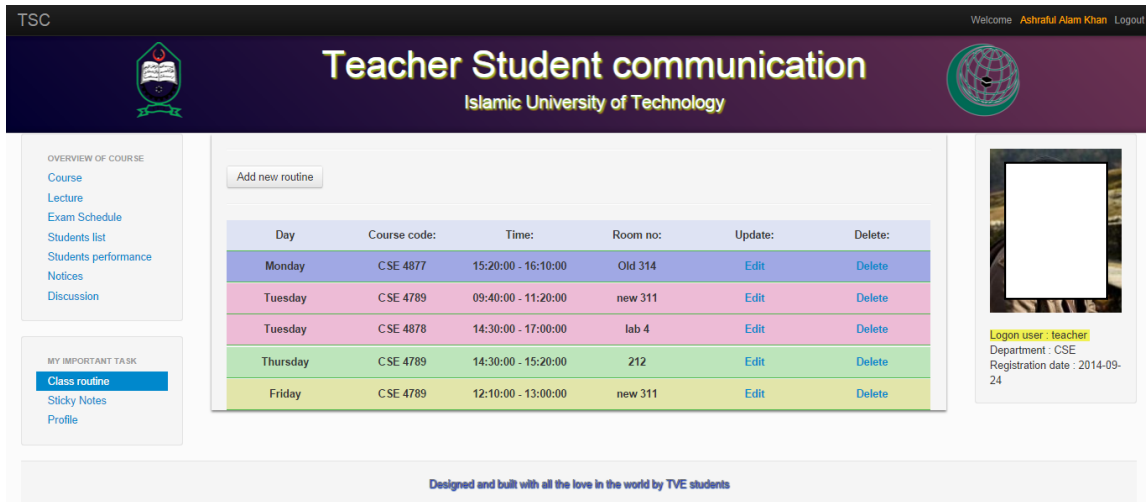
Teacher can entry individual student marks and he can easily check those are present of this subject exam and those are not present. And he can easily understand those are achieving good marks and he also update individual marks and delete those marks. Sometimes he gets some request of individual subject mark and he will recheck of this mark and students will be satisfied by this process.

Figure 26: Teacher view student's performance

6.9 Teacher Class routine Interface

Teacher can upload his class routine easily and he also check either today he has any today or not. Teacher will see individual day wise color of his class schedule that's really beautiful looking. He also modify his class schedules and he can delete of those class are finished. Sometimes he needs to shift class for his some reason and also students sometime wants to be shift class for his better scheduling that's why teacher are easily change of those class.

Figure 27: Teacher routine interface

6.10 Teacher Discussion Interface

Teacher will see those students are asked him and he will give answer of those particular students for students good performance. That's why students are really motivated to knowing from his teacher of his desired. Teacher will see notification and try to immediately feedback to the students. We are trying to develop to notify of his mobile and he will easily send his answer.

Figure 28: Teacher discussion interface

6.11 Teacher All Course Interface

Teacher will see of his all course on this page those are provided by the administration. But when he are not interested to continue this course then he can changed of this course. Also he can see those students are assign by the administration with respective course.

Figure 29: offered courses interface

6.12 Teacher Profile Interface

Teacher can upload his all information easily and students can see his profile. So students can motivate to follow of his respective teachers. Teacher can inserted of his research interest and also those publications are already published and students also see of those articles. And students can easily contact with him. Sometimes students are interested to know about of his teachers and this page will be helped both the teachers and students.

Figure 30: Teacher profile interface

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6.13 Home Page Interface for Students

When as a student login he will go to his home page and he get some notification from his teachers and he will easily see those notifications. Also he will see some events those are important for upcoming days and he easily remember those things and try to do it. Sometimes students forgot his exam schedules so this site will help to the students to reminder to recall his schedules
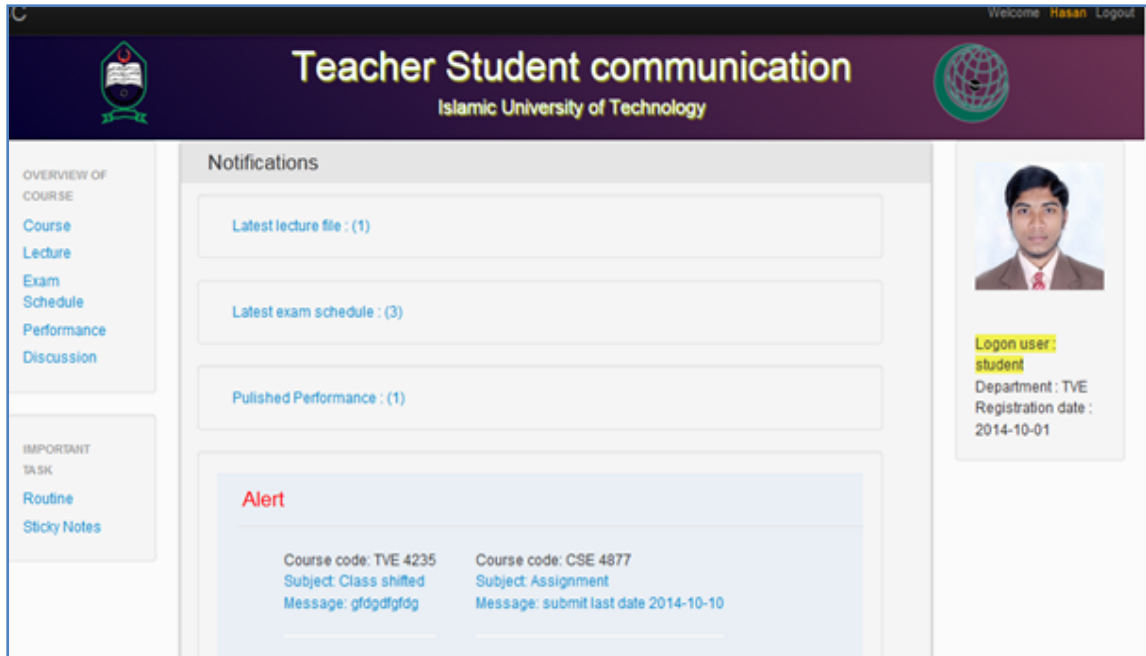
Figure 31: Students home interface

6.14 Lecture View interface for Students

Students are responsible to collect lecture those are provided by his respective teachers. Sometimes students missed some class then he will locate to his friends and talking about his class. So this site removes his disturbance also save his time to collect his requirements.
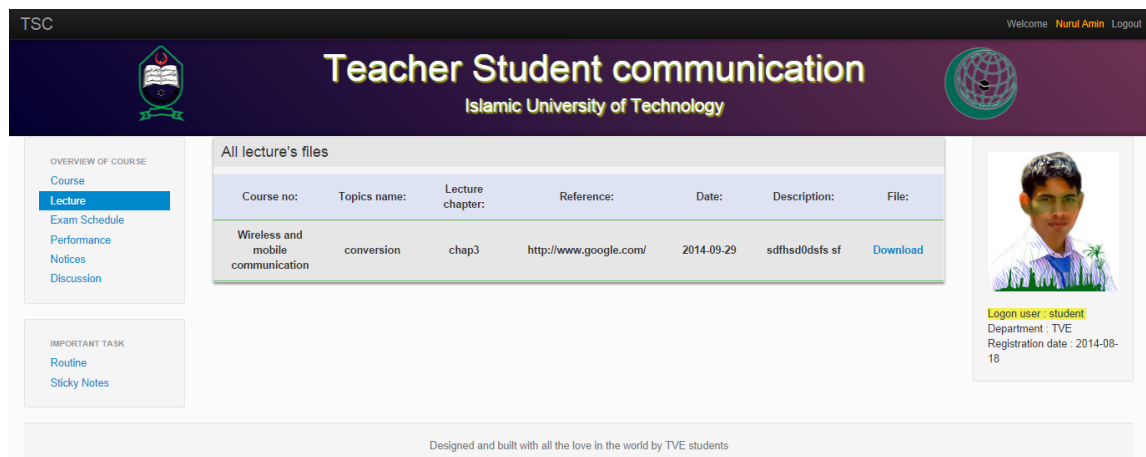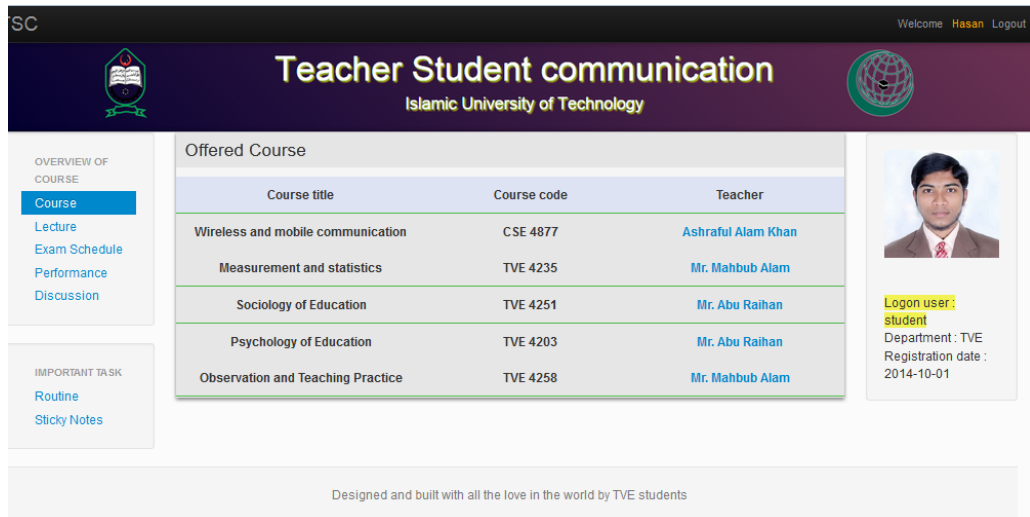
Figure 32: lecture interface for students

6.15 Offered Courses Interface

Students will see of his all course on this page those are provided by the administration. He will also see those teacher are assigned for individual course. So students are easily understand how many courses have and how many credit of individual semester. So he cans easily preparation which subjects are difficult and which subject are simple.

Figure 33: Offered Courses Information Interface for Students

6.16 Discussion Interface

Students can easily asked of his teacher to better understanding and he can asked more and more but teacher don't disturbance. Teacher also replies of that question for his motivated. Students can ask frequently by his individual teacher. Each and every teacher also replies each and every topic.

Figure 34: Students discussion interface

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6.17 Comments Interface for Class Performance Marks

When students have any comments about his individual exam mark he can easily request to the respective teacher for recheck then teacher will be recheck of those then students will be happy to see that also saved time to conversion.

Figure 35: Students place doubt interface

6.18 Routine Interface

Students can upload his class routine easily and he also check either today he has any today or not. Students will see individual day wise color of his class schedule that's really beautiful looking. He also modify his class schedules and he can delete of those class are finished. Sometimes he needs to shift class for his some reason for his better scheduling that's why students are easily change of those class.

Figure 36: Students routine interface

6.19 Login Interface in Android Apps

Teacher and students both are easily enter into his site by this android application. This application is very light to access. So user is more interacted to use of this application.
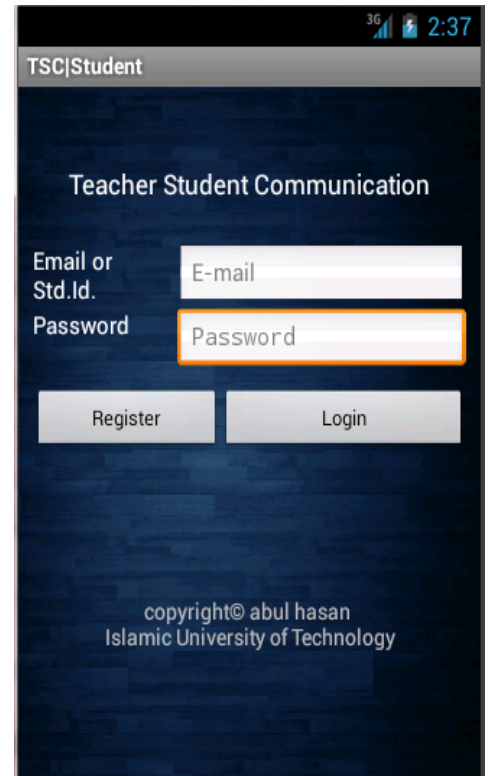
Figure 37: Teacher student's login interface

6.20 Home Page interface in Android

Students are easily collect all of study materials by these android applications. Students will get notification in real time then he will try to manage those things those are provided by his teacher also his classmates. Students also get exam schedules by these apps for his better reminder. He also gets some sticky notice those he already input his apps and recalls these think then activate it. He also checks his performance by these apps.

Figure 38: Students android interface

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6.21 Update Interface in Android

Android is most popular portable and handheld device and everybody carry of this devices. So teacher can easily upload his exam schedules and also he can easily modify things for his better schedules and students also get these things.
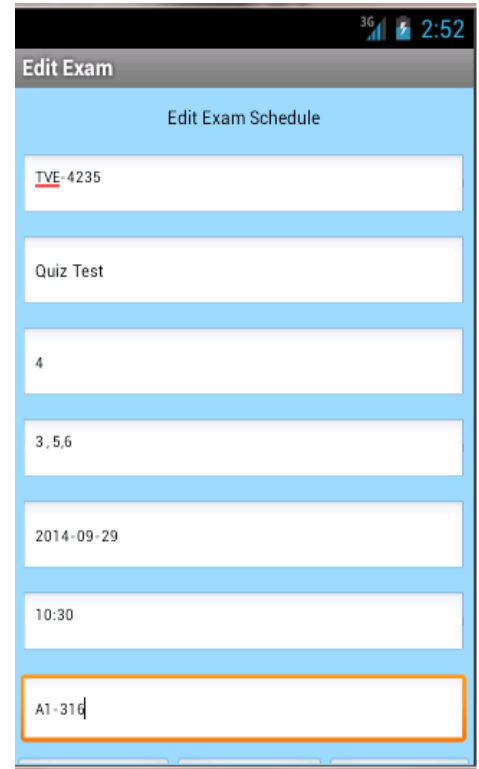
Figure 39: examination update interface

6.22 Exam Schedule Interface in Android

Students are easily notice his exam schedules by this android apps. This exam interface are notice to the students in the before each and every exam then students are easily prepare his content of the individual exam.
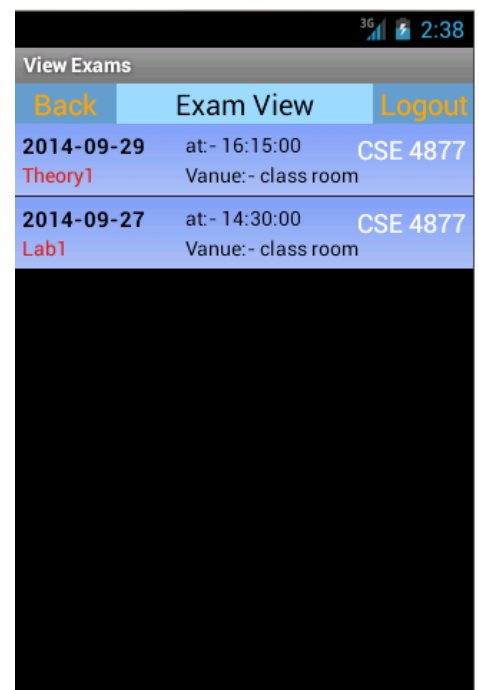
Figure 40: exam Schedule interface in Android

Chapter 7: Testing

Why we need testing in any project?

As without get tested a we cannot determine the various errors that may be there in the project or may come in future, that gradually becomes defects while implementing the project. So, to make an efficient project it should be properly tested.

UNIT TESTING

It is one of the white-box oriented testing. Unit testing focuses verification efforts on the smallest unit of software design- the software component and module. As in this project various modules are: Teacher Module, student module, administration modules and so on. So, various modules are independently tested here to ensure that information properly flow into and out of the various modules

INTEGRATION TESTING

Integration testing is a technique to uncover errors associated with interfacing. The objective is to take unit testing components and build a program structure. Here interfaces can be between patient and doctor, between patient and facilities between visitors and facilities available to them, between administrator and users in general and so on. Therefore these interfaces are properly tested.

SYSTEM TESTING

Software in incorporated with other system elements (such as people, information, hardware) thus a series of system integration and validation tests are conducted. It is actually a series of different test whose primary purpose is to fully exercise the computer based system.

Chapter 8: Conclusion

In this project we are using for teachers students communication to share daily class lectures sheets and essential references to know details for students by the teachers. And from this project students get notification about examination dates or upcoming activities and recants events where there are benefited from traditional notice about examination. In traditional system teacher provide the lecture either hard copy or softcopy, softcopy provided by either using pen drive or Gmail or ftp server. Those have some existent problem in teaching leering systems. This cloud web and android based application are   provided the facilitate to teachers and students to make easier communication to each others.

Appendix

During the software implementation, we developed many data structures, but we will just show some important portions of the important one.

1. For Web Application:

Registration process
```php
<? Php
session_start();
include_once 'connect.php';
if (isset($_POST['f_uid'])){
$fld_tid = $_POST['f_uid'];
$fld_sid = $_POST['f_uid'];
$query = "SELECT distinct fld_tid FROM tbl_teacher_student WHERE fld_tid='$fld_tid'";
$query1 = "SELECT distinct fld_sid FROM tbl_teacher_student WHERE fld_sid='$fld_sid'";
$result = mysql_query($query) or die(mysql_error());
$result1 = mysql_query($query1) or die(mysql_error());
$count = mysql_num_rows($result);
$count1 = mysql_num_rows($result1);
if ($count == 1 or $count1==1){
 if(isset($_POST['register'])  && $_POST['register']=='Submit') {
      $f_date = date("y-m-d");
      $f_utype = $_POST['f_utype'];
      $f_uid = $_POST['f_uid'];
      $f_name = $_POST['f_name'];
      $f_email = $_POST['f_email'];
      $f_password = $_POST['f_password'];
      $f_dept = $_POST['f_dept'];
      $pic1=($_FILES['files1']['name']);
      $path = "uploads/profile/"; // Upload directory
      $result = mysql_query("select * from tbl_teacher_student");
      $row=mysql_fetch_array($result);
      $student_id = $row['fld_sid'];
      $teacher_id = $row['fld_tid'];
```

```php
        move_uploaded_file($_FILES["files1"]["tmp_name"], $path.$pic1);
        $query = "INSERT INTO tbl_users (f_utype, f_uid, f_name, f_password, f_email, f_dept,
f_date, file)
        VALUES ('$f_utype', '$f_uid', '$f_name', '$f_password', '$f_email', '$f_dept', '$f_date',
'$pic1')";
        mysql_query($query) or die(mysql_error());
        echo "<script>alert('Successfully Registered');
        window.location='reg.php';
        </script>";
    }
}
else{
    echo "<script>alert('Invalid user! Please contact your department.');
        window.location='reg.php';
        </script>";
    }
}
?>
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Registration for TSC</title>
    <link href="css/bootstrap.css" rel="stylesheet">
    <link href="css/bootstrap-responsive.css" rel="stylesheet">
  </head>
  <body>
    <div class="container">
      <form class="form-signin" role="form" action="reg.php" method="post" enc-
type="multipart/form-data">
          <p style="text-align: left; margin-top: 15px; margin-right: 5px"><a
href="index.php">Back to login page</a></p><hr>
      <h3 class="form-signin-heading">Please registration</h3>
      <label>User Category :</label>
          <select class="form-control" name="f_utype" type="text" required>
          <option value="">Please select your category</option>
          <option value="teacher">Teacher</option>
          <option value="student">Student</option>
          </select>
          <label>User ID: </label>
          <input class="form-control" id="f_uid" type="text" name="f_uid" pattern="^[0-
9]{3,6}" required placeholder="Enter here your ID" />
          <span class="hint">User id should be 3 to 6 characters</span>
          <label>Full Name : </label>
          <input class="form-control" id="f_name" type="text" name="f_name" pattern="[a-zA-
Z ]{4,30}" required placeholder="Enter here your name" />
          <span class="hint">Name should be maximum 30 characters</span>
          <label>E-Mail : </label>
          <input class="form-control" type="email" id="f_email" name="f_email" class="form-
control" placeholder="Email address" required autofocus/>
          <span class="hint">Email should be valid like nurul@google.com</span>
          <label>Password : </label>
          <input type="password" id="f_password" name="f_password" class="form-control"
pattern="^[a-zA-Z0-9]{4,15}" placeholder="Password" required />
          <span class="hint">Password should be 4 to 15</span>
          <label>Department :</label>
          <select class="form-control" name="f_dept" type="text" required>
          <option value="">Please select your dept.</option>
```

```
        <option value="TVE">TVE</option>
        <option value="CSE">CSE</option>
        <option value="EEE">EEE</option>
        <option value="MCE">MCE</option>
        <option value="CEE">CEE</option>
        </select>
        <label>Photo : </label>
        <input class="form-control" type="file" name="files1" id="file" value="Submit"/>
        <input style="display:none" type="date" name="f_date">
        <br><button class="btn btn-lg btn-primary" type="submit" name="register" val-
ue="Submit">Create your account</button>
    </form>
  </div> <!-- /container -->
 </body>
</html>
```

//--**Sign in process**-------------------------------//

```php
<?php
session_start();
include_once 'connect.php';
if (isset($_POST['f_email']) and isset($_POST['f_password'])){
$f_email = $_POST['f_email'];
$f_password = $_POST['f_password'];
$query = "SELECT * FROM tbl_users WHERE f_email='$f_email' and
f_password='$f_password'";
$result = mysql_query($query) or die(mysql_error());
$count = mysql_num_rows($result);
if ($count == 1){
  while($type = mysql_fetch_array($result)){
   $u_type = $type['f_utype'];
   if($u_type=='teacher'){
   $_SESSION['t_email'] = $f_email;
   header("Location: teacher/t_index.php");
   }
   if($u_type=='student'){
    $_SESSION['s_email'] = $f_email;
    header("Location: student/s_index.php");
   }
   if($u_type=='admin'){
    $_SESSION['admin'] = $f_email;
    header("Location: admin/index.php");
   }
  }
}
else{
echo "Invalid Login Credentials.";
}
}
?>
<!DOCTYPE HTML>
<html lang="en">
 <head>
  <title>Signin || TSC</title>
  <link href="dist/css/bootstrap.min.css" rel="stylesheet">
  <link href="css/signin.css" rel="stylesheet">
  <script src="assets/js/ie-emulation-modes-warning.js"></script>
```

```html
    <script src="assets/js/ie10-viewport-bug-workaround.js"></script>
  </head>
  <body>
    <div class="container">
      <form class="form-signin" role="form" action="index.php" enctype="multipart/form-data" method="post">
        <h2 class="form-signin-heading">Please sign in</h2>
        <input type="email" id="f_email" name="f_email" class="form-control" placeholder="Email address" required autofocus>
        <input type="password" id="f_password" name="f_password" class="form-control" placeholder="Password" required>
        <button class="btn btn-lg btn-primary btn-block" type="submit">Sign in</button>
        <a href="reg.php"><p style="text-align: right; margin-top: 15px; margin-right: 5px">create new account</p></a>
      </form>
    </div>
  </body>
</html>
```

//------------------------------Admin process-------------------------------------//

```php
<?php
include_once "session.php";
?>
<!DOCTYPE html>
<html lang="en">
  <head>
    <link href="../css/bootstrap.css" rel="stylesheet">
    <link href="../css/bootstrap-responsive.css" rel="stylesheet">
    <script type="text/javascript">
    function init() {
      var bHaveFileAPI = (window.File && window.FileReader);
      if (!bHaveFileAPI) {
        alert("This browser doesn't support the File API");
        return;
      }
      document.getElementById("fileElem").addEventListener("change", onFileChanged);
    }
    function onFileChanged(theEvt) {
      var thefile = theEvt.target.files[0];
      if (thefile.type != "text/plain") {
        document.getElementById('filecontents').innerHTML = "No text file chosen";
        return;
      }
      var reader = new FileReader();
      reader.onload = function (evt) {
        var resultText = evt.target.result;
        document.getElementById('filecontents').innerHTML = resultText;
      }
      reader.readAsText(thefile);
    }
    window.addEventListener("load", init);
</script>
  </head>
  <body>
```

```html
    <div class="navbar navbar-inverse navbar-fixed-top">
      <div class="navbar-inner">
        <div class="nav-collapse collapse">
           <p class="navbar-text pull-right">
            <a href="../logout.php" class="navbar-link">Logout</a>
           </p>
           <p class="navbar-text pull-right">Welcome  
            <a href="#" class="navbar-link">
           <?php
           //mag show sang information sang user nga nag login
           $user_email=$_SESSION['admin'];
           $result=mysql_query("select * from tbl_users where f_email='$user_email'")or
die(mysql_error);
           $row=mysql_fetch_array($result);
           $Name=$row['f_name'];
           echo '<font color="orange">'.$Name.'</font>';?>
          </a>
          </p>
          <ul class="nav">
           <li style="font-size: 22px;"><a href="index.php">TSC</a></li>
          </ul>
        </div><!--/.nav-collapse -->
      </div>
    </div>
  <?php include "header.php"; ?>
    <div class="container-fluid">
      <div class="row-fluid">
        <div class="span2 bs-docs-sidebar">
          <div class="well sidebar-nav">
           <ul class="nav nav-list">
            <li class="nav-header">Overview</li>
             <li><a href="teacher_student.php">Course Offer</a></li>
             <li><a href="index_teacher_list.php">Search Faculties</a></li>
             <li><a href="index_student_list.php">Search Student</a></li>
           </ul>
          </div><!--/.well -->
        </div><!--/span-->
        <div class="span10">
           <cite>Course offer</cite><hr>
         <form action="teacher_student.php" method="post" enctype="multipart/form-data">
          <fieldset>
          <label>Teacher ID: </label>
          <input id="fld_tid" type="text" name="fld_tid" pattern="[0-9]{3,6}"  placehold-
er="Enter here teacher id"  />
          <span class="hint">Teacher id should be 3 to 6 number</span>
          <label>Name:</label>
          <input id="fld_name" type="text" name="fld_name" title="Avoid special characters"
placeholder="name: example abc" pattern="[a-zA-Z,-. ]{1,50}" />
          <label>Select a file: </label>
                        <input type="file" name="files" id="fileElem" />
          <label>Student's ID: </label>
          <textarea cols="80" rows="10" id="filecontents" name="fld_sid"></textarea>
          <span class="hint">Enter here all student id with comma</span>
          <label>Department :</label>
          <select class="form-control" name="fld_dept" type="text" >
          <option value="">Please select your dept.</option>
          <option value="TVE">TVE</option>
```

```html
          <option value="CSE">CSE</option>
          <option value="EEE">EEE</option>
          <option value="MCE">MCE</option>
          <option value="CEE">CEE</option>
          </select>
          <label>Course code: </label>
          <input id="fld_course_code" type="text" name="fld_course_code" pat-
tern="^{TVE}[0-9]" placeholder="example:TVE 4235" required >
          <span class="hint">Start with (TVE || CSE || MCE || EEE || CEE) then code </span>
          <label>Title:</label>
          <input id="fld_course_name" type="text" name="fld_course_name" />
          <br><button type="submit" name="upload" id="upload" value="Upload"
class="btn">Upload your data</button>
          <span class="notif">* denotes all required</span>
         </fieldset>
       </form>
     </div><!--/span-->
    </div><!--/row-->
    <footer>
     <?php include "footer.php"; ?>
    </footer>
   </div><!--/.fluid-container-->
  </body>
</html>
<?php
        $user_email=$_SESSION['admin'];
        $result=mysql_query("select * from tbl_users where f_email='$user_email'")or
die(mysql_error);
        $row=mysql_fetch_array($result);
        $user_id=$row['f_uid'];
if(isset($_POST['upload']) && $_POST['upload']=='Upload')
{
  $fld_tid = $_POST['fld_tid'];
  $fld_name = $_POST['fld_name'];
  $fld_sid = $_POST['fld_sid'];
  $fld_dept = $_POST['fld_dept'];
  $fld_course_code = $_POST['fld_course_code'];
  $fld_course_name = $_POST['fld_course_name'];
$std_id = explode(",", $fld_sid);
foreach ($std_id as $part) {
    $ins="INSERT into tbl_teacher_student
(fld_tid,fld_name,fld_sid,fld_dept,fld_course_code,fld_course_name)
    VALUES
('$fld_tid','$fld_name','$part','$fld_dept','$fld_course_code','$fld_course_name')";
    mysql_query($ins) or die(mysql_error());
 }
    echo "<script>alert('Successfully added your data');
    window.location='teacher_student.php';
    </script>";
}
?>
```

//--------------------------------**Exam schedule process**----------------------------//


```php
<?php
```

```php
include_once "session.php";
?>
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Lecture Upload page</title>
    <link href="../css/bootstrap.css" rel="stylesheet">
        <link href="../css/bootstrap-responsive.css" rel="stylesheet">
  </head>
  <body>
    <div class="container-fluid">
      <div class="row-fluid">
        <div class="span12">
          <fieldset>
 <hr>
<a href="index_exam_upload.php"><button class="btn">Add New</button></a>
<hr>
<?php
$user_email=$_SESSION['t_email'];
        $result=mysql_query("select * from tbl_users where f_email='$user_email'")or
die(mysql_error);
        $row=mysql_fetch_array($result);
        $user_id=$row['f_name'];
$sql = "SELECT * FROM tbl_examschedule where fld_name='$user_id'";
$query = mysql_query($sql) or die(mysql_error());
?>
<table>
        <tr>
         <th>Course</th>
         <th>Exam/Test</th>
         <th>Exam no</th>
         <th>Content</th>
                            <th>Venue</th>
                            <th>Date</th>
         <th>Time</th>
         <th colspan="2">Action</th>
        </tr>
<?php while($row = mysql_fetch_array($query)) {
 $id = $row['id'];
 $todays_date = date("Y-m-d");
 $timestamp = time() - 86400;
 $date2 = strtotime (" + 2 days ", $timestamp);
 $date5 = strtotime (" + 4 days ", $timestamp);
 $date365 = strtotime (" + 365 days ", $timestamp);
 $alert_date2 = date('Y-m-d', $date2);
 $alert_date5 = date('Y-m-d', $date5);
 $alert_date365 = date('Y-m-d', $date365);
 $exam_date = $row['fld_date'];
 if($exam_date > $todays_date ){
    if($exam_date <= $alert_date2)
    {
   echo "<tr style=background-color:rgba(255,51,51,.7)";
    }
elseif ($exam_date <= $alert_date5 && $exam_date > $alert_date2) {
 echo "<tr style=background-color:rgba(36,222,11,.7)";
}
elseif ($exam_date <= $alert_date365 && $exam_date > $alert_date5) {
```

```php
  echo "<tr style=background-color:rgba(240,240,14,.7)";
}
?>
 <tr>
  <td><?php echo $row['fld_course_name']; ?></td>
  <td><?php echo $row['fld_exam_type']; ?></td>
  <td><?php echo $row['fld_eno']; ?> </td$>
  <td><?php echo $row['fld_content']; ?> </td>
        <td><?php echo $row['fld_venue']; ?> </td>
        <td><?php echo $row['fld_date']; ?> </td>
        <td><?php echo $row['fld_time']; ?> </td>
  <td><a href="index_exam_update.php?id=<?php echo $id;?>">Edit</a></td>
  <td><a href="index_exam_delete.php?id=<?php echo $id;?>">Delete</a></td>
 </tr>
<?php }
}
?>
</table>
      </fieldset>
    </div><!--/.fluid-container-->
</div>
</div>
 </body>
</html>
```

2. For Android Application:

//-------------------**User Function for Login, Registration**--------------------------------//

```java
package com.example.androidhive.library;
import java.util.ArrayList;
import java.util.List;
import org.apache.http.NameValuePair;
import org.apache.http.message.BasicNameValuePair;
import org.json.JSONObject;
import android.content.Context;
public class UserFunctions {
private JSONParser jsonParser;

private static String loginURL = "http://www.mytsc.humanbd.com/iut_tsc_connect/index.php";
private static String registerURL = "http://www.mytsc.humanbd.com/iut_tsc_connect/index.php";
private static String forpassURL = "http://www.mytsc.humanbd.com/iut_tsc_connect/index.php";
private static String chgpassURL = "http://www.mytsc.humanbd.com/iut_tsc_connect/index.php";

   private static String login_tag = "login";
   private static String register_tag = "register";
   private static String forpass_tag = "forpass";
   private static String chgpass_tag = "chgpass";

   // constructor
   public UserFunctions(){
      jsonParser = new JSONParser();
   }

/*** Function to Login**/
   public JSONObject loginUser(String email, String password){
      List<NameValuePair> params = new ArrayList<NameValuePair>();
```

```java
      params.add(new BasicNameValuePair("tag", login_tag));
      params.add(new BasicNameValuePair("email", email));
      params.add(new BasicNameValuePair("password", password));
      JSONObject json = jsonParser.getJSONFromUrl(loginURL, params);
      return json;
   }

/*** Function to change password**/
   public JSONObject chgPass(String newpas, String email){
      List<NameValuePair> params = new ArrayList<NameValuePair>();
      params.add(new BasicNameValuePair("tag", chgpass_tag));

      params.add(new BasicNameValuePair("newpas", newpas));
      params.add(new BasicNameValuePair("email", email));
      JSONObject json = jsonParser.getJSONFromUrl(chgpassURL, params);
      return json;
   }

/*** Function to reset the password**/
   public JSONObject forPass(String forgotpassword){
      List<NameValuePair> params = new ArrayList<NameValuePair>();
      params.add(new BasicNameValuePair("tag", forpass_tag));
      params.add(new BasicNameValuePair("forgotpassword", forgotpassword));
      JSONObject json = jsonParser.getJSONFromUrl(forpassURL, params);
      return json;
   }

/*** Function to  Registeration_Fo**/
   public JSONObject registerUser(String fname, String lname, String email, String uname,
String password)
         {
      // Building Parameters
      List<NameValuePair> params = new ArrayList<NameValuePair>();
      params.add(new BasicNameValuePair("tag", register_tag));
      params.add(new BasicNameValuePair("fname", fname));
      params.add(new BasicNameValuePair("lname", lname));
      params.add(new BasicNameValuePair("email", email));
      params.add(new BasicNameValuePair("uname", uname));
      params.add(new BasicNameValuePair("password", password));
      JSONObject json = jsonParser.getJSONFromUrl(registerURL,params);
      return json;
         }

/*** Function to logout user * Resets the temporary data stored in SQLite Database**/
   public boolean logoutUser(Context context)
         {
      DatabaseHandler db = new DatabaseHandler(context);
      db.resetTables();
      return true;
         }

}


//-------------------------------------View Lectures in Android--------------------------------//
package com.example.androidhive;
import java.io *;
```

```java
public class ViewLectures extends ListActivity {
    //01
        ProgressBar pb;
    Dialog dialog;
    int downloadedSize = 0;
    int totalSize = 0;
    private String fil_path;
    TextView cur_val;


        private ProgressDialog pDialog;
        JSONParser jParser = new JSONParser();
        ArrayList<HashMap<String, String>> ContentList;

        //01------urlchnage--------------------
        //private static String url_all_content =
"http://10.0.2.2/iut_tsc_connect/view_all_lecture.php";
        private static String url_all_content =
"http://www.mytsc.humanbd.com/iut_tsc_connect/view_all_lecture.php";
        private static String dwnload_file_path =
"http://www.mytsc.humanbd.com/uploads/uploads/Dd.pdf";
//02---------------------- JSON Node names----------------------
        private static final String TAG_SUCCESS = "success";
        private static final String TAG_LECTURES = "tbl_lecture";
        private static final String TAG_LID = "php_lid";
        private static final String TAG_TID = "php_tid";
        private static final String TAG_HED = "php_heading";
        private static final String TAG_CODE = "php_code";
        private static final String TAG_CNTNT = "php_content";
        private static final String TAG_CDATE = "php_created_at";
        private static final String TAG_REF = "php_reference";
        private static final String TAG_FILE = "php_file";

        // lecture JSONArray
        JSONArray lecture = null;

        @Override
        public void onCreate(Bundle savedInstanceState) {
                super.onCreate(savedInstanceState);
                setContentView(R.layout.view_lectures);                //our layout name

//-----------------------NEW Button-------------------------------
        Button btnNew = (Button) findViewById(R.id.btnCreateLecture);
                    btnNew.setOnClickListener(new View.OnClickListener() {
                            @Override
                            public void onClick(View view) {
//                                    Intent i = new Intent(getApplicationContext(),
Add_Lecture_web.class);
//                                    startActivity(i);

                            UserFunctions logout = new UserFunctions();
                            logout.logoutUser(getApplicationContext());
                            Intent login = new Intent(getApplicationContext(), Login.class);
                            login.addFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP);
                            startActivity(login);
                            finish();
                                }
```

```
                                });

//---------------------Back Button--------------------------------------------
Button btnBack = (Button) findViewById(R.id.btnback);
btnBack.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
                Toast.makeText(getApplicationContext(), "Back Button Pressed",
Toast.LENGTH_LONG).show();
                ViewLectures.this.finish();
        }
});


                ContentList = new ArrayList<HashMap<String, String>>();
                new LoadAllContents().execute();
                ListView lv = getListView();
                // on selecting single product
                lv.setOnItemClickListener(new OnItemClickListener() {
                        @Override
                        public void onItemClick(AdapterView<?> parent, View view, int position,
long id) {
                                String str_lid = ((TextView)
view.findViewById(R.id.lid)).getText().toString();
                                //ohhps
                                Toast.makeText(getApplicationContext(), "List Button",
Toast.LENGTH_LONG).show();
                                showProgress(dwnload_file_path);

                new Thread(new Runnable() {
                  public void run() {
                    downloadFile();
                  }
                }).start();


                        }
                });

        }

        ///down
  void downloadFile(){

        try {
                URL url = new URL(dwnload_file_path);
                HttpURLConnection urlConnection = (HttpURLConnection)
url.openConnection();
                urlConnection.setRequestMethod("GET");
                urlConnection.setDoOutput(true);
                urlConnection.connect();
                File SDCardRoot = Environment.getExternalStorageDirectory();
        String urls[] =
dwnload_file_path.split("http://www.mytsc.humanbd.com/uploads/uploads/");
        fil_path = urls[1].trim();
                File file = new File(SDCardRoot, fil_path);
                FileOutputStream fileOutput = new FileOutputStream(file);
                InputStream inputStream = urlConnection.getInputStream();
```

```java
                totalSize = urlConnection.getContentLength();
                runOnUiThread(new Runnable() {
                        public void run() {
                                pb.setMax(totalSize);
                        }
                });

                byte[] buffer = new byte[1024];
                int bufferLength = 0;
                while ( (bufferLength = inputStream.read(buffer)) > 0 ) {
                        fileOutput.write(buffer, 0, bufferLength);
                        downloadedSize += bufferLength;
                        runOnUiThread(new Runnable() {
                           public void run() {
                                   pb.setProgress(downloadedSize);
                                   float per = ((float)downloadedSize/totalSize) * 100;
                                   cur_val.setText("Downloaded " + downloadedSize + "KB / " + to-
talSize + "KB (" + (int)per + "%)" );
                           }
                        });
                }
                fileOutput.close();
                runOnUiThread(new Runnable() {
                        public void run() {
                        }
                });

        } catch (final MalformedURLException e) {
                showError("Error : MalformedURLException " + e);
                e.printStackTrace();
        } catch (final IOException e) {
                showError("Error : IOException " + e);
                e.printStackTrace();
        }
        catch (final Exception e) {
                showError("Error : Please check your internet connection " + e);
        }
}

void showError(final String err){
        runOnUiThread(new Runnable() {
                public void run() {
                        Toast.makeText(ViewLectures.this, err, Toast.LENGTH_LONG).show();
                }
        });
}

void showProgress(String file_path){
        dialog = new Dialog(ViewLectures.this);
        dialog.requestWindowFeature(Window.FEATURE_NO_TITLE);
        dialog.setContentView(R.layout.myprogressdialog);
        dialog.setTitle("Download Progress");
        cur_val = (TextView) dialog.findViewById(R.id.cur_pg_tv);
        cur_val.setText("Starting download............................");
        dialog.show();
        pb = (ProgressBar)dialog.findViewById(R.id.progress_bar);
        pb.setProgress(0);
```

```java
                pb.setProgressDrawable(getResources().getDrawable(R.drawable.green_progress));
        }
        @Override
        protected void onActivityResult(int requestCode, int resultCode, Intent data) {
                super.onActivityResult(requestCode, resultCode, data);
                if (resultCode == 100) {
                        Intent intent = getIntent();
                        finish();
                        startActivity(intent);
                }

        }

        class LoadAllContents extends AsyncTask<String, String, String> {
                @Override
                protected void onPreExecute() {
                        super.onPreExecute();
                        pDialog = new ProgressDialog(ViewLectures.this);
                        pDialog.setMessage("Loading Lectures. Please wait...");
                        pDialog.setIndeterminate(false);
                        pDialog.setCancelable(false);
                        pDialog.show();
                }

                protected String doInBackground(String... args) {
                        List<NameValuePair> params = new ArrayList<NameValuePair>();
                        JSONObject json = jParser.makeHttpRequest(url_all_content, "GET",
params);
                        Log.d("All Contents: ", json.toString());
                        try {
                                int success = json.getInt(TAG_SUCCESS);
                                if (success == 1) {
                                        lecture = json.getJSONArray(TAG_LECTURES);
                                        for (int i = 0; i < lecture.length(); i++) {
                                                JSONObject c = lecture.getJSONObject(i);
                                                String str_lid= c.getString(TAG_LID);
                                                String str_tid= c.getString(TAG_TID);
                                                String str_hed= c.getString(TAG_HED );
                                                String str_code= c.getString(TAG_CODE);
                                                String str_contnt= c.getString(TAG_CNTNT);
                                                String str_dt= c.getString(TAG_CDATE);
                                                String str_ref= c.getString(TAG_REF);
                                                String str_file= c.getString(TAG_FILE);

                                                // creating new HashMap
                        HashMap<String, String> map = new HashMap<String, String>();

//05------------------
                                                adding each child node to HashMap key => value
                                                map.put(TAG_LID, str_lid);
                                                map.put(TAG_TID, str_tid);
                                                map.put(TAG_HED, str_hed);
                                                map.put(TAG_CODE, str_code);
                                                map.put(TAG_CNTNT, str_contnt);
                                                map.put(TAG_CDATE, str_dt);
                                                map.put(TAG_REF, str_ref);
                                                map.put(TAG_FILE, str_file);
```

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```java
                                                // adding HashList to ArrayList
                                                ContentList.add(map);
                                        }
                                } else {
                                        Intent i = new Intent(getApplicationContext(),
Add_Lecture_web.class);

                                        i.addFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP);
                                        startActivity(i);
                                }
                        }
                        catch (JSONException e)
                                {
                                e.printStackTrace();
                                }

                        return null;
                }

/*** After completing background task Dismiss the progress dialog***/

                protected void onPostExecute(String file_url) {
                        pDialog.dismiss();
                        runOnUiThread(new Runnable() {
                                public void run() {

                                        /*** Updating parsed JSON data into ListView* */
                                        ListAdapter adapter = new SimpleAdapter(
                                                ViewLectures.this, ContentList,
                                                R.layout.list_item_for_lecture, new
String[] { TAG_LID,   TAG_CODE,TAG_CDATE,TAG_FILE},
                                                new int[] { R.id.lid, R.id.lec_code,
R.id.txtDate, R.id.lectures
                                                        });
                                        setListAdapter(adapter);
                                }
                        });

                }

        }

        private static final int Setting_Menu = Menu.FIRST + 2;
                private static final int Logout_Menu = Menu.FIRST + 3;
                Toast msg;

        @Override
        public boolean onCreateOptionsMenu(Menu menu)
                {
                menu.add(Menu.NONE, Setting_Menu, Menu.NONE, "Home");
                menu.add(Menu.NONE, Logout_Menu, Menu.NONE, "Logout");
                return (super.onCreateOptionsMenu(menu));
                }

        @Override
        public boolean onOptionsItemSelected(MenuItem item)
                {
          switch (item.getItemId())
```

```
        {
        case Setting_Menu:
                msg = Toast.makeText(ViewLectures.this, "Home",
Toast.LENGTH_LONG);
                msg.show();
                        Intent faq = new Intent(getApplicationContext(), MainScreenAc-
tivity.class);
                        startActivity(faq);
                break;

        case Logout_Menu:
            UserFunctions logout = new UserFunctions();
            logout.logoutUser(getApplicationContext());
            Intent login = new Intent(getApplicationContext(), Login.class);
            login.addFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP);
            startActivity(login);
            finish();
        }
      return (super.onOptionsItemSelected(item));
       }


}

//----------------------View Exam----------

package com.example.androidhive;

import java.util.ArrayList;
import java.util.HashMap;
import java.util.List;
import org.apache.http.NameValuePair;
import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;

public class ViewExams extends ListActivity {
        private ProgressDialog pDialog;
        JSONParser jParser = new JSONParser();
        ArrayList<HashMap<String, String>> ContentList;

private static String url_all_content = "http://www.mytsc.humanbd.com/iut_tsc_connect/view_all_exams.php";
private static final String TAG_SUCCESS = "success";
private static final String TAG_DBTABLE = "tbl_examschedule";

        private static final String TAG_EID = "php_eid";
        private static final String TAG_xCode = "php_code";
        private static final String TAG_exType = "php_exType";
        private static final String TAG_exNo = "php_exNo";
        private static final String TAG_exSyllbs = "php_exSyllbs";
        private static final String TAG_exVanu = "php_exVan";
        private static final String TAG_exDate = "php_date";
        private static final String TAG_extm = "php_tm";

        JSONArray exam = null;

        @Override
```

```java
public void onCreate(Bundle savedInstanceState)
        {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.view_exam);

Button btnNewProduct = (Button) findViewById(R.id.btnCreateLecture);
                btnNewProduct.setOnClickListener(new View.OnClickListener() {
                        @Override
                        public void onClick(View view) {

        Intent i = new Intent(getApplicationContext(), Add_NewExams.class);
                                startActivity(i);


                        }
                });
        Button btnBack = (Button) findViewById(R.id.btnback);
        btnBack.setOnClickListener(new View.OnClickListener()
        {
        @Override
        public void onClick(View v)
                {
                Toast.makeText(getApplicationContext(), "Back Button Pressed",
Toast.LENGTH_LONG).show();
                ViewExams.this.finish();
                }
        });

        ContentList = new ArrayList<HashMap<String, String>>();
        new LoadAllContents().execute();
        ListView lv = getListView();

        lv.setOnItemClickListener(new OnItemClickListener() {
        @Override
        public void onItemClick(AdapterView<?> parent, View view,
        int position, long id)
                {
                String php_eid = ((TextView) view.findViewById(R.id.eid)).getText().toString();
                Intent in = new Intent(getApplicationContext(), Edit_Exam.class);
                in.putExtra(TAG_EID, php_eid);
                startActivityForResult(in, 100);
                }
});
}
@Override
protected void onActivityResult(int requestCode, int resultCode, Intent data) {
        super.onActivityResult(requestCode, resultCode, data);
        if (resultCode == 100)
                {
                Intent intent = getIntent();
                finish();
                startActivity(intent);
                }
}
class LoadAllContents extends AsyncTask<String, String, String> {
        @Override
        protected void onPreExecute() {
                super.onPreExecute();
```

```java
                        pDialog = new ProgressDialog(ViewExams.this);
                        pDialog.setMessage("Loading Exam. Please wait...");
                        pDialog.setIndeterminate(false);
                        pDialog.setCancelable(false);
                        pDialog.show();
                }
                protected String doInBackground(String... args) {
                        List<NameValuePair> params = new ArrayList<NameValuePair>();
                        JSONObject json = jParser.makeHttpRequest(url_all_content, "GET",
params);
                        Log.d("All Exams: ", json.toString());
                        try {
                                int success = json.getInt(TAG_SUCCESS);
                                if (success == 1)
                                        {
                                        exam = json.getJSONArray(TAG_DBTABLE);
                                        for (int i = 0; i < exam.length(); i++)
                                                {
                                                JSONObject c = exam.getJSONObject(i);
                                                String j_exam_id = c.getString(TAG_EID);
                                                String j_c_code = c.getString(TAG_xCode);
                                                String j_exam_type = c.getString(TAG_exType);
                                                String j_exam_no = c.getString(TAG_exNo);
                                                String j_exam_syl = c.getString(TAG_exSyllbs);
                                                String j_exam_venue = c.getString(TAG_exVanu);
                                                String j_exam_date = c.getString(TAG_exDate);
                                                String j_exam_time = c.getString(TAG_extm);

                                                HashMap<String, String> map = new Hash-
Map<String, String>();

                                                map.put(TAG_EID, j_exam_id);
                                                map.put(TAG_xCode, j_c_code);
                                                map.put(TAG_exType, j_exam_type);
                                                map.put(TAG_exNo, j_exam_no);
                                                map.put(TAG_exSyllbs, j_exam_syl);
                                                map.put(TAG_exVanu, j_exam_venue);
                                                map.put(TAG_exDate, j_exam_date);
                                                map.put(TAG_extm, j_exam_time);

                                                ContentList.add(map);
                                                }
                                        }

                                else
                                        {
                                        Intent i = new Intent(getApplicationContext(),
Add_NewExams.class);

                                        i.addFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP);
                                        startActivity(i);
                                        }
                                }

                        catch (JSONException e)
                                {
                                e.printStackTrace();
                                }
                        return null;
```

```
                }
            protected void onPostExecute(String file_url) {
                    pDialog.dismiss();
                    runOnUiThread(new Runnable()
                            {
                            public void run()
                                    {
                                    ListAdapter adapter = new SimpleAdapter(
                                    ViewExams.this, ContentList,
                                    R.layout.list_item_for_exam, new String[] { TAG_EID,
TAG_xCode, TAG_exType,TAG_exNo, TAG_exVanu,TAG_exDate,TAG_extm},
                                    new int[] { R.id.eid, R.id.txtCode, R.id.txtExamType,
R.id.textView2,R.id.txtVenue, R.id.txtExamDate, R.id.txtTime});
                                    setListAdapter(adapter);
                                    }
                            });

                }
        }
                    private static final int Setting_Menu = Menu.FIRST + 2;
                    private static final int Logout_Menu = Menu.FIRST + 3;
                    Toast msg;

                @Override
                public boolean onCreateOptionsMenu(Menu menu)
                        {
                        menu.add(Menu.NONE, Setting_Menu, Menu.NONE, "Home");
                        menu.add(Menu.NONE, Logout_Menu, Menu.NONE, "Logout");
                        return (super.onCreateOptionsMenu(menu));
                        }

                @Override
                public boolean onOptionsItemSelected(MenuItem item)
                        {
                    switch (item.getItemId())
                    {
                    case Setting_Menu:
                            msg = Toast.makeText(ViewExams.this, "Home",
Toast.LENGTH_LONG);
                            msg.show();
                                    Intent faq = new Intent(getApplicationContext(), Main-
ScreenActivity.class);
                                    startActivity(faq);
                            break;

                    case Logout_Menu:
                        UserFunctions logout = new UserFunctions();
                        logout.logoutUser(getApplicationContext());
                        Intent login = new Intent(getApplicationContext(), Login.class);
                        login.addFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP);
                        startActivity(login);
                        finish();
                    }
                  return (super.onOptionsItemSelected(item));
                    }
}
```

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