



**ISLAMIC UNIVERSITY OF TECHNOLOGY
(IUT)**



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Project Title: IUT Gate Pass Management System

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CERTIFICATION

This thesis is to certify that “**IUT Gate Pass Management System**” is a work of Mohamed Yusuf Mohamed Elmi and Ibrahim Zakariyau as their final year project for bachelor degree in Computer Science And Engineering at Islamic University of Technology (IUT) Dhaka, Bangladesh.

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DEDICATION

Dedicated to our beloved parents who have been in our support me to complete our degree successfully, and they have always motivated us to achieve my educational goals.

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CHAPTER 1

INTRODUCTION

A gate pass management system is the framework of policies, processes and procedures used to ensure that an organization can fulfill all tasks required to achieve its entrance gates security objectives. A gate pass management system provides a way to effectively control, record and track your organization's visitor traffic. It helps to prevent the entry of any unauthorized or unwanted person in the premises.

The Gate Pass Management process was computerized to have an easy mechanism for resident students to apply for a Gate Pass in the campus. The Gate Pass system is to ensure that the information on students' exit from and entry to the campus is maintained. Until recently this was managed through a manual system. This had its limitations with regard to application process, approval system, etc. The computerized Gate Pass Management System (GPMS) system was introduced to overcome the limitations of the manual system. The system also generates information base that is used by various other departments in the campus for optimum resources utilization.

The GPMS system allows a resident student to apply for her / his Gate Pass Permit online i.e in the case of taking any material out of the residence. The GPMS portal is only available on the campus intranet. The concerned authorities approve this request. The student is informed through an E-mail/ SMS as soon as her / his Gate Pass is approved. The Staff and student just needs to scan their ID card at the main security gate while leaving the campus to indicate her / his exit. While returning, the Staff and student scan their ID card again at the main gate to indicate her / his entry back into the campus.

The system records all transactions, which help to generate large amount of information for campus management.

CHAPTER 2

PLATFORM, TOOLS AND TECHNOLOGIES:

For the development of this system we are using:

PHP5

PHP is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1994, the PHP reference implementation is now produced by The PHP Development Team. PHP originally stood for Personal Home Page, but it now stands for the recursive acronym PHP: Hypertext Preprocessor.

PHP code may be embedded into HTML code, or it can be used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.

The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014 work has gone on to create a formal PHP specification.

During the 2010s there have been increased efforts towards standardisation and code sharing in PHP applications by projects such as PHP-FIG in the form of PSR-initiatives as well as Composer dependency manager and the Packagist repository.

HTML5

HTML5 is a markup language used for structuring and presenting content on the World Wide Web. It is the fifth and current version of the HTML standard.

It was published in October 2014 by the World Wide Web Consortium (W3C) to improve the language with support for the latest multimedia, while keeping it both easily readable by humans and consistently understood by computers and devices such as web browsers, parsers, etc. HTML5 is intended to subsume not only HTML 4, but also XHTML 1 and DOM Level 2 HTML.

HTML5 includes detailed processing models to encourage more interoperable implementations; it extends, improves and rationalizes the markup available for documents, and introduces markup and application programming interfaces (APIs) for complex web applications. For the same reasons, HTML5 is also a candidate for cross-platform mobile applications, because it includes features designed with low-powered devices in mind.

Many new syntactic features are included. To natively include and handle multimedia and graphical content, the new `<video>`, `<audio>` and `<canvas>` elements were added, and support for scalable vector graphics (SVG) content and MathML for mathematical formulas. To enrich the semantic content of documents, new page structure elements such as `<main>`, `<section>`, `<article>`, `<header>`, `<footer>`, `<aside>`, `<nav>` and `<figure>`, are added. New attributes are introduced, some elements and attributes have been removed, and others such as `<a>`, `<cite>` and `<menu>` have been changed, redefined or standardized.

The APIs and Document Object Model (DOM) are now fundamental parts of the HTML5 specification and HTML5 also better defines the processing for any invalid documents.

CSS Cascading Style Sheets

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of document content from document presentation, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

Separation of formatting and content makes it possible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or screen reader), and on Braille-based tactile devices. It can also display the web page differently depending on the screen size or viewing device. Readers can also specify a different style sheet, such as a CSS file stored on their own computer, to override the one the author specified.

Changes to the graphic design of a document (or hundreds of documents) can be applied quickly and easily, by editing a few lines in the CSS file they use, rather than by changing markup in the documents.

The CSS specification describes a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called cascade, priorities (or weights) are calculated and assigned to rules, so that the results are predictable.

The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/css is registered for use with CSS by RFC 2318 (March 1998). The W3C operates a free CSS validation service for CSS documents.

JAVASCRIPT

In computing, JavaScript is a high-level, dynamic, untyped, and interpreted programming language. It has been standardized in the ECMAScript language specification. Alongside HTML and CSS, JavaScript is one of the three core technologies of World Wide Web content production; the majority of websites employ it, and all modern Web browsers support it without the need for plug-ins. JavaScript is prototype-based with first-class functions, making it a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles.

It has an API for working with text, arrays, dates and regular expressions, but does not include any I/O, such as networking, storage, or graphics facilities, relying for these upon the host environment in which it is embedded.

Although there are strong outward similarities between JavaScript and Java, including language name, syntax, and respective standard libraries, the two are distinct languages and differ greatly in their design. JavaScript was influenced by programming languages such as Self and Scheme.

JavaScript is also used in environments that are not Web-based, such as PDF documents, site-specific browsers, and desktop widgets. Newer and faster JavaScript virtual machines (VMs) and platforms built upon them have also increased the popularity of JavaScript for server-side Web applications. On the client side, developers have traditionally implemented JavaScript as an interpreted language, but more recent browsers perform just-in-time compilation. Programmers also use JavaScript in video-game development, in crafting desktop and mobile applications, and in server-side network programming with run-time environments such as Node.js.

BOOTSTRAP FRAME WORK

Bootstrap is a free and open-source front-end web framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many web frameworks, it concerns itself with front-end development only.

Bootstrap is the second most-starred project on GitHub, with more than 100,000 stars and 45,000 forks.

Bootstrap, originally named Twitter Blueprint, was developed by Mark Otto and Jacob Thornton at Twitter as a framework to encourage consistency across internal tools. Before Bootstrap, various libraries were used for interface development, which led to inconsistencies and a high maintenance burden. According to Twitter developer Mark Otto

XAMPP(APACHE2 SERVER FOR PHP AND MYSQL DATABASE)

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

The term XAMPP is an apparent acronym. However, there is no official acronym expansion specified on the Apache Friends website. Their homepage header reads “XAMPP Apache + MariaDB + PHP + Perl”, indicating that this abbreviation is a recursive acronym.

MySQL is used as the backend database. MySQL is an open source database management system. The features of MySQL are given below MySQL is a relational database management system. A relational database stores information in different tables, rather than in one giant table. These tables can be referenced to each other, to access and maintain data easily. MySQL is open source database system. The database software can be used and modify by anyone according to their needs. It is fast, reliable and easy to use. To improve the performance, MySQL is multithreaded database engine. A multithreaded application performs many tasks at the same time as if multiple instances of that application were running simultaneously. In being multithreaded MySQL has many advantages. A separate thread handles each incoming connection with an extra thread that is always running to manage the connections. Multiple clients can perform read operations simultaneously, but while writing, only hold up another client that needs access to the data being updated. Even though the threads share the same process space, they execute individually and because of this separation, multiprocessor machines can spread the thread across many CPUs as long as the host operating system supports multiple CPUs. Multithreading is the key feature to support MySQL’s performance design goals. It is the core feature around which MySQL is built. MySQL database is connected to PHP using an ODBC driver. Open Database Connectivity (ODBC) is a widely accepted application-programming interface (API) for database access. The ODBC driver is a library that implements the functions supported by ODBC API. It processes ODBC function calls, submits SQL requests to MySQL server, and returns results back to the application. If necessary, the driver modifies an application's request so that the request conforms to syntax supported by MySQL.

CHAPTER 3

SOFTWARE DEVELOPMENT APPROACH

RAD Methodology:

Rapid application development (RAD) is both a general term used to refer to alternatives to the conventional waterfall model of software development as well as the name for James Martin's approach to rapid development. In general, RAD approaches to software development put less emphasis on planning tasks and more emphasis on development. In contrast to the waterfall model, which emphasizes rigorous specification and planning, RAD approaches emphasize the necessity of adjusting requirements in reaction to knowledge gained as the project progresses. This causes RAD to use prototypes in addition to or even sometimes in place of design specifications. RAD approaches also emphasize a flexible process that can adapt as the project evolves rather than rigorously defining specifications and plans correctly from the start. Graphical user interface builders are often called rapid application development tools

Features Of RAD :

Risk reduction: A prototype could test some of the most difficult potential parts of the system early on in the life-cycle. This can provide valuable information as to the feasibility of a design and can prevent the team from pursuing solutions that turn out to be too complex or time consuming to implement. This benefit of finding problems earlier in the life-cycle rather than later was a key benefit of the RAD approach. The earlier a problem can be found the cheaper it is to address.

Better Requirement Specifications: Users are better at using and reacting than at creating specifications. In the waterfall model it was common for a user to sign off on a set of requirements but then when presented with an implemented system to suddenly realize that a given design lacked some critical features or was too complex. In general most users give much more useful feedback when they can experience a prototype of the running system rather than abstractly define what that system should be.

Faster Development: Prototypes can be usable and can evolve into the completed product. One approach used in some RAD methods was to build the system as a series of prototypes that evolve from minimal functionality to moderately useful to the final completed system. The

advantage of this besides the two advantages above was that the users could get useful business functionality much earlier in the process.

RAD phases :

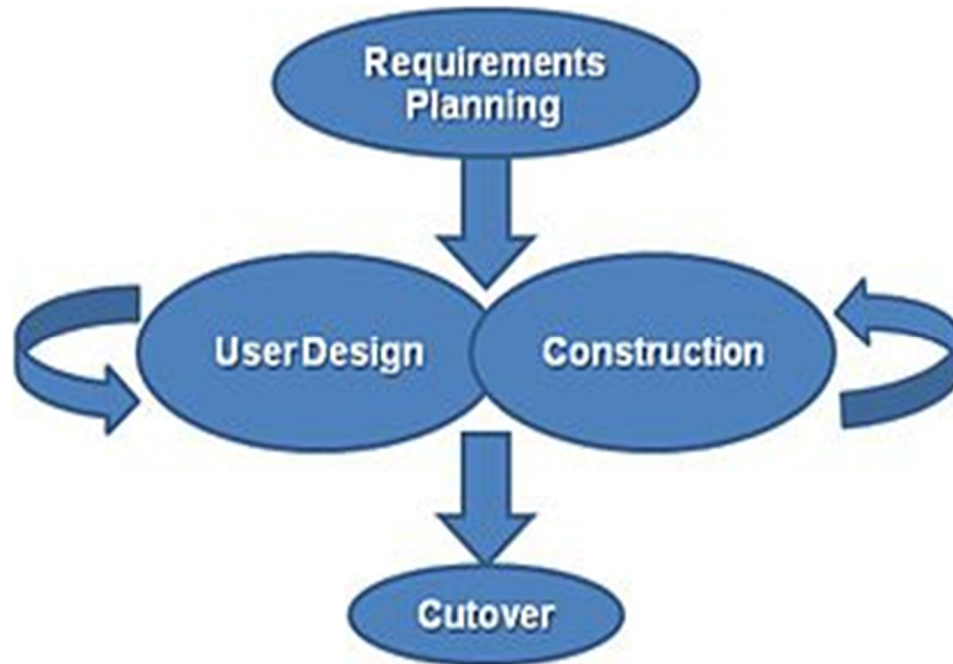


Figure 1: RAD Phases

The James Martin approach to RAD divides the process into four distinct phases:

1. **Requirements planning phase** – combines elements of the system planning and systems analysis phases of the Systems Development Life Cycle (SDLC).
2. **User design phase** – during this phase, users interact with systems analysts and develop models and prototypes that represent all system processes, inputs, and outputs.
3. **Construction phase** – focuses on program and application development task similar to the SDLC. In RAD, however, users continue to participate and can still suggest changes or improvements as actual screens or reports are developed. Its tasks are programming and application development, coding, unit-integration and system testing.
4. **Cutover phase** – resembles the final tasks in the SDLC implementation phase, including data conversion, testing, changeover to the new system, and user training. Compared with traditional methods, the entire process is compressed. As a result, the new system is built, delivered, and placed in operation much sooner.

RAD Model Design

RAD model distributes the analysis, design, build, and test phases into a series of short, iterative development cycles. Following are the phases of RAD Model [1]:

- **Business Modeling:** The business model for the product under development is designed in terms of flow of information and the distribution of information between various business channels. A complete business analysis is performed to find the vital information for business, how it can be obtained, how and when is the information processed and what are the factors driving successful flow of information.
- **Data Modeling:** The information gathered in the Business Modeling phase is reviewed and analyzed to form sets of data objects vital for the business. The attributes of all data sets is identified and defined. The relation between these data objects are established and defined in detail in relevance to the business model.
- **Process Modeling:** The data object sets defined in the Data Modeling phase are converted to establish the business information flow needed to achieve specific business objectives as per the business model. The process model for any changes or enhancements to the data object sets is defined in this phase. Process descriptions for adding , deleting, retrieving or modifying a data object are given.
- **Application Generation:** The actual system is built and coding is done by using automation tools to convert process and data models into actual prototypes.
- **Testing and Turnover:** The overall testing time is reduced in RAD model as the prototypes are independently tested during every iteration. However the data flow and the interfaces between all the components need to be thoroughly tested with complete test coverage. Since most of the programming components have already been tested, it reduces the risk of any major issues.

RAD Model Vs Traditional SDLC:

The traditional SDLC follows a rigid process models with high emphasis on requirement analysis and gathering before the coding starts. It puts a pressure on the customer to sign off the requirements before the project starts and the customer doesn't get the feel of the product as there is no working build available for a long time.

The customer may need some changes after he actually gets to see the software, however the change process is quite rigid and it may not be feasible to incorporate major changes in the product in traditional SDLC.

RAD model focuses on iterative and incremental delivery of working models to the customer. This results in rapid delivery to the customer and customer involvement during the complete development cycle of product reducing the risk of nonconformance with the actual user requirements.

RAD Model Application

RAD model can be applied successfully to the projects in which clear modularization is possible. If the project cannot be broken into modules, RAD may fail. Following are the typical scenarios where RAD can be used:

- RAD should be used only when a system can be modularized to be delivered in incremental manner.
- It should be used if there's high availability of designers for modeling.
- It should be used only if the budget permits use of automated code generating tools.
- RAD SDLC model should be chosen only if domain experts are available with relevant business knowledge.
- Should be used where the requirements change during the course of the project and working prototypes are to be presented to customer in small iterations of 2-3 months.

Pros and cons of rapid application development:

In modern Information Technology environments, many systems are now built using some degree of Rapid Application Development (not necessarily the James Martin approach). In addition to Martin's method, Agile methods and the Rational Unified Process are often used for RAD development.

The advantages of RAD include:

Better quality. By having users interact with evolving prototypes the business functionality from a RAD project can often be much higher than that achieved via a waterfall model. The software can be more usable and has a better chance to focus on business problems that are critical to end users rather than technical problems of interest to developers.

Risk control. Although much of the literature on RAD focuses on speed and user involvement a critical feature of RAD done correctly is risk mitigation. It's worth remembering that Boehm initially characterized the spiral model as a risk based approach. A RAD approach can focus in early on the key risk factors and adjust to them based on empirical evidence collected in the early part of the process. E.g., the complexity of prototyping some of the most complex parts of the system.

More projects completed on time and within budget. By focusing on the development of incremental units the chances for catastrophic failures that have dogged large waterfall projects is reduced. In the Waterfall model it was common to come to a realization after six months or more of analysis and development that required a radical rethinking of the entire system. With RAD this kind of information can be discovered and acted upon earlier in the process.

The disadvantages of RAD include:

The risk of a new approach. For most IT shops RAD was a new approach that required experienced professionals to rethink the way they worked. Humans are virtually always averse to change and any project undertaken with new tools or methods will be more likely to fail the first time simply due to the requirement for the team to learn.

Requires time of scarce resources. One thing virtually all approaches to RAD have in common is that there is much more interaction throughout the entire life-cycle between users and developers. In the waterfall model, users would define requirements and then mostly go away as developers created the system. In RAD users are involved from the beginning and through

virtually the entire project. This requires that the business is willing to invest the time of application domain experts. The paradox is that the better the expert, the more they are familiar with their domain, the more they are required to actually run the business and it may be difficult to convince their supervisors to invest their time. Without such commitments RAD projects will not succeed.

Less control. One of the advantages of RAD is that it provides a flexible adaptable process. The ideal is to be able to adapt quickly to both problems and opportunities. There is an inevitable trade-off between flexibility and control, more of one means less of the other. If a project (e.g. life-critical software) values control more than agility RAD is not appropriate.

Poor design. The focus on prototypes can be taken too far in some cases resulting in a "hack and test" methodology where developers are constantly making minor changes to individual components and ignoring system architecture issues that could result in a better overall design. This can especially be an issue for methodologies such as Martin's that focus so heavily on the User Interface of the system.

Very large systems. RAD typically focuses on small to medium-sized project teams. The other issues cited above (less design and control) present special challenges when using a RAD approach for very large scale systems.

CHAPTER 4

REQUIREMENTS SPECIFICATION

Function And Features

The flexible architecture of gate pass management System allows various people in the organization to directly access the data they need. Integrated with various hardware's like bar-code scanner and printers.

Gate Pass Management System has 5 modules with user specific roles.

Security Gate Module(attendant) The Security Gate module is installed at the entrance of the premises. It facilitates the staff at security gate to register the visitor's details with and also send the notification to the host employee inside the premises. The system will print visitor pass with name of visitor and other details as per designed gate pass format. Security can handover generate gate pass in required format to visitor.

Staff Module The student of the university will register there details with the management system , they can get information related to all their in and out per time interval. Their identity card will serve as authentication Identity for them to access the university which will be digitally verifiable by the security gate staff.

Student Module The student of the university will register there details with the management system , they can get information related to all their in and out per time interval. Their identity card will serve as authentication means for them to access the university which will be digitally verifiable by the security gate staff.

System Administrator Module In order to ensure the system remains update date the administrator will be responsible for adding security guards and deleting and updating staff and student information, as well as managing and forwarding all complain receive from the security guards.

Gate pass Administrator Module(Permit Office): will be responsible on approving and managing all information related to gate pass permit.

Provost Module(Provost Office): will be responsible on approving and managing all information related to gate pass permit.

EXISTING SYSTEM

At present Islamic university of technology gate pass management system is working under manual management. All records related to visitors, staff and student gate pass permit are manually registered, authentication at the gate rely heavily on Human intelligence of the security guard at the gate. For student to access any gate permit to takes any personal property out of the university campus for repairing and related issue it requires a lot of time, this bring a lot of difficulty mostly to the residential student as they have to wait for long time to obtain the permit from the authorization office.

One major challenges face by the authority in –charge of managing the system is the complexity of the process as a lot of manual registers must be used to record the information. this might lead to a lot of error and miss detection of various parties involve which might pose a security threat if the number of the student increase rapidly. In each of this process mention above error is hardly detected which leads to lack of accuracy of the manual system.

During the manual management, the tasks, which are to be performed by its users manually, are:

Activities relating to the security Guard:

1. In case of Visitors records, all information related to visitors and visited are documented in the visitors register
2. A loss of gate pass permit to transfer any valuable material outside the campus may lead to a lot security flaws in the system.
3. There recorded data could not be index properly to allow for report generation on the IUT Gate.
4. The security guard rely on visitors to obtain the contact of person intended for the visit.

Activities relating to the gate pass permit administrator:

1. Student and staff of the university apply for the gate pass manually.
2. All gate pass permit issue by the administration is manually recorded .
3. Student and Staff obtain there gate pass permit.

Activities relating to the Staff and Student:

1. Staff and student intending for any gate pass permit in order to take any material out need to manually apply to the officer in charge of gate pass authorization. Presently now IUT Building Engineer.
2. The Staff and student obtain the permit and get authenticated at the IUT Main Gate.
- 3.
4. Staff and student receiving visitors are contacted by the security guard to permit the visitor.
5. Visitors are Only allow to access visitors room pending the time required to establish contact with staff and student they are visiting.

PROPOSED SYSTEM

Our Proposed system is being design to digitalize the entire existing system mention above, all the activities will be handle using computerize , this will lay a solid foundation toward a framework of policies, processes and procedures to ensure that the security of the university is handle at the maximum required level.

During the automated gate pass management, the tasks, which are to be performed by its users are:

Activities relating to the security Guard:

- Time will be automatically assigned to any visitor depending on the purpose of his visit.
- In case of Visitation records, all information related to visitors and visited are stored in the system database.
- Gate pass permit request will be electronically made by staff and student and approved.
- At any point of time Report of Various detailed and summary reports of Security wise, with regards to staffs, student and visitors.
- Security guard can obtain any contact information of the staff, student and visitors

Activities relating to the gate pass permit administrator:

- Student and staff of the university apply for the gate pass electronically using web portal.
- All gate pass permit issue by the administration is electronically recorded .
- Student and Staff obtain there gate pass permit electronically.

Activities relating to the gate pass permit administrator:

- Maintain the entire system database
- Receive and forward complain to relevant authorities
- Provide feedback to security guards whenever necessary

Activities relating to the Staff and Student:

- Staff and student intending for any gate pass permit in order to take any material out need to apply online to the officer in charge of gate pass authorization. Presently now IUT Building Engineer.
- The Staff and student obtain the permit and get authenticated at the IUT Main Gate.
- Staff and student receiving visitors are contacted by the security guard to permit the visitor in case of personal visit or directly allow in case of official visit.

OPPORTUNITIES FOR PROPOSED SYSTEM

CHALLENGES

After conducting an intensive interview with the officers concern with IUT gate activities The following issues where Identified.

Issue	Weight
1. Staff west time while handling new visitors	10
2. Inadequate visitors verification system	9
3. New visitors information is not always recorded.	9
4. Staff and Student gate pass permit takes a lot of time to handle.	8
5. Inadequate staff and student Information at the Gate	6
6. Inadequate student and staff verification system	6
7. Lack of report generation to enhance decision Making	6

Note : **Weight** is taken under a scale of 10.

OBJECTIVES:

1. Web based with barcode Scanner integrated enhance staff efficiency.
2. All visitors will be provided with barcoded visitors tag.
3. Updating the database system automatically
4. Staff and Student can now electronically do all what they need to due with regards to the Gate online.
5. Security Guards can access all staff and student Information.
6. Barcoded Student Identity card for effective verification.
7. Visitor's details and summary for daily, Weeks and Monthly Summary.

CHAPTER 5

DESIGN IMPLEMENTATIONS

SOFTWARE ARCHITECTURE

Three-Tier Architecture:

Three-tier architecture [2] typically comprise a presentation tier, a business or data access tier, and a data tier. Three layers in the three tier architecture are as follows:

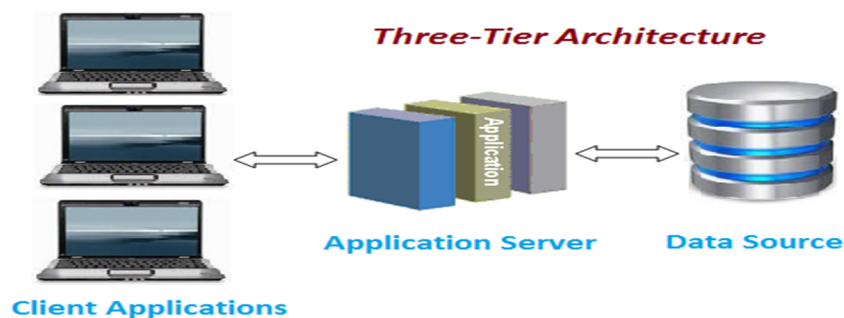


Figure 2: Three-Tier Architecture

- 1) Client layer
- 2) Business layer
- 3) Data layer

1) Client layer:

It is also called as *Presentation layer* which contains UI part of our application. This layer is used for the design purpose where data is presented to the user or input is taken from the user. For example designing registration form which contains text box, label, button etc.

2) Business layer:

In this layer all business logic written like validation of data, calculations, data insertion etc. This acts as a interface between Client layer and Data Access Layer. This layer is also called the intermediary layer helps to make communication faster between client and data layer.

3) Data layer:

In this layer actual database is comes in the picture. Data Access Layer contains methods to connect with database and to perform insert, update, delete, get data from database based on our input data.

Advantages

1. High performance, lightweight persistent objects
2. Scalability – Each tier can scale horizontally
3. Performance – Because the Presentation tier can cache requests, network utilization is minimized, and the load is reduced on the Application and Data tiers.
4. High degree of flexibility in deployment platform and configuration
5. Better Re-use
6. Improve Data Integrity
7. Improved Security – Client is not direct access to database.
8. Easy to maintain and modification is bit easy, won't affect other modules
9. In three tier architecture application performance is good.

Disadvantages

1. Increase Complexity/Effort

This is the common Question asked in the Interview. Hope this article helped you understanding Two-Tier and Three-Tier Architecture with example.

USER INTERFACE SNAPSHOT:

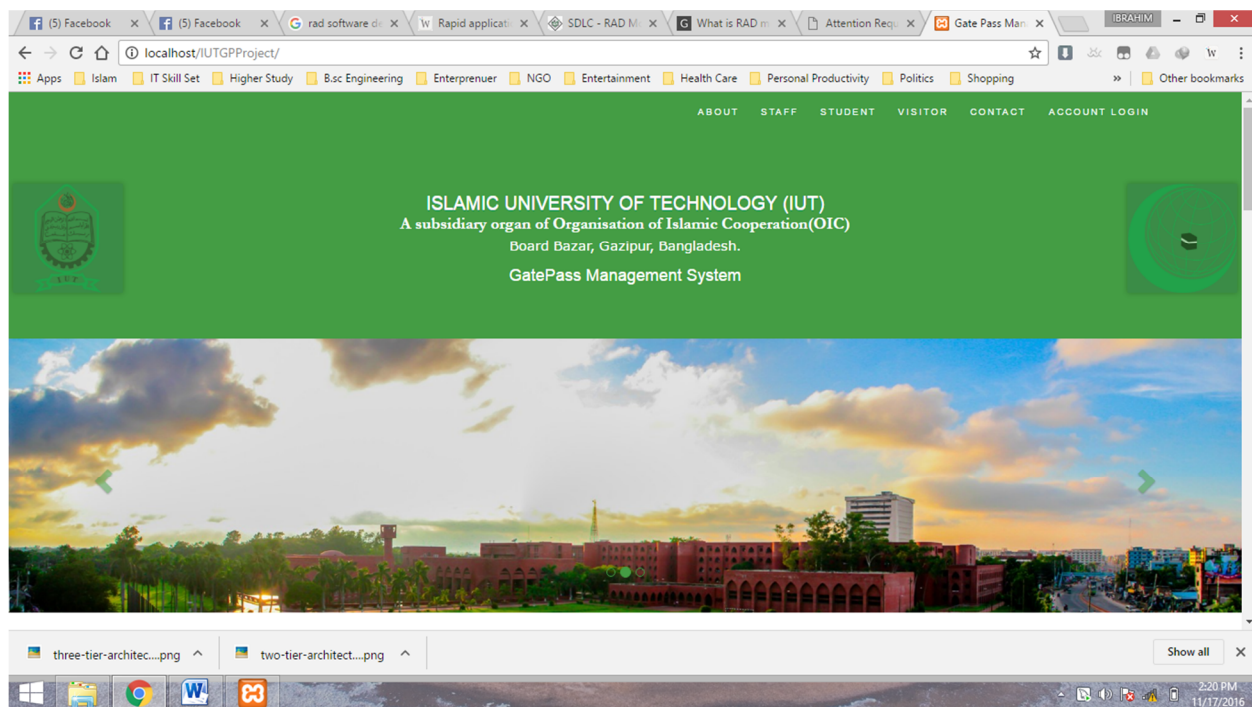


Figure 3: Home Page

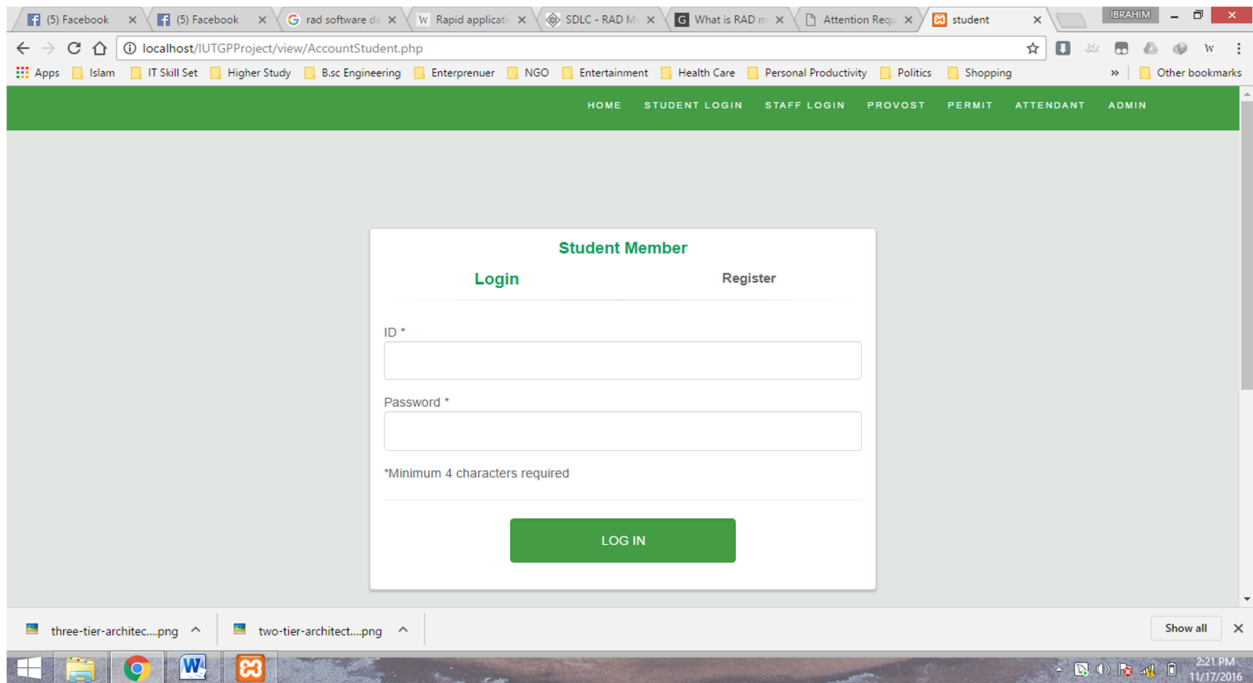


Figure 4: Account Login

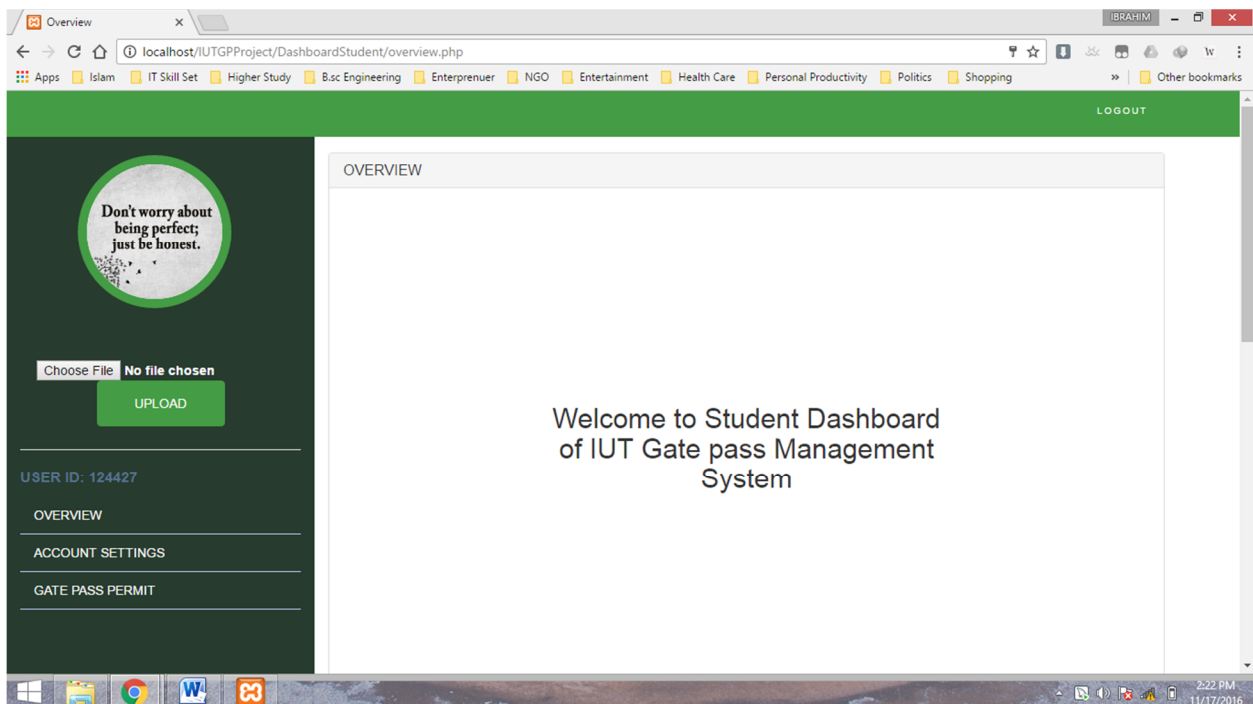


Figure 5: Student Log Account Dashboard

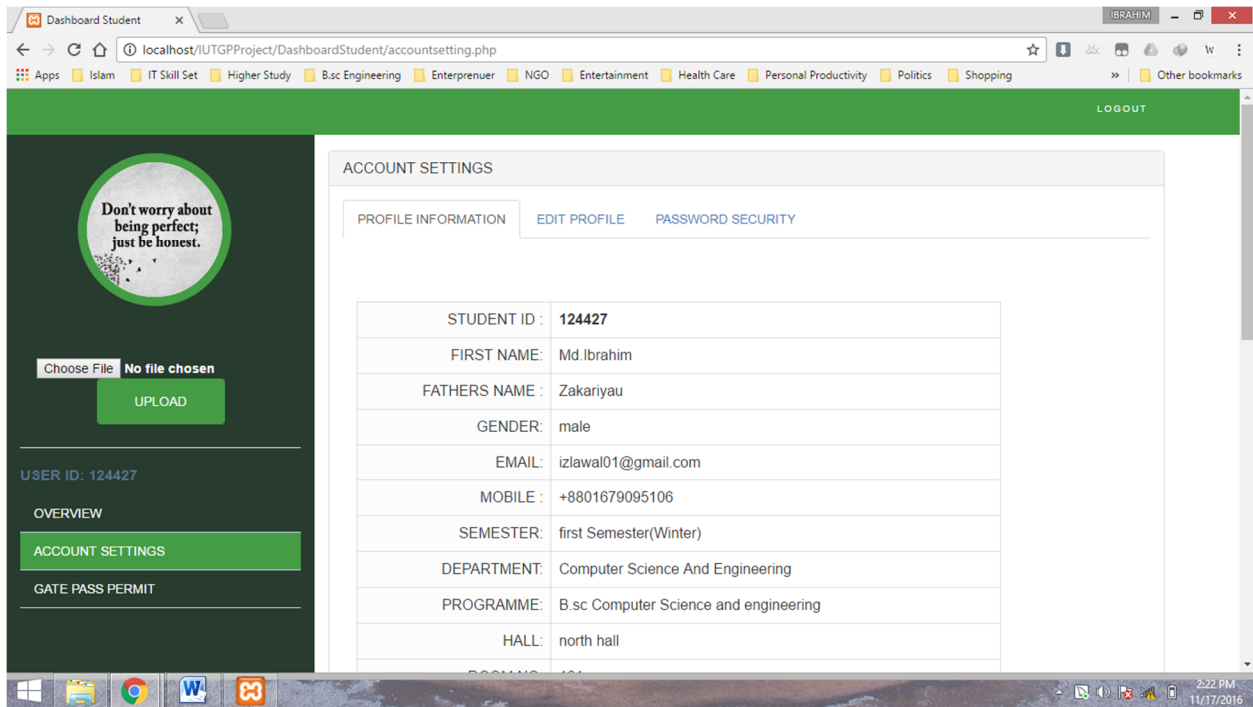


Figure 6: Student Account Profile Information

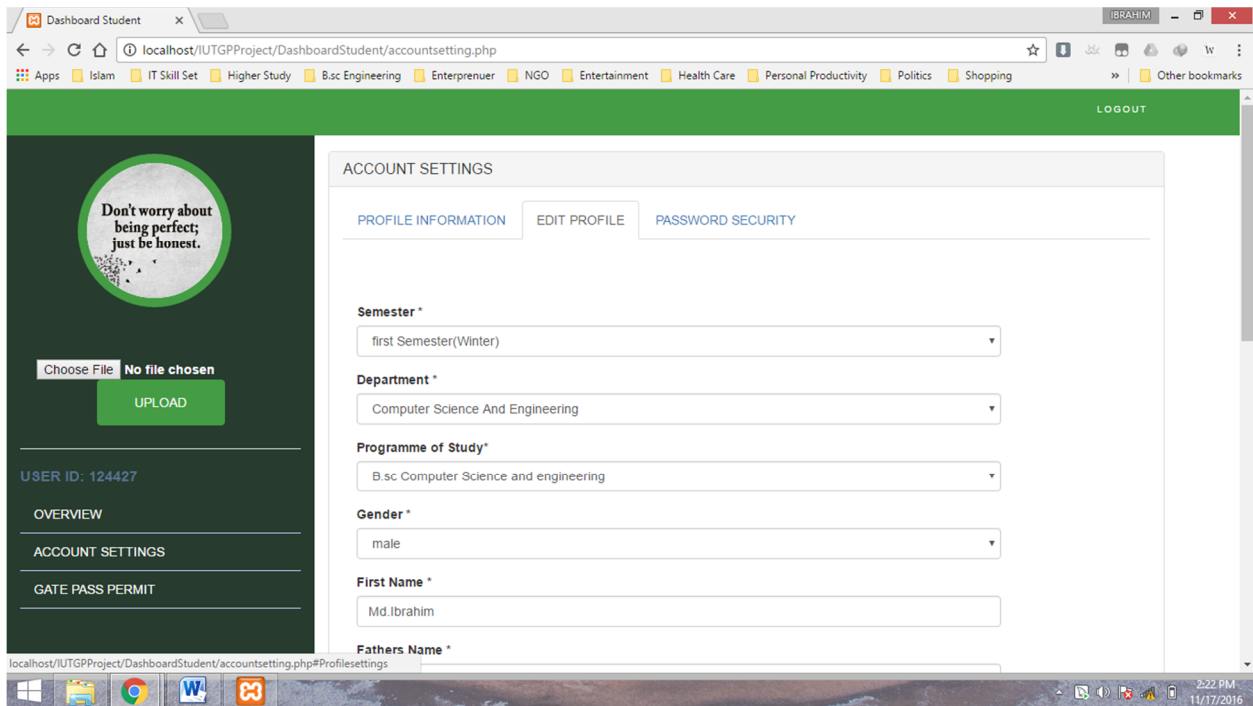


Figure 7: Edit Student Profile

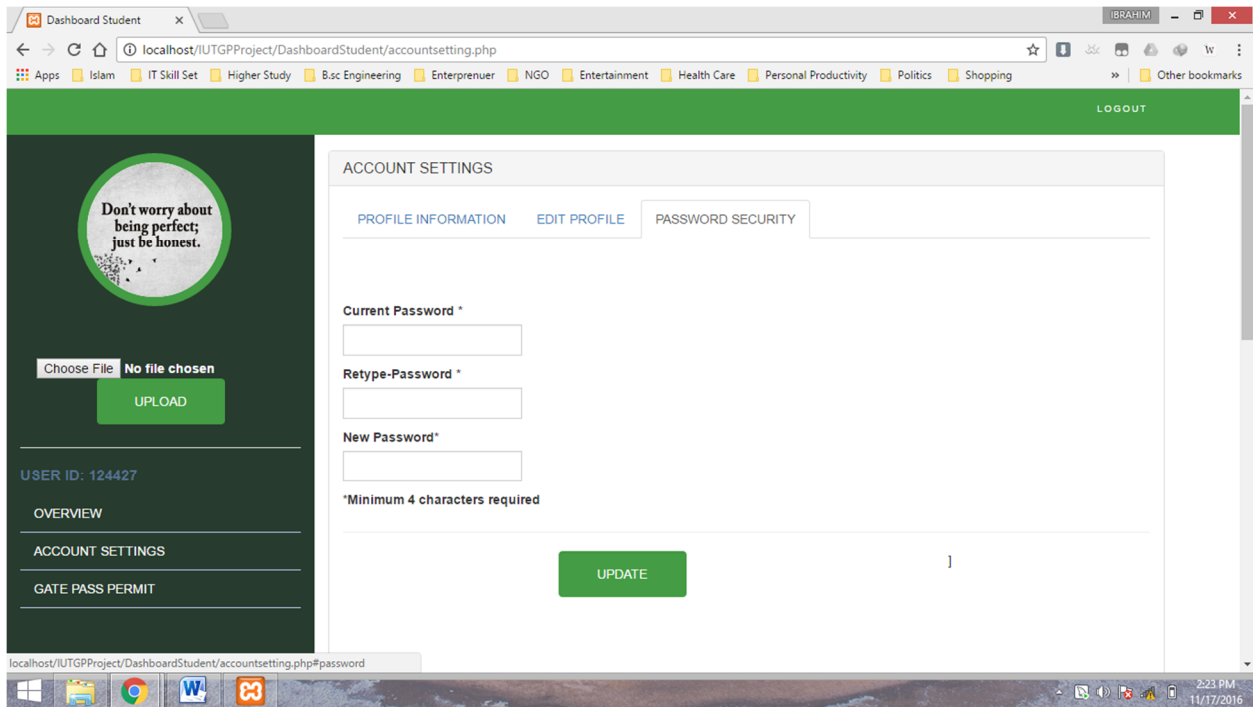


Figure 8: Change Student Password

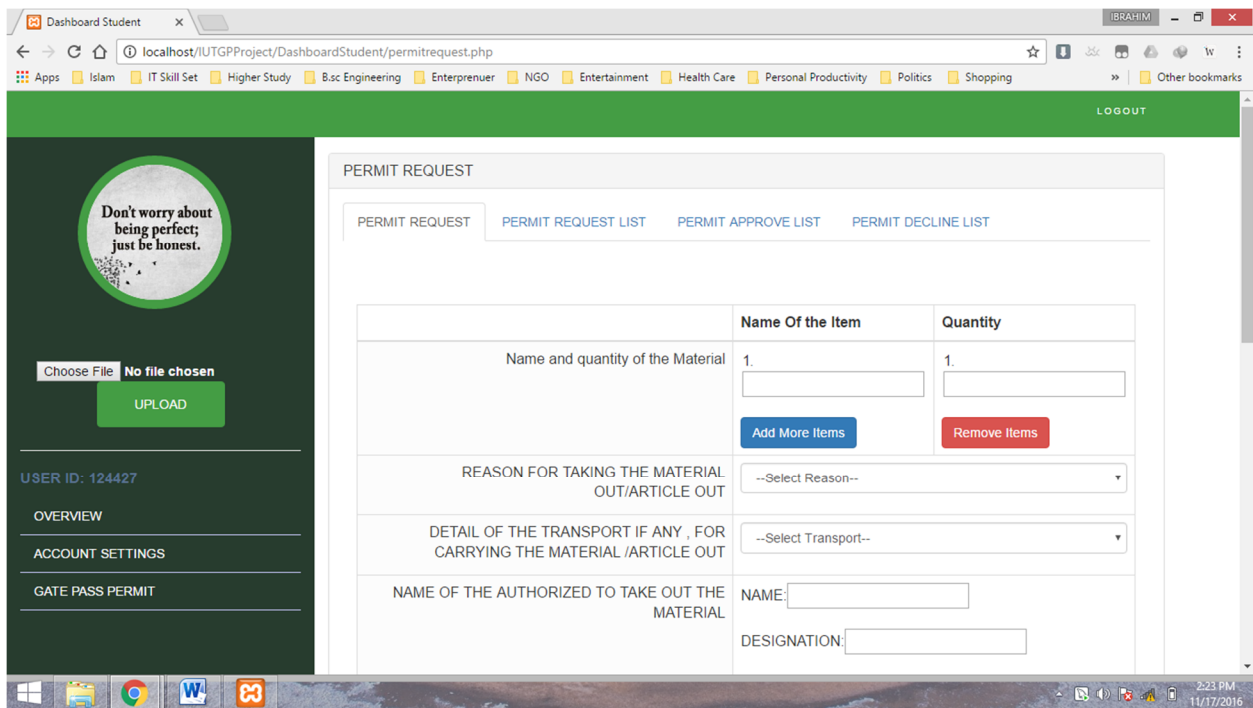


Figure 9: Student Dashboard Gate Pass Permit Tab

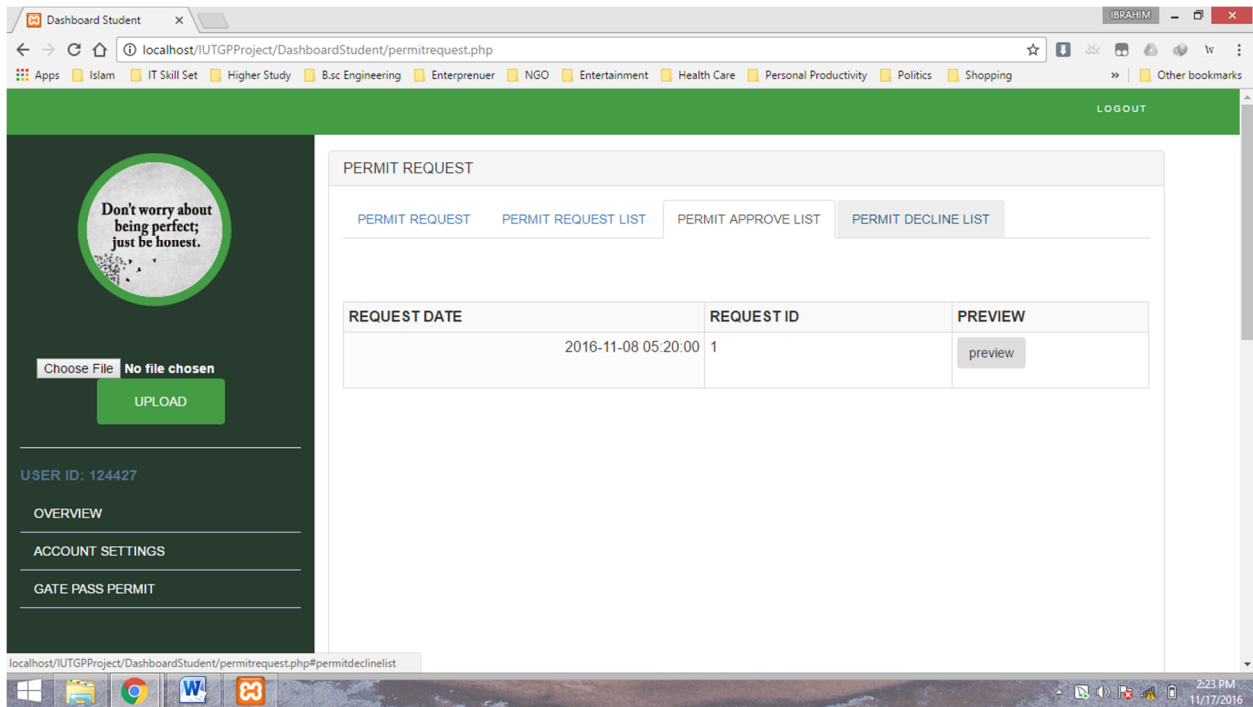


Figure 10: Student Dashboard Permit Approve List

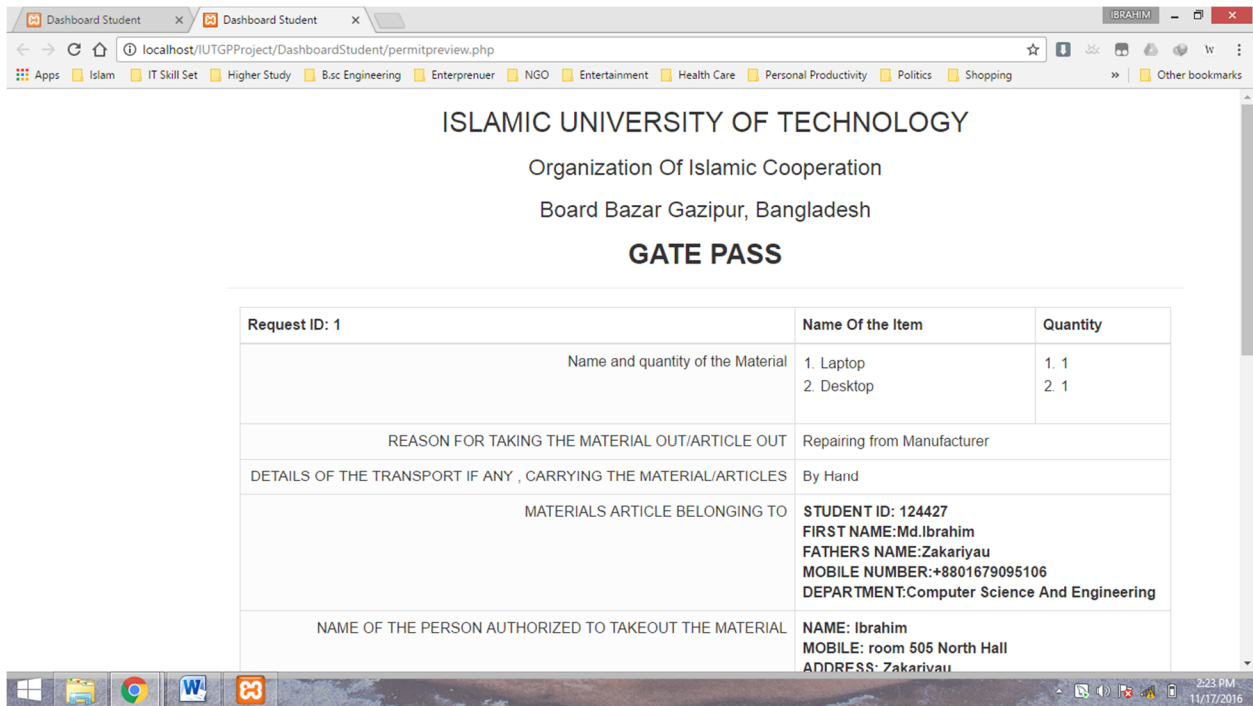


Figure 11: Student Dashboard Permit Preview

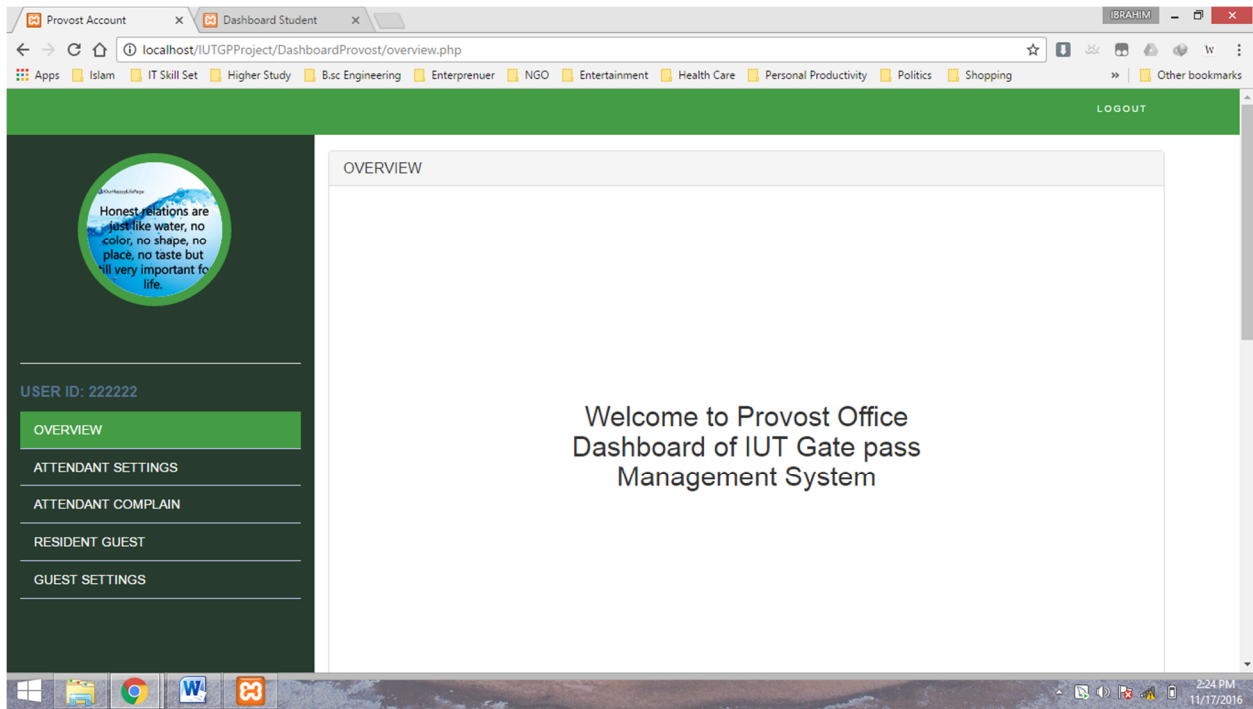


Figure 12: Provost Account Dashboard

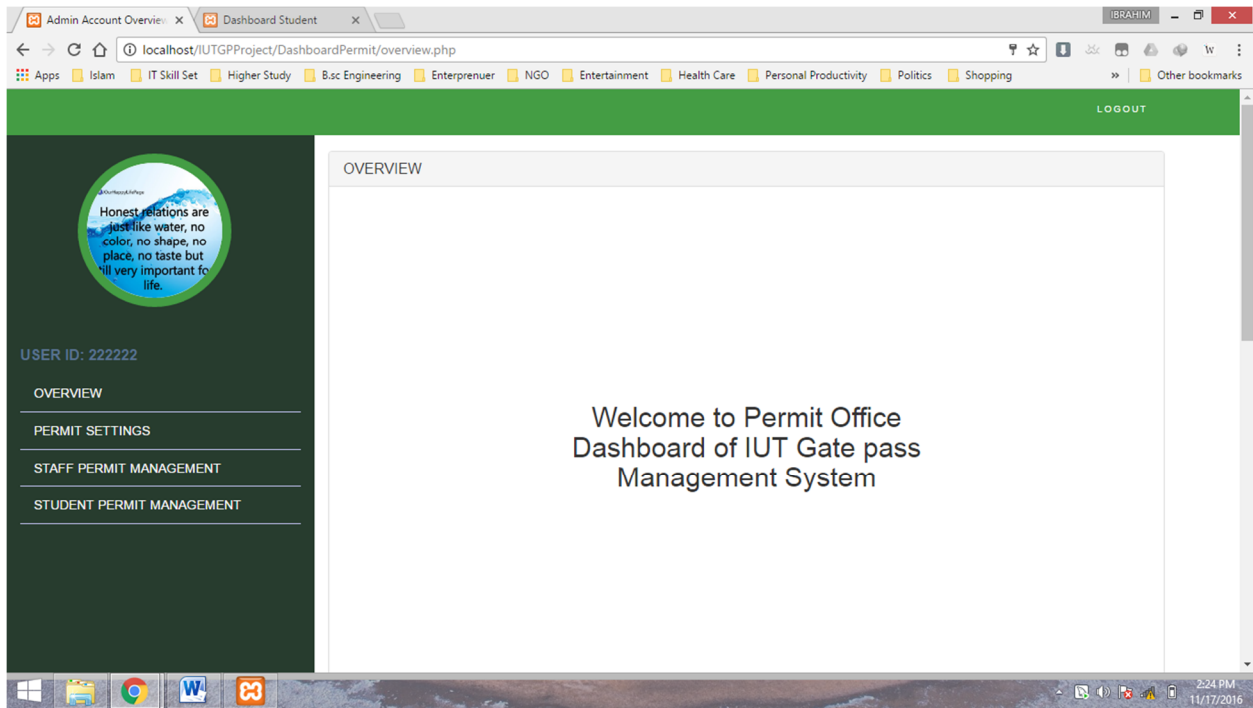


Figure 13: Permit Office Account Dashboard

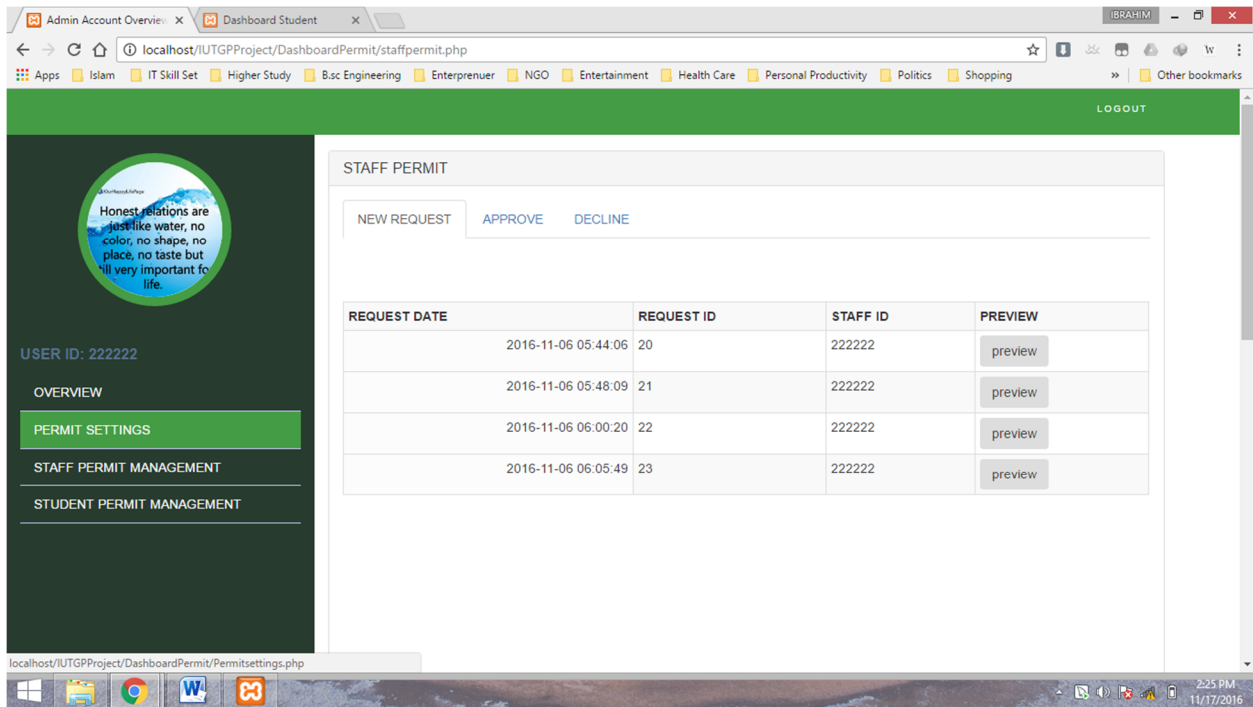


Figure 14: Staff Account Dashboard Permit Tab

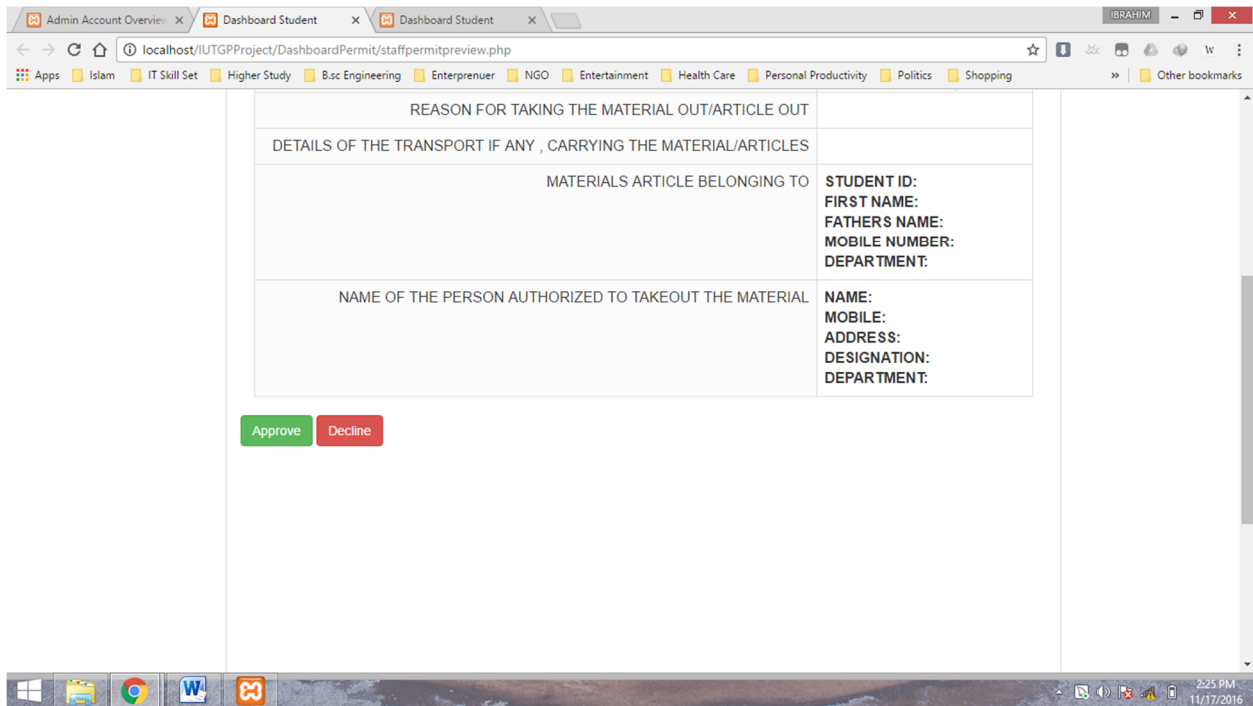


Figure 15: Permit Office Account Dashboard Permit Approval /Decline Preview

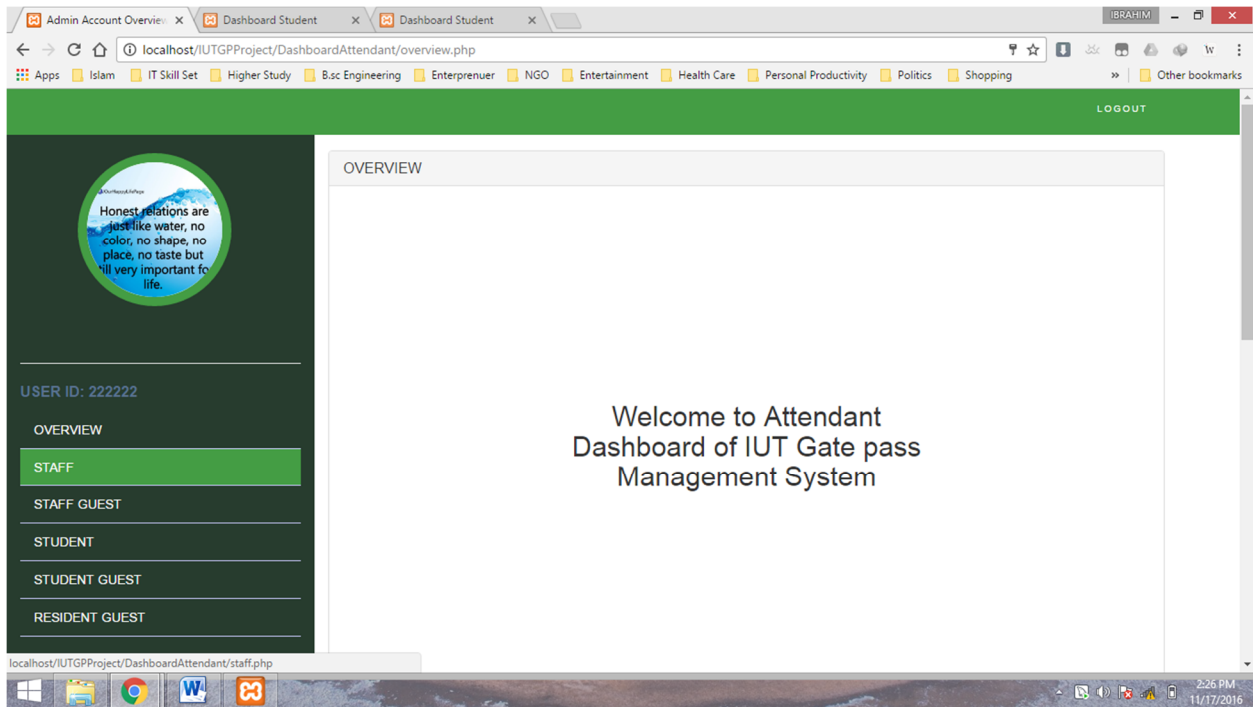


Figure 16: Attendant Account Dashboard

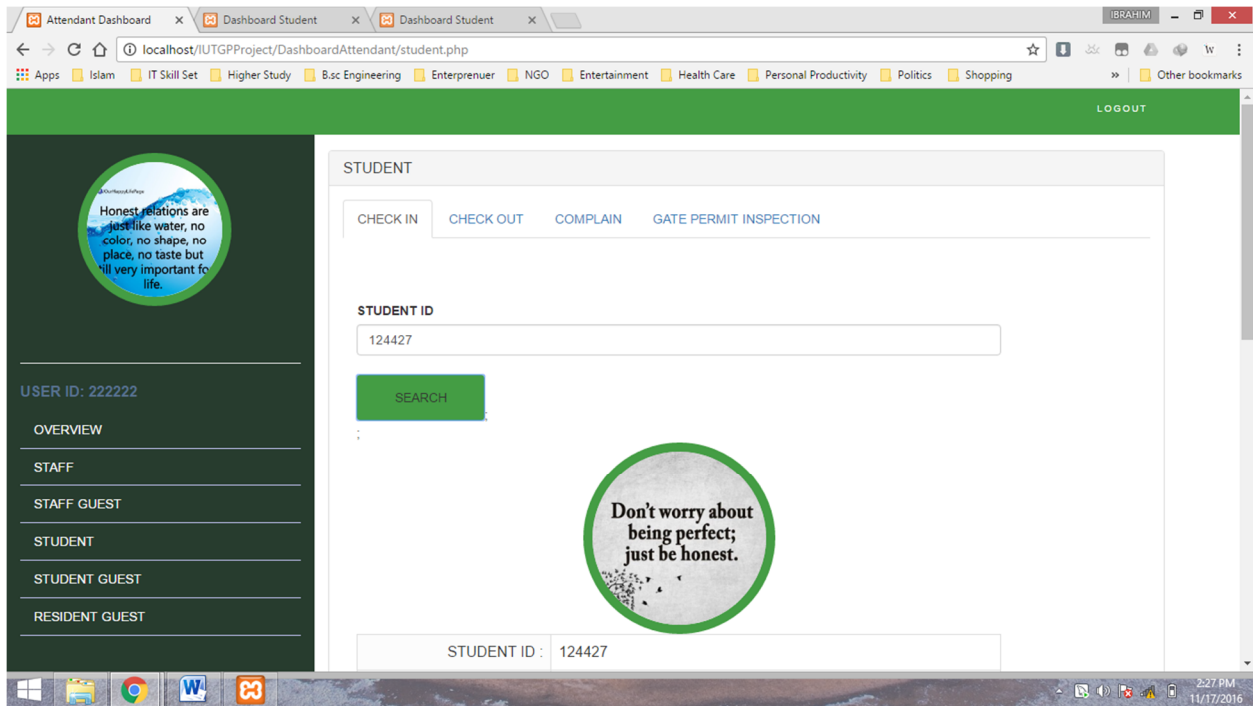


Figure 17: Attendant Account Dashboard Student Tab

CHAPTER 6

CONCLUSION

In conclusion to the above project , the limitation to our project is that the report generation part has not been implemented , but we hope it will be done in the future. The project is simple to understand and user.

Reference:

1. https://www.tutorialspoint.com/sdlc/sdlc_rad_model.htm
2. <http://www.softwaretestingclass.com/what-is-difference-between-two-tier-and-three-tier-architecture/>