

IIT WEB PORTAL
(Online Project Store Application)



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STATEMENT OF SUBMISSION

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Mirza Muhammad Hamza Sheraz

ABSTRACT

Nowadays web services are widely used to integrate heterogeneous systems and develop new applications. For that matter an application of online web portal systems is developed by utilizing web services technology. IIT WEB PORTAL integrates lots of systems of App store such as Project store, Departmental elections, Departmental attendance system. This integration solution can add or expand for the betterment of our departmental software system. The system is helpful in increasing quality and efficiency of service. This system attracts our students and motivates them to work hard for their better grades. Implementing this system provides a cost-efficient opportunity to the Students to avail this platform. In addition to all this Teachers can announce their projects proposal. This platform will give an opportunity to show their skills to the industry. Through this the student can access their projects through internet. This system is being built by using android platform and is specifically for Web users.

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CHAPTER 1

INTRODUCTION

1.1 Introduction:

Now a day's technology is playing a very fast role in all fields and in our personal lives. The widespread use of mobile devices is an important consideration for any business. Technology involves in every fields. Technology has important facts in business fields. Technology has both tangible and intangible benefits that will help you to make money and produce the results for you customers demand. The most demand these days is online system. Everybody wants to access the things online. Business point of view technology pays a lot in it. Medical, transportation and business is most important usage of technology. Everyone is busy at their own work and they want things in their hand with no time, for this they want it online. The big advantage for technology is that it saves your time and money. Businesses are going in a general direction of implementing mobility within the business services and employee's way of working. Mobile Applications have taken a very central role in our daily life. Nowadays, they are the key to smart phone user experience. We use them to read news, listen to the radio, watch television and play games. The bigger the usage base grows, the more applications are developed. The project here described within document "IIT PROJECTS PORTAL" (Online Projects store). The purpose of this document is to present the detailed description for online projects store. This document will explain the purpose and feature of the system, what system will do, interface of the system, how the system will work, how the system will operate and react to eternal.

1.2 Project Introduction:

IIT JOB PORTAL (Online Projects store) system is Web based and Android based application. The Application version provides to download the projects with the help of internet without going to the related software house. This application helps the students to upload their final year project and this will help the students to show their skills to a forum. This application also helps to user to view the listed projects and can download it. This application is the first forum for our students to show their skills. The viewer can be any person or belong to some software house. This will give boost to student to work hard. Today student make their projects only for their degree requirement by using and knowing this forum they will work harder for their future. This will help the software houses to visit this site to select good employee (Employee can be developer, hacker, etc.). In our department teachers offers the projects for student, also benefit for the teacher to announce the project of their own field so that the student choose the project of their own interest. The student and admin can see what kind of projects is offered and which student is under the supervision of which teacher. In this project I am going to develop the android application and a web for online job portal through which am going to facility of my department to upload their final year project and will upload on it. The IIT JOB PORTAL is the forum through which their

project can be utilized in the industry and will help the software houses to hire a good student. The student will register them self through registration number. After registration the student can upload their project with proper descriptions. The description can be thesis work, proper codes, tools, hardware description, their research, etc. The whole process can be managed by the supervisor/admin or the projects in charge of our department. This can be managed by the student or the supervisor of relevant department. If student want to upload he/she will login and provide the proper description related to their project and the supervisor will verifies it and allows uploading it with no time. The supervisor has the authority to verify student's project data. Admin/Supervisor has also the authority to allow any user to download it. Moderator can cancel, modify, and can delete the projects, and check the requests for downloading, check the student request for uploading projects. Students can upload their projects and can also download it. User can view the listed projects and can download it.

1.2.1 Motivation:

Application development has a vast role these days. Application with good functions and features at one place give you much business. This forum helps to motivate the students to work more effectively. This forum is the way to business at initial level. A motivation tool it is. Till now all the previous project are not shown and utilized at any forum.

1.3 Scope:

This system is web and android based system. The android system is to view the lists of projects and can only download the thesis work and mobile based applications. Web is for the complete sign-up and registration and supervisor can approve requests, it will also for uploading. System will provide a platform to those students who are doing their final year project. This platform is also for Computer Science Department. This will help the future to that student who wants to get idea from it and extend it further (Add more features). This will help the student to find a good idea related to their fields. The teacher can show the list of offered projects so that the student can choose the project of their own interest. This web and application provide the facility to the department to keep track of all the projects. This will help the viewer to get idea from it. This is the first application for our department. This can be also utilized for free app store. This can be worked as free App Store. This will extend the scope of it.

1.4 Purpose:

Main purpose is to provide the students a platform to upload their projects .The uploaded can be updates by future students. Motivate the students that their product is being used or making business. There is no place for their project. They make their projects for grades only and then they don't work further on it to make it usable. This will facilitate the students and viewer. This will help also to the software houses. The teacher also offered the projects.

1.5 Existing system:

There is no previous system like this from that student can motivate their self. The system is totally new and first system for this purpose in our department. There will exist some system from different department but that can be used for that department only. In the proposed system we will provide the proper path to students to build and utilize their projects. This will motivate the student after completing their project can't be further developed/update and place of their project in only the dusty place of cupboard. Purpose is only to give them a proper place, so future students can motivate their self. So the project coordinator is known of the whole process.

1.5 Proposed system:

Moving with the technology we have to make this system that will be helpful for the students, Viewers and also teachers. When the student will upload the application on this platform that will be utilized. Their project can be used as product. This system is available for 24/7. It contains the database of available list of projects. It also show the list for proposed projects which is announced by the teachers. This will motivate students. This will help the student to get chance of good job. Downloading can be done by the permission of Moderator. This security check will provide the security to the student that their project cannot be used illegally.

1.6 Key Features:

- Viewer type (unregistered) can view the list of projects with some documentation.
- The student from IIT can only upload their project.
- Student will request to the moderator to download the project.
- The Admin/moderator will approve the requests for both downloading.

- There is proper record for the download and upload.
- Student can register.
- Viewer will enter the feedback about the project and service.
- Viewer and student can use the web or android app.
- The student will download it only by fulfilling the required form.
- Future students can further update the previous projects.
- The teacher will announce the projects.
- The moderator is dealing with the whole process.
- The Admin/Moderator will know which student is under the supervision of which teacher.
- The students register/choose the project of their interest.
- The moderator can take a record of student's project.

1.7 Information objectives:

This application is especially for any android based smart phone and can be downloaded and installed on any android based smart phone easily. This can be accessed by the use of internet.

1.8 Resource Identification:

The resources which are identified to complete this project are mentioned below.

1.8.1 Human resources:

This project is developed by Mirza Muhammad Hamza Sheraz (MSC- IT) under the supervision of Madam **Sidra Batool Kazmi**.

1.8.2 Software resources:

Table 1.2 shows hardware resources which are used in the development of this system.

Table 1.1 Software Resources:

Operating System	Microsoft Windows 10
Android Version	3.0
Development Tool	Android Studio, JDK, Android SDK, Adobe Photoshop 8.0
Documentation Tools	Microsoft Office, Microsoft Visio

1.8.3 Hardware resources:

Table 1.2 shows hardware resources which are used in the development of this system.

Table 1.2 Hardware Resources:

System	Intel(R)Core(TM)i5-2370M
Processor	2.40Ghz
Hard Disk	465Gb
RAM	4.00Gb
Android Cell Phone	Any

1.9 Process model:

A software process model is a format for planning, organizing and running a development project. Software process is a partially ordered set of activities undertaken to manage, develop and maintain software systems. We select a software process model to see all these things that what is the nature of the project, we also see the methods and what tool will have to use in it, and its application.

I used Incremental Process Model for developing my application. For this project the incremental software process model is used because increments are required for each iteration. System is developed and delivered in increments after creating an overall structural design. Figure 1.3 shows incremental process model.

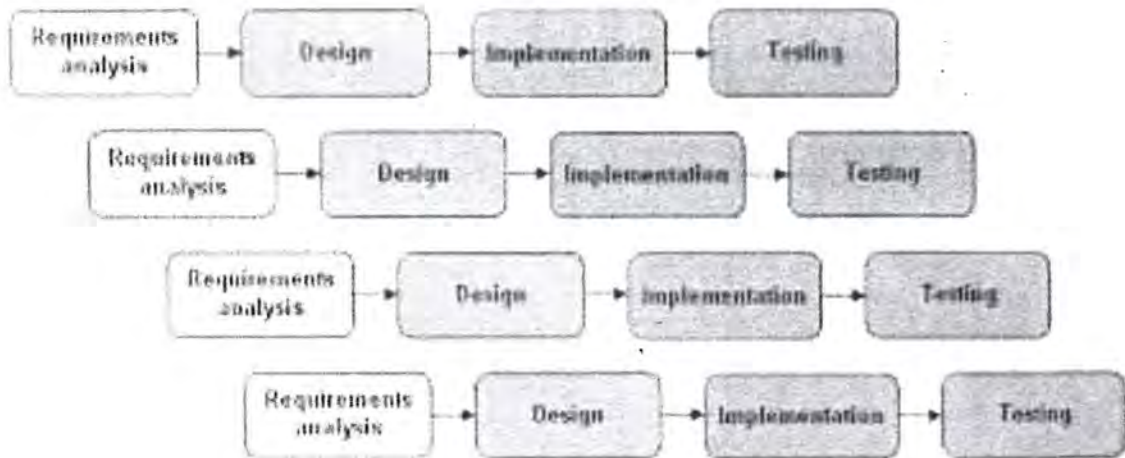


Figure 1.1 Incremental Models

1.10 Tools and technologies:

Following are the tools and technologies:

- Java, XML [Front End] in Android Studio
- Android Studio, Java JDK
- PHP, MySQL (Backend)
- Jason Parsing [For Retrieving Data from Database]

1.11 Thesis overview:

Chapter 1 is about introduction and project planning activities. Chapter 2 consists of requirement Analysis. Chapter 3 includes design methodology and diagrams. Chapter 4 includes syntax study of java and Jason and explains implementation, tools and technologies used to develop the system and any other algorithms which are used for the solution are also mentioned in detail. Chapter 5 is about testing and evaluation. Chapter 6 contains user interface. In Chapter 7 conclusion and future work is given.



CHAPTER 2

REQUIREMENT ANALYSIS

2.1 Requirement Analysis:

This section of the document specifying the general factors that effects of the product and its requirements, providing a background for the requirements of the software. It also describes the summary of the function that the software will perform. It also describes the user capabilities and their interests.

2.2 Introduction:

Requirements analysis, also called requirement engineering, is the process of determination user expectations for a new or modified product. The purpose of requirement analysis is to setup common understandings among stakeholders, the output of analysis is a requirement document, and the document can be business requirement specification, technical requirement specification, user stories, some screenshot drawings, or any other documents. Requirements analysis is conducted iteratively with functional analysis to optimize performance requirements for identified functions, and to verify that synthesized solution can satisfy customer requirements.

2.3 Stakeholders:

A person, group or organization that has an interest or concern in an organization is stakeholders.

Admin, Viewer, Students and Teachers are stakeholders.

2.4 Major Function:

Students who are new firstly he/she has to get registered online. After this he has Email, I.D, and password for uploading. He will be able to upload the project, view the listed projects. The teacher will register with their ID, and then he/she will upload the list for sponsor projects. The students choose the projects of their own interest. Viewer can see only the uploaded projects list and screen shots. Moderator will supervise and verify the project description, verify the student's data. For Registration process there will be available list of the whole registration data for both student and teacher. When some of the student or teacher wants to register he/she will enter the registration ID the system automatically verifies the data from database. If the data is correct the student/teacher will be given user name and password otherwise the error will be pop up by the system.

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2.5 Major inputs and outputs:

Major inputs and outputs are defined as which input is given to the system by the user and which outputs are shown to the user. Some of the major input and outputs are listed below.

2.5.1 Major Inputs:

Major Input of the system which I implement is that the Teacher can login into the system by using username and password. Student can login into the system by using username and password. Moderator can login into the system by using username and password.

2.5.2 Major Output:

Major output when the Teacher try to login, the login form will appear. When User/Student try to download the download request form will appear. Downloaded projects can be viewed in list form.

2.6 Requirement elicitation:

Requirement elicitation is the first of four steps in software requirement engineering (the other being analysis, specification and validation). It consists of collecting information, understanding the stakeholder needs. Requirements elicitation practices include interviews, questioners, user observation, workshops, brainstorming, use cases role playing and prototyping.

2.7 Requirement Analysis:

The analysis activity examines the high-level requirements and determines if they are clear, complete, and free of contradiction, and then defines the strategy to address these issues.

2.8 Requirement specification:

A specification is a document that specifies, in a complete, precise, verifiable manner, the requirements, design, behavior, or other characteristics of a system, and often, the procedures for determining whether these provisions have been satisfied.

2.9 System interfaces:

IIT JOB PORTAL is web and android based system. This system is used by the Viewers, teachers and students who are registered, unregistered Viewers can only view. IIT JOB PORTAL uses a server which holds system database. The admin updates the database after logging in the system. The viewer, teacher and student access this system through Mobile or computer using the internet. After login students and teachers can perform the different functions. The functions are Teacher will upload the list of sponsored projects. The student can see the list of sponsored projects and can also upload projects.

2.9.1 Viewer Interface:

In the Viewer interface I describe how user interacts with the system. The system which I implement is web and android-based. In order to use this system the Viewer just visits the web page and views the relevant data.

2.9.2 Teacher interface:

In the Teacher interface I describe how Teacher interacts with the system. The system which I implement is web and android-based. In order to use this Teacher must have authenticated email and password. The teacher after login can upload the sponsored projects when some student register with that project, the teacher will notify.

2.9.3 Admin interface:

In the Admin interface I describe how Admin interacts with the system. The system which I implement is web and android-based. In order to use this Admin must have authenticated email and password. The admin can see what teacher offered and which project is taken by the student. The admin can also notify when teacher offered some projects and also when student choose the project. When the student upload the project, the admin has to verify the data and then online the project.

2.9.4 Student Interface:

In the Student interface I describe how Student interacts with the system. The system which I implement is web and android-based. In order to use this Student must have authenticated email and password. When the student login the student will view the already uploaded projects. The student can view the uploaded projects list or sponsored list of project. The student firstly register with the project (student have to choose a project of their own interest).

2.10 Software Interfaces:

This web-based system can access by any type of browser there is no restriction of the web browser, but most preferred is to use the latest browser. There is no restriction of the operating system. The user uses his system on my kind of operating system. For mobile, user should have an android version no matter but latest one is better.

2.11 Hardware interfaces:

There is no hard and though hardware requirement to run our application. Even it can be run using processor with window XP. The website can be open in any browser using device. But it is recommended to use a better machine to run website perfectly. Same for Android phone any mobile which have android operating system can use application.

2.12 User/Student Characteristics:

This is assumed that Viewer knows English language and can read and write it. Viewers must have to use a computer and mobile related applications. And admin, teacher, moderator and student must have knowledge of how to use computer/laptop and related application.

2.13 Constraints:

In order to operate this implemented system the user must have a desktop/laptop computer or mobile phone. The mobile phone should be android and has the internet. Without internet user cannot communicate.

2.14 Assumptions and dependencies:

The system which I implemented is web and android-based system the user must have the internet connection to operate this system. Without the internet you cannot operate this system.

2.15 Functional requirements:

Functional requirements describe the main functionality of the system. These requirements are requested by the customer and presented to the developer. The presence of functional requirements is very important for the system because if any one of the functional requirement is missing in the system, the system will be incomplete. functional requirements deal with what the system should do or provide for users. They include description of the required functions, outlines of associated reports or online queries,

and details of data to be held in the system. Some main functional requirements of Digital Menu system are as follows:

2.15.1 Admin/Supervisor Sign Up & Login:

Admin/supervisor first sign up and then login to the system to perform activities on the system.

2.15.1.1 Add Projects:

Admin first login and then can add the projects after checking and verifying the description.

2.15.1.2 View Projects:

Admin after login can view the list of downloaded projects.

2.15.1.3 View sponsored projects:

User can view the sponsored projects by the teacher after the login

2.15.1.4 Delete projects:

Admin can delete the uncomplete projects.

2.15.1.5 Manage Projects:

Admin can manage the list of projects by keeping it in proper category.

2.15.1.6 Allow For Downloading:

Admin can approve the requests for download from the student/user side.

2.15.1.7 Allow uploading:

Admin verify the whole description of the projects and then it allow to upload.

2.15.1.8 Update projects:

Admin can add the updated version of the apps.

2.15.1.9 Logout:

Admin can logout from the system.

2.15.2 Students can signup/login:

Student firstly has to register him/her. Student has to register with registration number. Then they will login is with the help of username/mail and password

2.15.2.1 Upload project:

Student will upload the project with proper description as per given condition.

2.15.2.2 View sponsored project:

When student login he/she can see the list of project which is sponsored/announced by the teacher.

2.15.2.3 View Project:

When student sign in and he/she can see the listed projects.

2.15.2.4 Rate and Comment Project:

The student can rate and write suggestion when he/she will login.

2.15.2.5 Download project:

After the login the student can download after completion of the required form.

2.15.2.6 Register project:

After the login student can choose the project as a final year project in the list sponsored by the teacher.

2.15.3 Viewer:

The viewer views the website and downloads the app .viewer can only visits as a visitor only some of the project description can be viewed by it.

2.15.3.1 View Projects:

The user can view the listed projects. No need to be registered

2.15.3.2 Rate and Comment Projects:

They can rate and comment after login.

2.15.3.3 Contact us:

Viewer can contact the admin through contacts which is given on the website.

2.15.4 Teachers can signup/login:

Teacher firstly has to register him/her. Teacher has to register with registration number. Then they will login is with the help of username/mail and password.

2.15.4.1 View Project:

After login teacher can view the uploaded project and also can view the projects sponsored by other teacher.

2.15.4.2 Upload Sponsored Projects:

Teacher will login firstly and then she/she will upload the list of the project of their related field which is sponsored by them.

2.15.4.3 Approve Proposal:

Teacher after login will upload the registration for project which is sponsored by them.

2.16 Non-Functional Requirements:

Non-functional Requirements describe the overall qualities and attributes of the proposed or modified system. These requirements place restrictions on the product being developed, the development process, and specify external constraint that the product must meet. Non-functional requirements include safety, security, usability, reliability and performance requirements.

2.17 Performance:

Performance requirements define acceptable response times for system functionality. This means that the retrieval speeds of any information, data about projects and commands should be fast to perform the actions quickly.

The performance of this system includes:

- The load time for user interface screens shall not take longer than two seconds.

The log in information shall be verified within five seconds.

- Queries shall return results within five seconds.

2.18 Security And Privacy:

System must be developed in such a way that it would provide security and privacy. It should prevent any unauthorized access to system. Security and privacy of system will be:

Admin's password used for login must have strong password eg; password should be combination of characters, symbols and letters.

Admin's password used for login must be changed after every three months.

For copyrights of student we here keep track of that student who is downloading .why they are downloading this project. What they do with this projects.The display shall not require any unauthorized Student to log-in eg; biometric authorization system should be there.

2.19 Usability:

Usability is very important non-functional attribute which help the new user to understand the system. This means system should be designed in an interactive way so that our system should be easy to use, easy to learn and easy to handle. Usability of this system includes:

The interface is easy to understand as it contains images and icon for every uploaded project.

The interface appears easy to use rather than demanding and frustrating.

2.20 Reliability:

System should be reliable and it must perform all the tasks for what it is made. It should not be accepted if system crashes during run time. System will have said to be more reliable that how fast it recovers from the abnormal conditions. This functionality can be achieved by adding exception handling techniques in implementation.

The system shall be capable of restoring itself to its previous state in the event of failure e.g. a system crash or power loss.

The system shall be able to display projects at times to facilitate the student.

2.21 Availability:

The system should available all the time. When the viewer/user makes any query to she database can send the result within the milliseconds. The systems will be available 24/7.

2.21.1 Admin/moderator availability:

The moderator should check at least once in a 24/7 for checking and request download form. Moderator is responsible for verifying the data.

2.22 Maintainability:

The database may crash at any time at any certain time due to virus or an operating system failure. Therefore, it is required to keep a backup of all the data on the database to avoid any data loss.

2.23 Multi-platform delivery:

Since android has a wide variety of devices on which it is used, so, this application would be installed and used on all devices that use android plate-form including smart phone, and tablets.

2.24 Resource requirements:

Resource requirements are the requirements that we need to achieve the objectives of our project. To be used efficiently, all computer software needs certain hardware components or other software resources to be present on a computer.

2.24.1 Software Requirement:

The software requirements are description of features and functionalities of the target system.

2.24.2 Web Based Development:

PHP, HTML, bootstrap is used as developing languages.

Xampp technology will be used.

MYSQL will be used.

2.24.3 Mobile Based Development:

Java, XML, Jason is used as developing languages. Android operating system. Java JDK.

Android version .30

CHAPTER 3

ANALYSIS AND DESIGN

3.1 Introduction:

System analysis and design deal with planning the development of information systems through understanding and specifying in detail what a system should do and how the components of the system should be implemented and work together. System analysts solve business problems through analyzing the requirements of information systems and designing such systems by applying analysis and design technique.

3.1.1 Analysis:

- This section addresses security considerations. Key security activities include:
- Conduct the risk assessment and use the results to supplement the baseline security controls.
- Analyze security requirements.
- Perform functional and security testing.
- Prepare initial documents for system certification and accreditation.

Although this section presents the information security components in a sequential top-down manner, the order of completion is not necessarily fixed. Security analysis of complex systems will need to be iterated until consistency and completeness is achieved.

3.1.2 Design:

During this phase the security architecture is designed.

3.2 Overview:

This is an application build using android framework for mobile platform. This application allows the user and student to download the listed projects. This application also allows the student to upload their final year projects. It also has additional functionalities such as allowing users and students to leave a feedback. The application is used to facilitate the student that their projects are being uploaded to such an official platform.

3.3 Components overview:

IIT Project Portal is an Android Application used to facilitate students to motivate them and also a proper platform for them to utilization of their projects. The main functionality of the system is described in following UML diagrams:

3.3.1 Use case diagram:

Use case diagrams are usually referred to as behavior diagrams used to describe a set of use cases that some system or systems should or can perform in collaboration with one or more external users of the system. Each use case should provide some observable and valuable result to the actors or other stakeholders of the system. Use case diagrams are used to specify:

External needs on a subject, mandatory usages of a system - to capture what a system under construction is meant to do. The functionality offered by a subject – what the system can do.

The requirements, which the specified subject poses on its environment - by defining how environment should interact with the subject so that it will be able to perform its services.

3.3.1.1 Use case diagram Teacher:

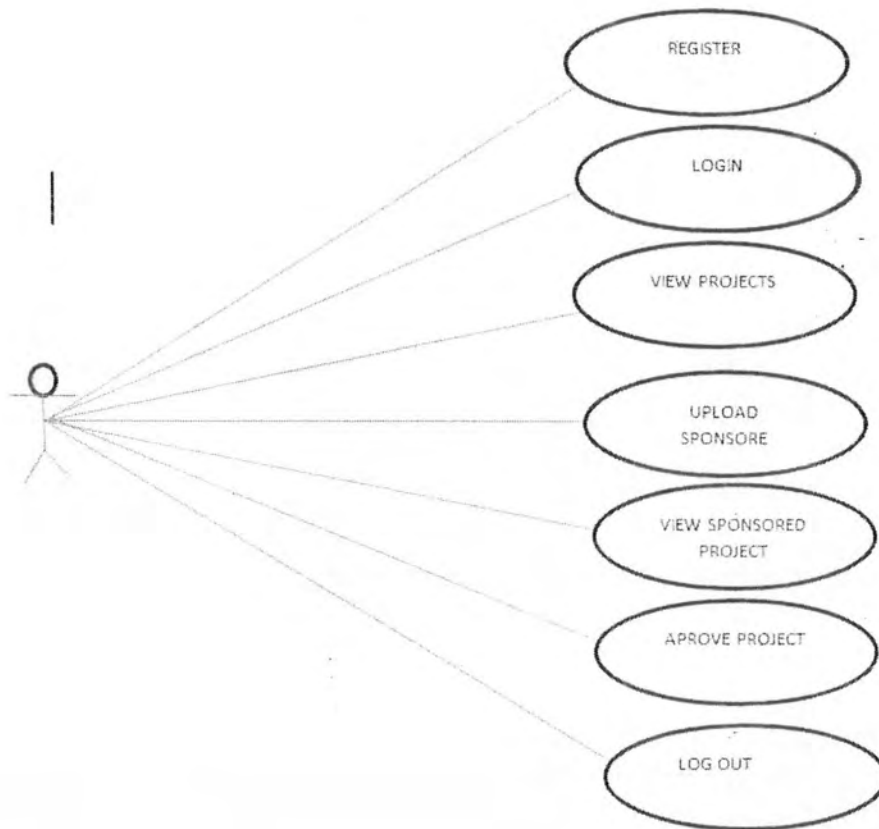


Figure 3.1 Use case diagram of Teacher

3.3.1.2 Use case diagram Student:

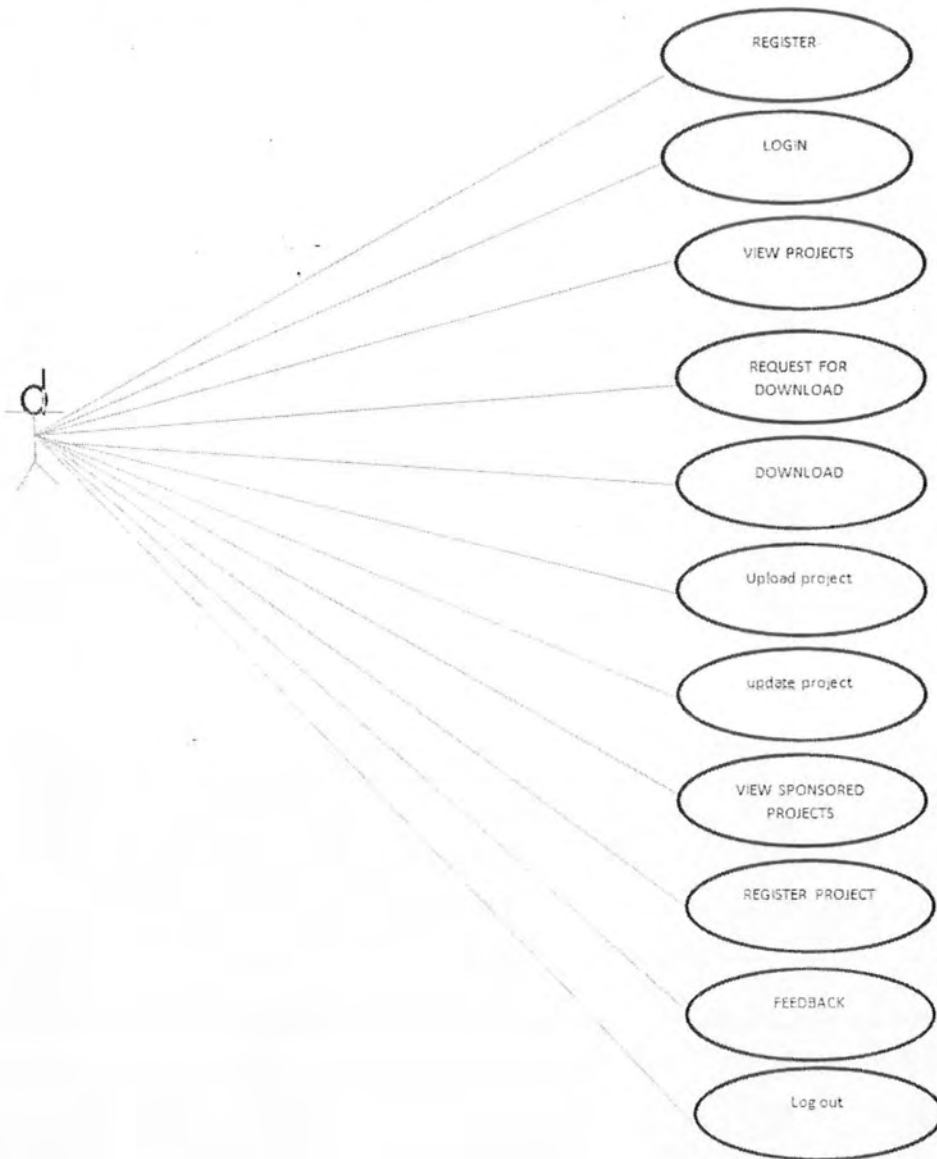


Figure 3.2 Use case diagram of Student

3.3.1.3 Admin/Moderator/Supervisor:

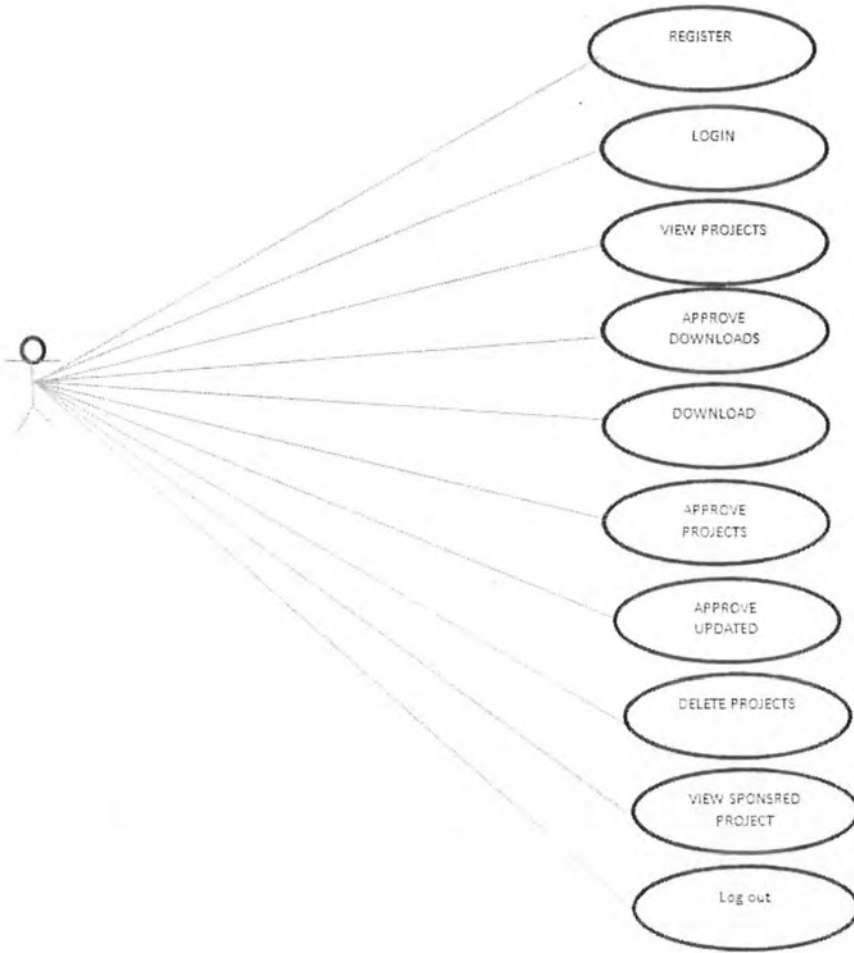


Figure 3.3 Use case diagram of Admin

3.3.1.4 Viewer:

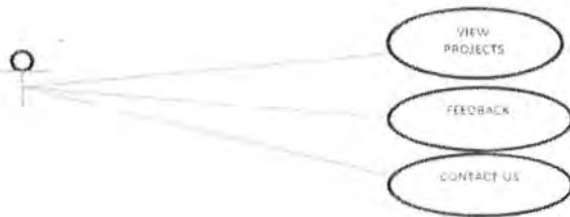


Figure 3.4 Use case diagram of Viewer

3.3.2 Use case description:

The use case description sometimes called as the use case narrative is a text-based, detailed, step-by- step interaction and dialogue between the actor and the system. The use case narrative is what people often mean when they say use case. They are multiple pieces that make up a use case model. The use case description is a written account of the sequence of steps performed by an analyst to accomplish a complete business transaction it is initiated by an actor, provides value to that actor, and is a goal of the actor working in that system. Following are the tables containing use case description of the use-cases identified in Figure 3.1, Figure 3.2, Figure 3.3 and Figure 3.4.

Table 3.1 Use case Register

Use case ID	1
Use case Name	Register
Actor	Admin / teacher /student
Description	He/ she will register by signing up the application. He/she has to enter the registration number provided by the department
Pre-condition	Admin, student and teacher should have an internet connection and connected to system.
Post-condition	Registered.
Basic Flow	Admin, student and teacher should enter registration ID press register button. System will match the registration in to the database. User is registered and given the user and password by the system.
Exceptional Flow	Admin, student and teacher cannot register to system if invalid data is entered.

Table 3.2 Use case Login

Use case ID	02
Use case Name	Login
Actor	Admin / teacher /student
Description	He/ she will login by signing up the application
Pre-condition	Admin, student and teacher should have an internet connection and connected to system.
Post-condition	Logged in.
Basic Flow	Admin, student and teacher should enter username, password and press login button. System validates username and password. User is logged into system.
Exceptional Flow	Admin, student and teacher cannot login to system if invalid data is entered.

Table 3.3 Use case Add Project

Use case ID	03
Use case Name	Add Project
Actor	Student
Description	He/ she can add project, thesis work of their final year.
Pre-condition	Student should have an internet connection and connected to system.
Post-condition	Student should be able to add Project.
Basic Flow	Student will login in the system and will select Add Project option and he can see Add in category as well as in subcategory through dropdown.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.4 Use case Delete Project

Use case ID	04
Use case Name	Delete Project
Actor	Admin
Description	He/ she can delete the project.
Pre-condition	Admin should have an internet connection and connected to system.
Post-condition	Admin should be able to delete project.
Basic Flow	Admin will login in the system and will select delete project option and he can delete from category as well as from subcategory through dropdown
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.5 Use case Updates Project

Use case ID	05
Use case Name	Update project
Actor	Student
Description	Student can update the project
Pre-condition	Student should have an internet connection and connected to system.
Post-condition	Student can update project of new version.
Basic Flow	Student will login in the system and will select update project/version option and he can update project version.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.6 Use case Logout

Use case ID	06. 12
Use case Name	Logout
Actor	Admin / teacher / Student
Description	Admin, Student and teacher's logout from the system.
Pre-condition	Admin, Student and teacher should have an internet connection.
Post-condition	By clicking logout session should be terminated.
Exceptional Flow	System User clicks on logout and session cannot terminate

Table 3.7 Use case View Project

Use case ID	07
Use case Name	View Projects
Actor	Teacher / Admin / Student/ viewer
Description	Teacher, viewer, Student and Admin can view the list of projects
Pre-condition	Teacher, viewer, Student and admin has to visit the page or app.
Post-condition	Project can be viewed in list form.
Basic Flow	After login user can see the list of projects and can select it according to his choice.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.8 Use case Download Project

Use case ID	07
Use case Name	Download Project
Actor	Admin/Student
Description	Admin and Student can download projects after completing requirements.
Pre-condition	Admin and Student is logged in.
Post-condition	Project can be Downloading in list form.
Basic Flow	After login user can Download projects and fill the Download Request form.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.9 Use case Request Download Project

Use case ID	07
Use case Name	Request Download Project
Actor	Student
Description	Students have to fill the form or request to download the projects.
Pre-condition	Student is logged in.
Post-condition	Project can be Downloading in list form.
Basic Flow	After login user can Download projects and fill the Download Request form.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.10 Use case Approve Download Project

Use case ID	08
Use case Name	Approve Download Project
Actor	Admin
Description	Admin will approve the requests after verifying the data of user/student.
Pre-condition	Admin is logged in.
Post-condition	Request for downloading while downloading the project.
Basic Flow	After login Admin will approve the requests form for downloading.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.11 Use case Approve Project

Use case ID	09
Use case Name	Approve Project
Actor	Admin
Description	Admin will approve and allow the student to upload their projects.
Pre-condition	Admin is logged in.
Post-condition	Uploaded Project can be firstly approved.
Basic Flow	After login Admin will approve the projects to be uploaded by the students.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.12 Use case view sponsored project list

Use case ID	07
Use case Name	View sponsored project list
Actor	Admin/teacher/Student
Description	Admin/teacher and Student can see the list of project's proposed/sponsored by the teachers
Pre-condition	Admin/teacher and Student is logged in.
Post-condition	List of sponsored proposal can be viewed in list form.
Basic Flow	After login teacher and student can view the list of sponsored projects.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.13 Use case upload sponsored project list

Use case ID	10.8
Use case Name	Upload sponsored project list
Actor	Teacher
Description	Teacher can upload the project list which he has to offer.
Pre-condition	Teacher is logged in.
Post-condition	List of sponsored proposal can be upload in list form.
Basic Flow	After login teacher can upload the list of sponsored projects.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.14 Use case Upload project

Use case ID	07,11
Use case Name	Upload project
Actor	Student
Description	Student can upload the project with proper details.
Pre-condition	student is logged in.
Post-condition	Projects can be uploaded in list form.
Basic Flow	After login student can upload the projects.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.15 Use case Add sponsored list

Use case ID	9
Use case Name	Add sponsored list of project
Actor	Teacher
Description	Teacher can upload the proposal for project with proper details.
Pre-condition	Teacher is logged in.
Post-condition	Proposal for Projects can be uploaded in list form.
Basic Flow	After login teacher can upload the projects.
Exceptional Flow	Invalid login details. Internet connection error.

Table 3.16 Use case registers projects

Use case ID	07
Use case Name	Register project
Actor	Student
Description	Students can register with the project which is sponsored by the teacher.
Pre-condition	Student is logged in.
Post-condition	Register with the project can be done in request form.
Basic Flow	After login student can register the projects.
Exceptional Flow	Invalid login details. Internet connection error.

3.3.3 Activity diagram:

Activity diagrams, which are related to program flow plans (flowcharts), are used to illustrate activities. In the external view, we use activity diagrams for the description of those business processes that describe the functionality of the business system.

Contrary to use case diagrams, in activity diagrams it is obvious whether actors can perform business use cases together or independently from one another.

Activity diagrams allow you to think functionally. Purists of the object-oriented approach probably dislike this fact. We, on the other hand, regard this fact as a great advantage, since users of object-oriented methods, as well as users of functional thinking patterns, find a common and familiar display format, which is a significant aid for business-process modeling.

Following are the notations used for activity diagrams:

3.3.3.1 Activity:

The rounded rectangles represent activities that occur.

3.3.3.2 Initial Node:

The filled in circles is the starting point of the diagram.

3.3.3.3 Final Node:

The filled circle with a border is the ending point.

3.3.3.4 Fork:

A black bar with one flow going into it and several leaving it.

3.3.3.5 Join:

A black bar with several flows entering it and one leaving it.

3.3.3.6 Decision:

A diamond with one flow entering and several leaving.

3.3.3.7 Merge:

A diamond with several flows entering and one leaving.

3.3.3.8 Flow Final:

The circle with the X through it. This indicates that the process stops at this point.

3.3.3.1 Activity Diagram for Admin:

Figure 3.5 represents an activity diagram of admin. Admin will first login to system to perform the entire task on the system.

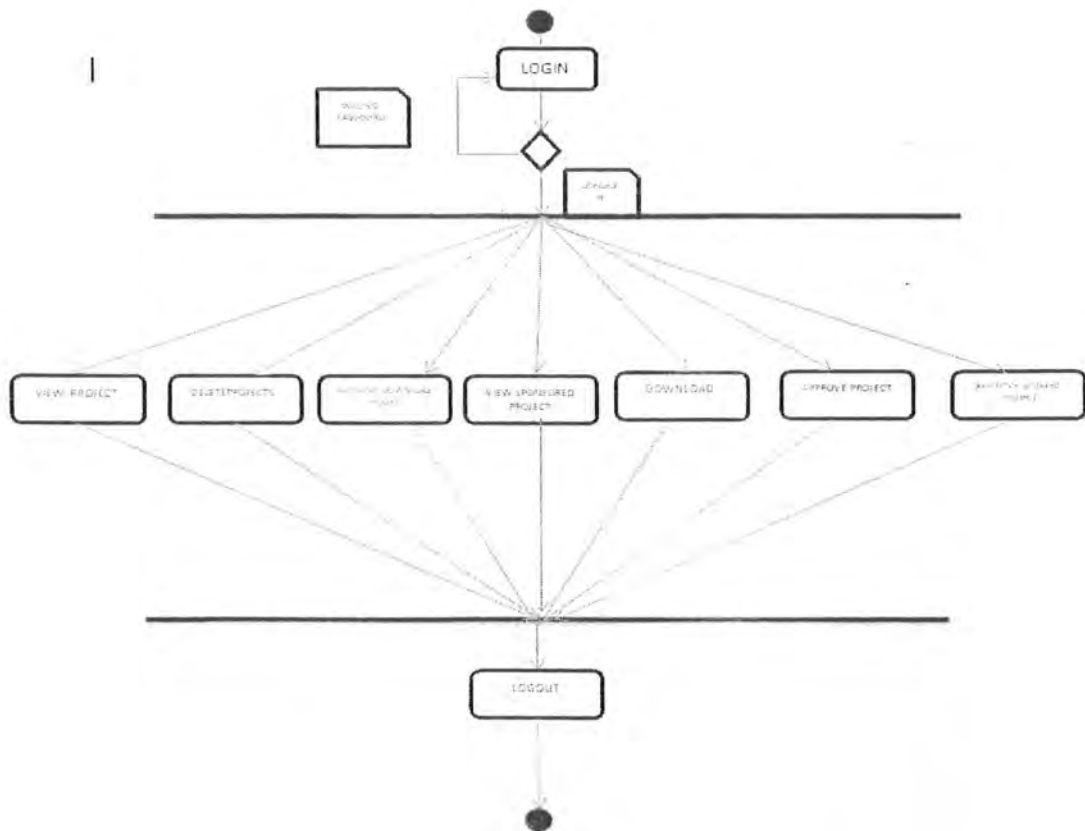


Figure 3.5 Activity diagram for admin

3.3.3.3 Activity Diagram for Teacher:

Figure 3.7 represents an activity diagram of teacher. Teacher will first login to system to perform the entire task on the system.

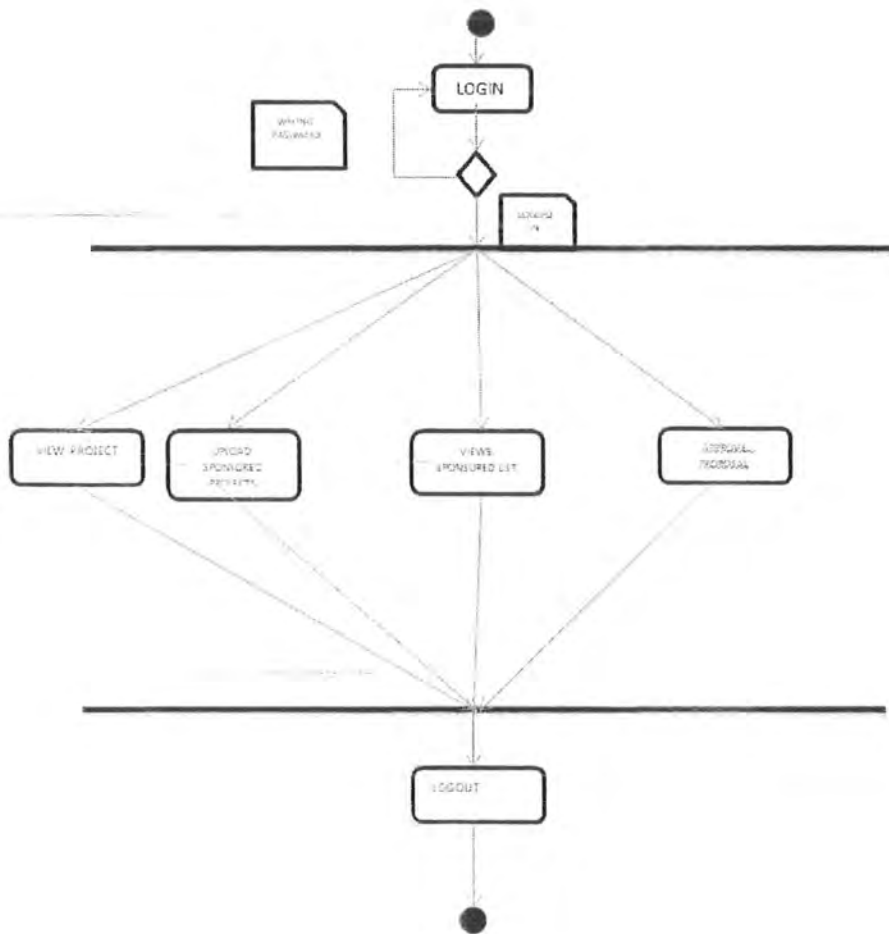


Figure 3.7 Activity diagram for Teacher

3.3.3.4 Activity Diagram for Viewer:

Figure 3.8 represents an activity diagram of Viewer.

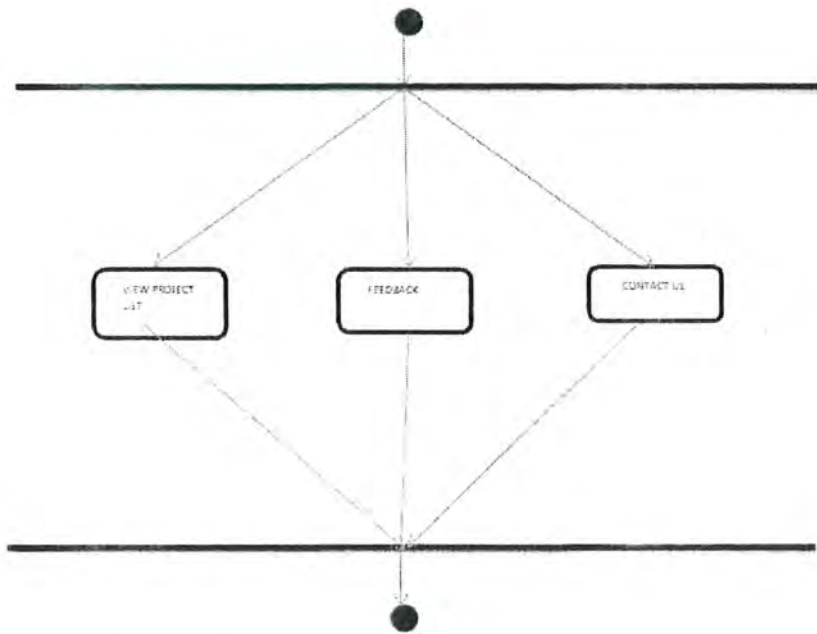
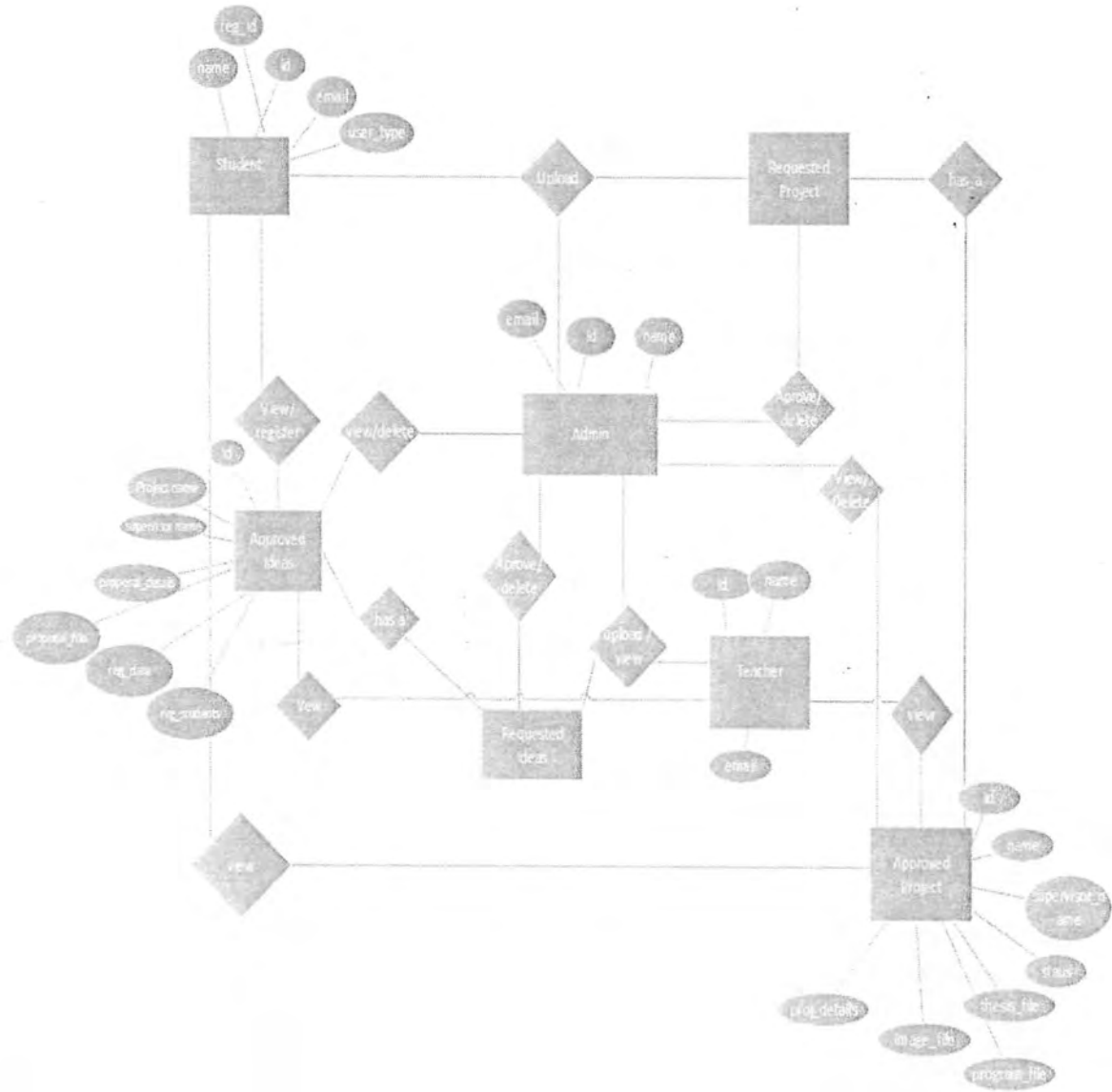


Figure 3.8 Activity diagram for Viewer

3.3.4 ERD diagram:



3.3.4.1 Class diagram for admin:

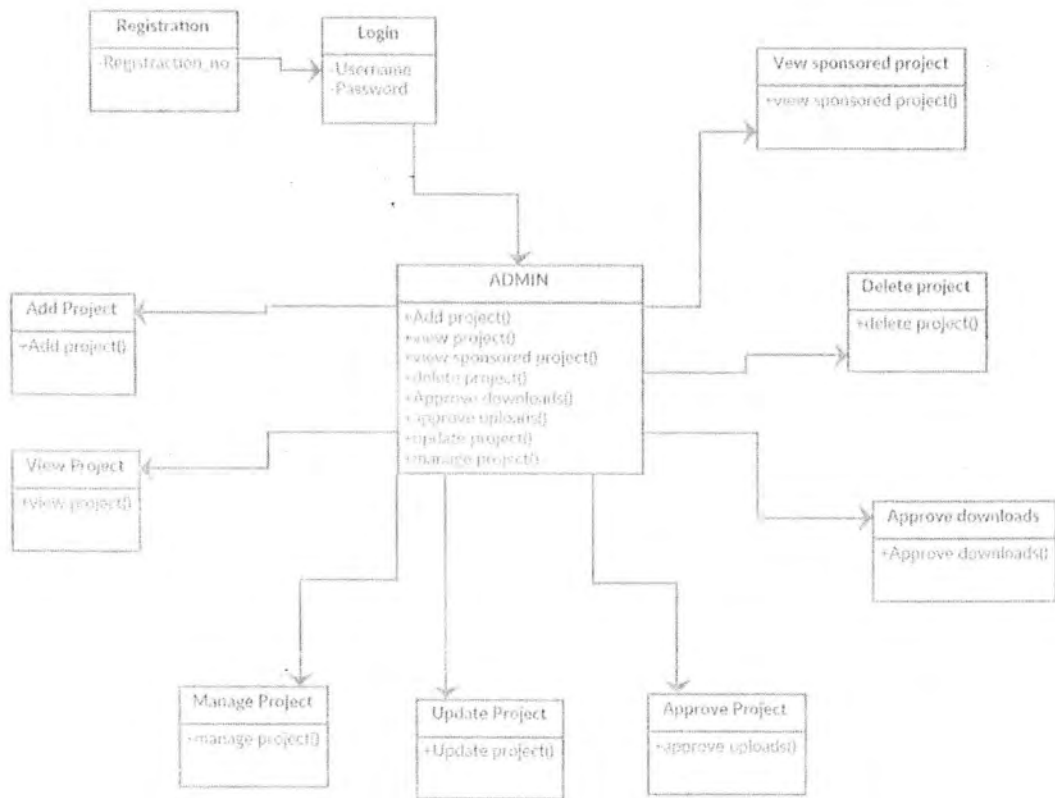


Figure 3.10 Class diagram for admin

3.3.4.2 Class Diagram for Student:

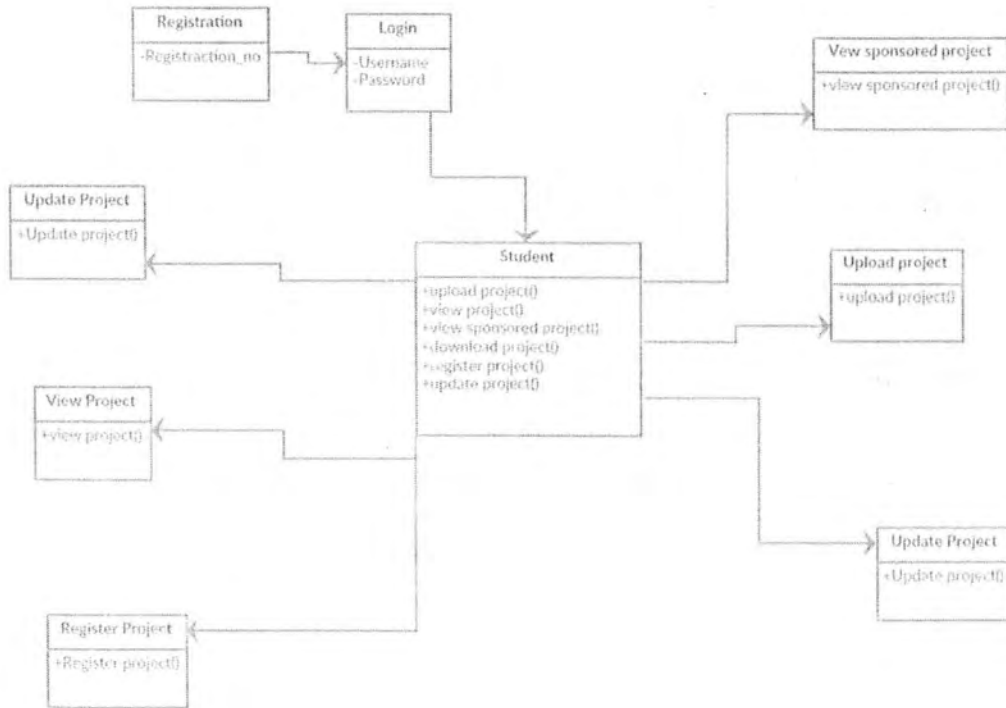


Figure 3.11 Class diagram for Student

3.3.4.3 Class Diagram for Viewer:

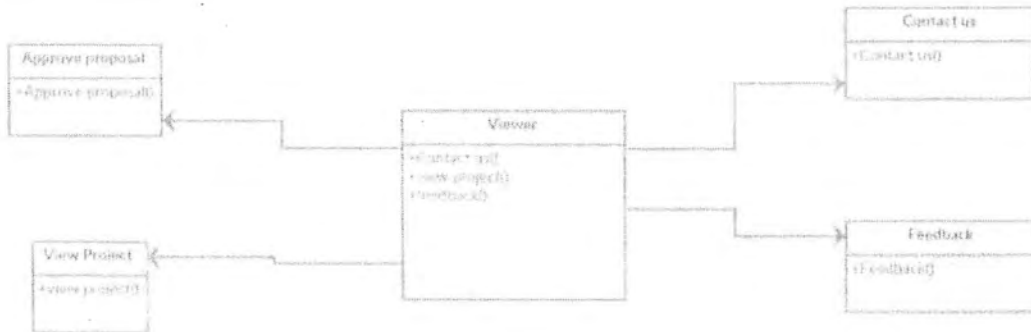


Figure 3.12 Class diagram for Viewer

3.3.4.4 Class diagram for Teacher:

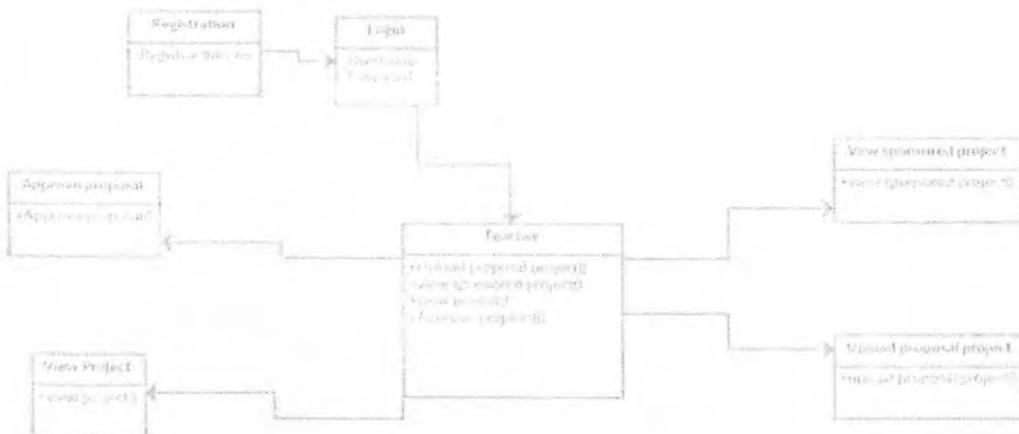


Figure 3.13 Class diagram for teacher

CHAPTER NO.4
IMPLEMENTATION

4.1 Introduction:

After the completion of design phase, the development phase of the software begins. The purpose of this phase is to transfer the system design into an executable form. Implementation is the realization of technical specification as program, software component through programming and deployment. For the system to be in executable form, Implementation is necessary. As this project includes development of mobile application so it is needed to decide first that which tools and technologies are used for system development. This chapter explains all the steps that are necessary for system development.

4.2 Project:

Project comprises of two parts: First section would be of PHP which will implement functionality of web application. Here, in this section a database would be maintained. This database maintains all the information regarding books in forms of tables. These tables will be updated by administrator. The users can access the table's information through an android interface however they would not be allowed to edit the tables in database. Only administrator would be able to Add, Delete or Update any field in the databases. In order to facilitate the users, a mobile based application is developed. Considering the remarkable increase in smartphones, mobile application is developed using Android operating system.

4.3 Language Selection:

The language selection to be used to develop an application is a critical step. A better language and tool support helps to avoid upcoming difficulties as we move forward in the development phase. The Android applications are written in JAVA programming language, so the selection of language was done with the selection of the platform.

4.4 Web based implementation:

A web-based application is a program that is accessed over a network connection using HTTP, rather than existing within a device's memory. Web based applications often run inside a web browser. Admin panel is developed using PHP which is a server side language.

4.4.1 PHP:

PHP is an "HTML-embedded scripting language" primarily used for dynamic web applications. It is a server side scripting technology that enables scripts (embedded in web pages) to be executed by an internet server. As scripting languages, PHP code requires the presence of the PHP processor. PHP takes

most of its syntax from C, Java and Perl. It is an open source technology and runs on most operating systems with most web servers. PHP was written in the C programming languages by Ramus Leadoff in 1994 for use in monitoring his online resume and related personal information. For this reason, PHP originally stood for “personal Home Page”. Among the many new features in PHP 7 are:

Improved object-oriented programming
Embedded SQLite Support for new MYSQL features
Exception handling

Integrated SOAP support

The filter library

Better XML tools

Figure 4.1 represents PHP logo.



Figure 4.1 PHP Logo

4.4.2 Web Services:

Web services are self-contained, modular, distributed, dynamic application that can be described, published, located, or invoked over the network to create products processes, and supply chains. These applications can be local, distributed or web-based. Web services are used to retrieve data from database.

To summarize a complete web service is, therefore any service that:

Is available over internet or private networks.

Uses a standardized XML messaging system.

Is not tied to any one operating system or programming language. Is self-describing

4.5 Mobile based Implementation:

A mobile software application or mobile app is a software application designed to run on a mobile device such as smartphones or tablet computer. Developing apps for mobile devices requires considering the constraints and features of these devices. Mobile application development requires use of specialized integrated development environments. Mobile apps are first tested within the development environment using emulators and later subjected to field testing. Emulators provide an inexpensive way to test applications on mobile phones to which developers may not have physical access.

4.5.1 Android-Operating System:

Android is an open source operating system for mobile devices. Android was initially developed by Android Inc., and sold to Google in 2005. The goal was to develop an open mobile platform every developer to contribute towards improving the performance and features of the product. Android is built on top of Linux kernel and GNU software. Software stack of the Android runs java applications using java core libraries. Each instance of java application runs on its own virtual machine (VM) called Dalvik. Android relies on Linux kernel to perform system level function such as memory management & even more dependent on it for hardware interactions and power management. Developers can build applications using the software development kit (SDK) developed by Google. It consists of Application Programming Interface (API) used to develop robust java applications. These API's facilitate to access the contents on the phone such as contacts and calendar information and also integrate them with external web services in order to provide online services. Figure 4.2 represents Android logo.



Figure 4.2 Android Logo

4.5.2 Java:

There are different languages that are used to develop android application by using Android Native Development Kit but here we use java language which is mostly used to develop android application. Java is a modern, evolutionary computing language that combines an elegant language design with powerful features that were previously available primarily in specialty languages. Java software distributions include many powerful, supporting software libraries for tasks such as database, network and graphical user interface. It is intended to let application developers “write once, run anywhere” (WORA) meaning that code that runs on one platform does not need to be recompiled to run on another. Java files are typically compiled to byte code (class file) that can run on any java virtual machine regardless of computer architecture. Java is one of the most popular programming languages in use, particularly for client-server web applications, with reported 10 million users. Java was originally developed by James Gosling at Sun Microsystems and released in 1995 as a core component of Sun Microsystems’ java platform. The language derives much to its syntax from C and C++. Figure 4.3 represents JAVA logo.



Figure 4.3 Java Logo

These were the primary goals in the creation of the Java Language:

It should be simple, object oriented and familiar.

It should be architecture-neutral and portable.

It should be robust and secure.

It should execute with high performance.

Some of the Java's important core features are:

It's object oriented and easy to learn and understand.

It's designed to be platform-independent and secure, using virtual machines.

Android relies heavily on these Java fundamentals.

The Android SDK includes many standard java libraries as well as special Android libraries that will help users for developing Android Applications.

Android only reuses the java language syntax and semantics; bur does not provide full class libraries and APIs bundled with Java.

4.5.3 What is java why do need it?

Java is a programming language and computing platform first released by Sun Microsystems in 1995. It is the underlying technology that powers state of the art programs including utilities, games and business applications. Java runs on more than 850 million personal computers worldwide, and on billions of devices worldwide, including mobile and TV devices. There are lots of applications and websites that won't work unless you have java installed, and more created every day java is fast, secure, and reliable. Java application runs on java virtual machine. There are millions of devices in which java is running these devices relates to different domains like Mobile phone, Computers, IPHones, Laptops, ATMs and many machines.



Figure 4.4 represents Java Virtual Machine

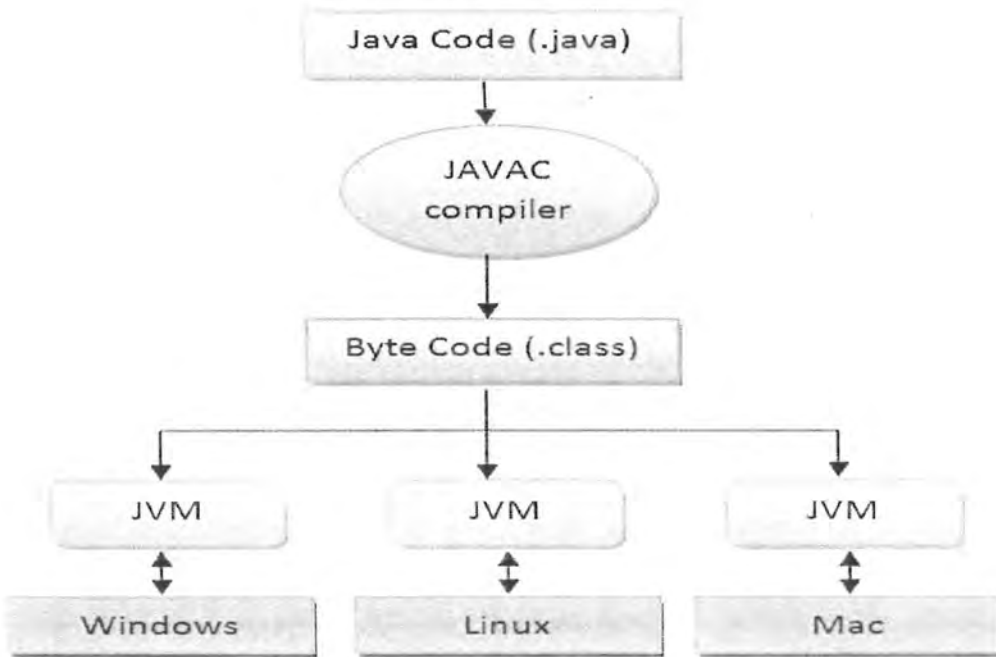


Figure 4.4 Java Virtual Machine (JVM)

4.5.4 JSON Parser:

JSON stands for JavaScript Object Notation. JSON is much human readable and easy to parse and structure. It is best alternative to XML when our android application needs to interchange data with our server.

Android provides four different classes to manipulate JSON data. These classes are

JSONArray

JSONObject

JSONStringer

JSONTokenizer

JSON-parsing:

The first step is to identify the fields in the JSON data in which we are interested in e.g. in the following JSON we are interested in getting temperature only.

```
{
  "System":
  {
    "Country":
    "Pakistan",
    "Sunrise":
    1354321678,
    "Sunset": 1381149604,
  },
  "Weather": [
  {
    "Id":322,
    "Main": "Smoke",
    "Description": "smoke";
    "Icon": "80n"
  }
  ],
  "Main": {
    "Temp": 305.15, 35
    "Pressure": 1009,
```



```
}
```

```
}
```

For parsing a JSON object, we will create an object of class `JSONObject` and specify a string containing JSON data to it. Its syntax is:

String in

```
JSONObject reader = new JSONObject (in);
```

The last step is to parse the JSON. A JSON file consists of different object with different key/value pair etc. So `JSONObject` has a separate function for parsing each of the components of JSON file. Its syntax is given below:

```
JSONObject sys = reader.getJSONObject ("system");
```

```
Country =sys.getString ("country");
```

```
JSONObject main = reader.getJSONObject ("main");
```

```
Temperature = main.getString ("temp");
```

4.6 Database Tool Selection:

A database is a separate application that stores a collection of data. Each database has one or more distinct APIs for creating, accessing, managing, searching and replicating the data it holds. We use relational database management system (RDBMS) to store and, manage huge data. All the data is stored into different tables and relations are established using primary keys and other keys known as foreign keys.

4.6.1 MYSQL:

Database system selected for this project is `MYSQL`. It is the most popular cross platform open source database system used with `PHP`. `MYSQL` is a structured query language database system used on web and runs on the server. It supports standard `SQL` and compiles on a number of platforms. `MYSQL` is fast reliable and easy to use `RDBMS` being used for both small and large application. It is used to access database on the internet due to its connectivity, speed and security.

4.7 Operating System:

64 bit operating system

Windows 10

4.8 Development Tools:

Android studio

Java JDK

4.9 Microsoft word 2013:

The Microsoft word is used for documentation of the project.

4.10 Microsoft Visio:

Microsoft Visio is used to create the UML diagrams.



CHAPTER NO.5
SYSTEM TESTING

5.1 Introduction:

In system testing the behavior of whole system is tested as defined by the scope of the development project or product. It may include tests based on the risks, requirement specifications, business process, use cases, or other high level description of the system behavior, interactions with the operating systems and system resources. System testing is most often the final test to verify that the system to be delivered meets the specification and its purpose. System testing is carried out by specialist testers. System testing should investigate both functional and non-functional requirements of the testing. The main purpose of testing is quality assurance, verification or reliability estimation in order to find problems and purpose of finding those problems is to get them fixed.

5.2 Objectives of System Testing:

System testing is done with a number of goals in the tester's mind but most importantly and basic goal of it is to verify the quality of the system. There are number of priority issues that make the system testing an important task. It includes:

- It ensures that we are building the system right. Meeting the requirements gathered during the requirement elicitation is the most important goal of the system. It covers all the aspects for which we are testing the system before deployment.
- If a bug or an error stays undetected for a long time after deployment it will eventually show itself but after doing harm to the system and that will be costly. Thus testing reduces future cost of the system.

5.3 Software Testing:

Software testing is the process of ensuring the good quality of software. Testing is an evaluating process which is conducted by testing team testing whether the software behaves in the required manner or not. It validates and verifies the software after development to avoid any future problems and issues.

5.3.1 Verification:

Verification implies that the software has been developed and working properly. It means that the software is in accordance with the required specifications.

5.3.2 Validation:

Validation assures that software or system meets the needs of the customer. It is most likely that it involves acceptance and suitability with external customers.

5.3.3 Goals:

Testing has different goals and objectives. The major objectives of software testing are as follows:

Finding defects which may get created by the programmer while developing the software.

Gaining confidence in and providing information about the level of quality.

To prevent defects.

To make sure that the end result meets the business and user requirements.

Software testing helps in finalizing the software application or product against business and user requirements. It is very important to have good test coverage in order to test the software application completely and make it sure that it's performing well and as per the specification.

5.4 Testing Levels:

Testing levels are basically used to identify missing areas and prevent overlap and repetition between the development life cycle phases. In software development life cycle models there are defined phases like requirements gathering and analysis, design, coding or implementation, testing and deployment. Each phase go through the testing. Hence there are various levels of testing. The various levels of testing are:

- Unit testing
- Component testing
- Integration testing
- Component integration testing
- System integration testing
- System testing
- Acceptance testing

- Alpha testing
- Beta testing

5.5 Testing Techniques:

Different testing techniques are used to test a system, which are as following:

5.5.1 Black box testing:

The technique of testing without having any knowledge of the interior workings of the application is called black box testing. The tester is oblivious to the system architecture and does not have access to the source code. Typically, while performing a black-box test, a tester will interact with the system's user interface by providing inputs and examining outputs without knowing how and where the inputs are worked upon.

Figure 5.1 represents black box testing.

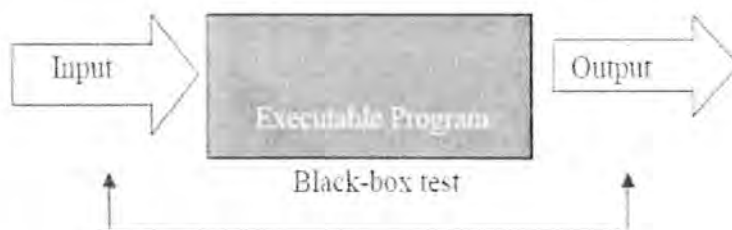


Figure 5.1 Black box testing

5.5.1.1 Advantages:

Well suited and efficient for large code segments.

Code access is not required.

Large number of moderately skilled testers can test the application with no knowledge of implementation, programming language, or operating systems.

5.5.5.2 Disadvantages:

Inefficient testing, due to the fact that the tester only has limited knowledge about an application.

Limited coverage, since only a selected number of test scenarios are actually performed.

Blind coverage, since the tester cannot target specific code segments or error-prone areas.

5.5.2 White Box Testing:

White-box testing is the detailed investigation of the internal logic and structure of the code. White box testing is also called open-box testing. For performing white box testing, tester needs to know the internal working of the system. The tester needs to have a look inside the source code and find out which unit of the code is behaving appropriately. Figure 5.2 represents white box testing.

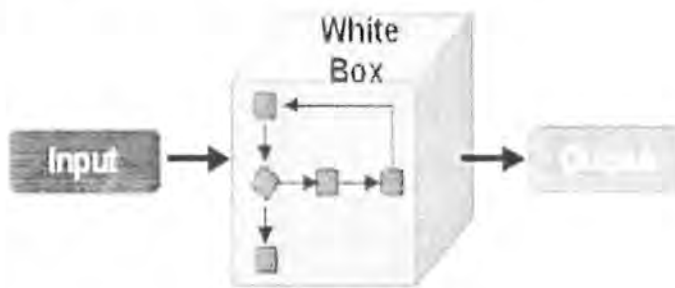


Figure 5.2 White box testing

5.5.2.1 Advantages:

It helps in optimizing the code.

Extra lines of code can be removed which can bring in hidden defects.

As the tester has knowledge of the source code, it become very easy to find out which type of data can help in testing the application.

5.5.2.2 Disadvantages:

Sometimes it is impossible to look into every corner to find out hidden errors that may create problems, as many paths will go untested.

It is difficult to maintain white-box testing, as it requires specialized tools like code analyzers and debugging tools.

5.6 Test Cases:

In software engineering, a test case is a set of conditions or variables under which a tester will determine if a requirement upon an application is partially or fully satisfied. In order to fully test that all the requirements of an application are met, there must be at least one test case for each requirement. A test has components that describe an input, action or event and an expected response, to determine if a feature of an application is working correctly. Test cases can be described in a tabular form like this:

Table 5.1 Generic Test case

Test case ID	Id of test case?
Tester	Tester name?
Test Type	What testing technique is used?
Test Case Name	Name of the test case.
Description	Description of functional requirement.
Procedure	Describes the steps of that function.
Expected Result	What should it do?
Actual Result	What it did?
Status	Success or fail?

5.6.1 Test cases of project:

The Test cases planned for testing this system are as follows:

Test Case 1:

Table 5.2 Test case Login

Test case ID	01 , 07
Tester	Hamza sheraz
Test Type	Black box testing
Test Case Name	Login
Description	Purpose of this test is whether the user is logged in or not.
Procedure	User enters Registration number and password. Clicks the login button.
Expected Result	Menu added
Actual Result	New menu is added into database.
Status	Success

Test Case 2:

Table 5.3 Test case Add Project

Test case ID	02
Tester	Hamza Sheraz
Test Type	Black box testing
Test Case Name	Add Project
Description	Add new Project to the system being tested.
Procedure	Student will login to system by entering correct name and password. He will click on add project tab. Student adds the project that is to be added.
Expected Result	Project added

Actual Result	New project is added into database.
Status	Success

Test Case 3:

Table 5.4 Test case Delete Project

Test case ID	03
Tester	Hamza Sheraz
Test Type	Black box testing
Test Case Name	Delete Project
Description	Delete project from the system being tested.
Procedure	Admin will login to system by entering correct name and password. He will click on delete project tab Admin deletes the project that is to be deleted.
Expected Result	Project deleted
Actual Result	Project is deleted from database.
Status	Success

Test Case 4:

Table 5.5 Test case Update Project

Test case ID	04
Tester	Hamza Sheraz
Test Type	Black box testing
Test Case Name	Update Project
Description	Changed version of project is added to the system being tested.
Procedure	student will login to system by entering correct Registration number and password. He will click on update project tab Then he will update project in data base.
Expected Result	version are updated.
Actual Result	Updated projects are added into database.
Status	Success

Test Case 5:

Table 5.6 Test case Verify Project

Test case ID	05
Tester	Hamza Sheraz
Test Type	Black box testing
Test Case Name	Verify Project
Description	In this test case, it will be checked either correct information is uploaded or not
Procedure	Admin will see the details of project and will verify the given information
Expected Result	Relevant information is sent to be
Actual Result	Verified details is sent
Status	Success

Test Case 6:

Table 5.7 Test case Logout

Test case ID	06 , 13
Tester	Hamza sheraz
Test Type	Black box testing
Test Case Name	Logout
Description	In this test case, logout process is to be tested
Procedure	User click on logout button.
Expected Result	User and admin should be logged out of the system.
Actual Result	User, student, teacher and admin successfully terminates their session
Status	Success

Test Case 7:

Table 5.8 Test case Upload sponsored project

Test case ID	07
Tester	Hamza sheraz
Test Type	Black box testing
Test Case Name	Select Table Number
Description	In this test case, the Teacher will upload the sponsored list of projects
Procedure	Teacher will login. Upload the list of sponsored projects
Expected Result	List will uploaded and viewed by students
Actual Result	List is uploaded

Test Case 8:**Table 5.9 Test case view project**

Test case ID	08
Tester	Hamza Sheraz
Test Type	Black box testing
Test Case Name	View Project
Description	User, Student, Teacher and Admin views the list of uploaded projects
Procedure	User, Student, Teacher and Admin will login.
Expected Result	Menu is being checked
Actual Result	Menu has been checked by user.
Status	Success

Test Case 9:**Table 5.10 Test case View Sponsored Project List**

Test case ID	09
Tester	Hamza Sheraz
Test Type	Black box testing
Test Case Name	View Sponsored Project List
Description	Student will see the list of projects.
Procedure	Student will login. He will select icon. He will check list of sponsor uploaded by other teachers and will upload its own.
Expected Result	List is uploaded
Actual Result	Listed uploaded

Test Case 10:

Table 5.11 Test case Download Request

Test case ID	10
Tester	Hamza sheraz
Test Type	Black box testing
Test Case Name	Request For Download
Description	Student will requester for downloading according to his choice
Procedure	Student will login. He will select the project. Then he will check details. He will select the apk and will request for download.
Expected Result	Project is being requested.
Actual Result	Download request from student.
Status	Success

Test Case 11

Table 5.12 Test case register project

Test case ID	11
Tester	Hamza Sheraz
Test Type	Black box testing
Test Case Name	Register project
Description	Students will register the project
Procedure	Student will login. He will register his/her fyp with the teacher.
Expected Result	Register project has been done.
Actual Result	registration done.
Status	Success

Test Case 12:

Table 5.13 Test case Approve Project

Test case ID	12
Tester	Hamza Sheraz
Test Type	Black box testing
Test Case Name	Approve Project
Description	In this test case, it will be test that either student will register will done or not.
Procedure	Teacher will check and approve the registration of project he will be supervisor.
Expected Result	Project will be approved.
Actual Result	APROVED
Status	Success

CHAPTER NO.6

USER INTERFACE

6.1 Introduction:

The user interface is an important aspect of a product and is often at least as important as the functionality of system. Graphical User Interfaces uses pictures and graphics instead of just words to represent the input and output of the program. The program displays certain icons, buttons, dialogue boxes etc. on the screen and the user controls the program mainly by moving a pointer on the screen and selecting certain objects by pressing buttons, etc. The function of a Graphical User Interface is to facilitate the handling of an application by means of graphical elements.

Designing a good user interface is an iterative process. First, we design and implement a user interface using appropriate techniques. Then we evaluate the design. The results of the evaluation feed the next design and implementation. Note that if we have different user communities (or the same user with different jobs), we may need different user interfaces, customizable user interfaces or both.

6.2 Interfaces:

Following are the interfaces of Admin and user.

6.2.1 Login screen:

Admin, Teacher and Student can login to system by providing name and password to perform activities in system.

6.2.2 Login screen for admin:

Admin can login to system by providing name and password to perform activities in system.

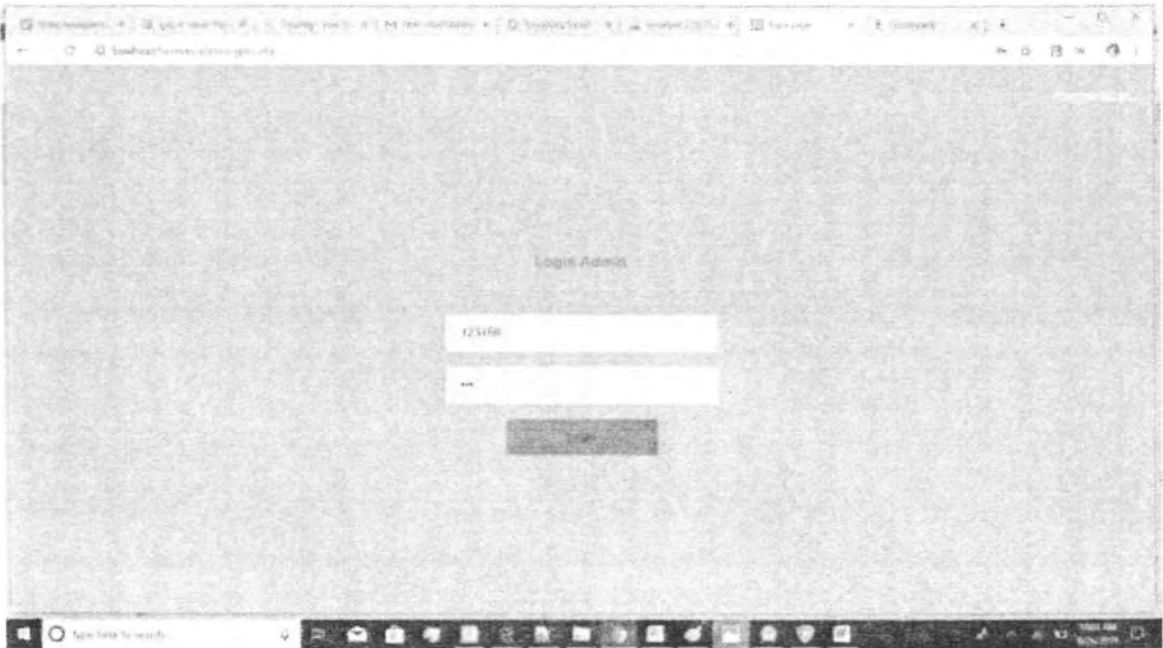


Figure 6.2 represents Admin Login page

6.2.3 Login screen for Teacher:

Teacher can login to system by providing name and password to perform activities in system.

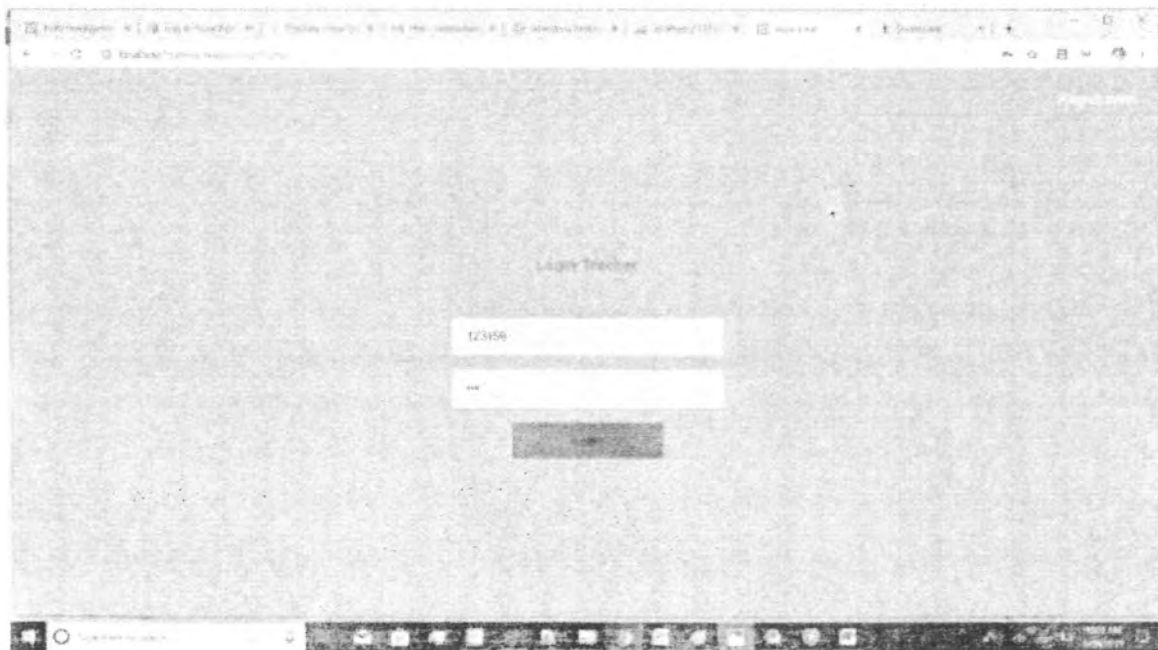


Figure 6.3 represents Teacher Login page.

6.2.4 Login screen for Student:

Student can login to system by providing name and password to perform activities in system.

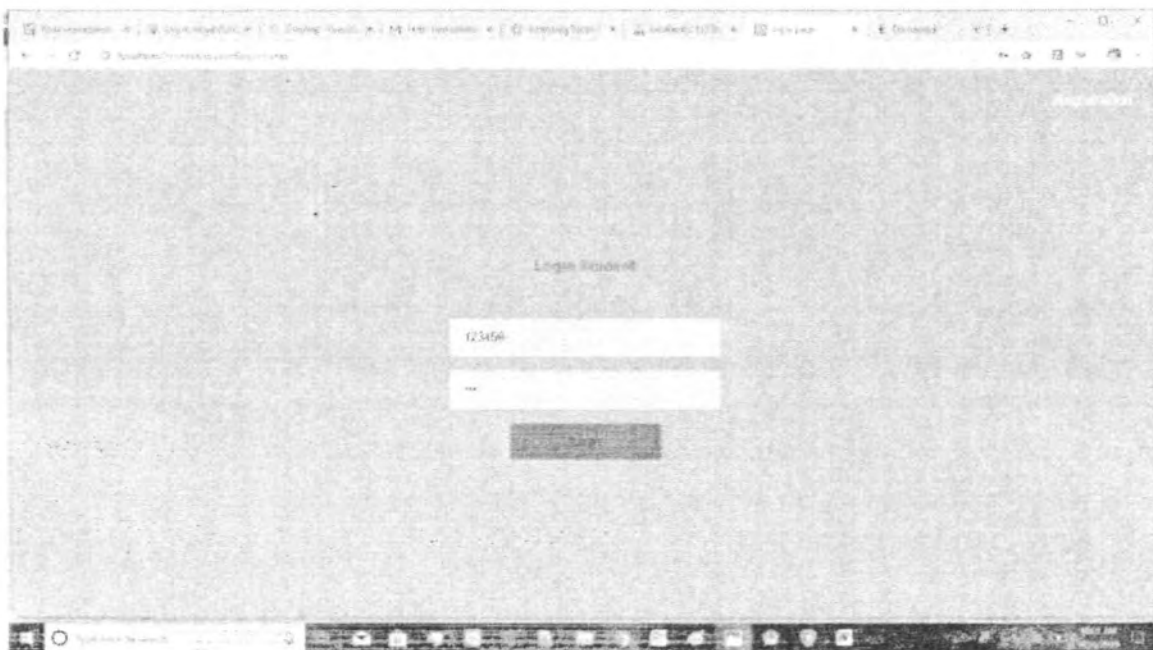


Figure 6.4 represents student Login page.

6.2.6 Sign Up for Admin:

Figure 6.6 represents the sign up form for admin. Admin fills the Sign up form to be registered to the system. After signup admin can access the system.

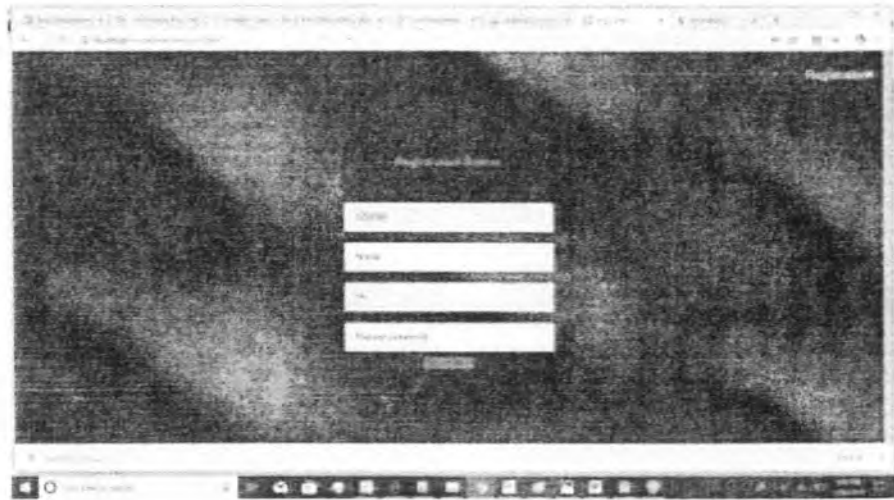


Figure 6.6 Admin Sign

6.2.7 Home Screen:

Figure 6.7 represents home screen.

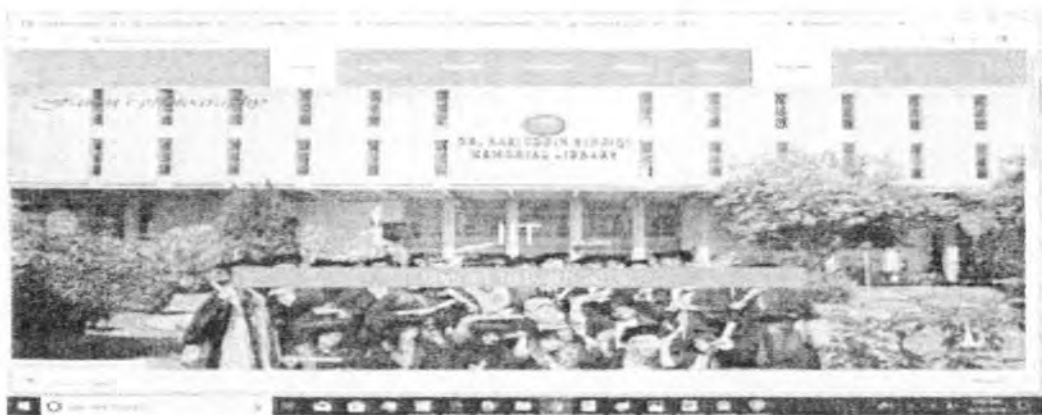


Figure 6.7 home screen

6.2.8 View Project:

Figure 6.8 represents View Project screen.



Figure 6.8 View Project:

6.2.8 View Proposal:

Figure 6.8 represents View Project screen.



6.2.9 Contact us:

Figure 6.9 represents Contact Us screen



Figure 6.9 Contact Us:

6.2.10 Add Project:

Figure 6.10 represents Add Project screen

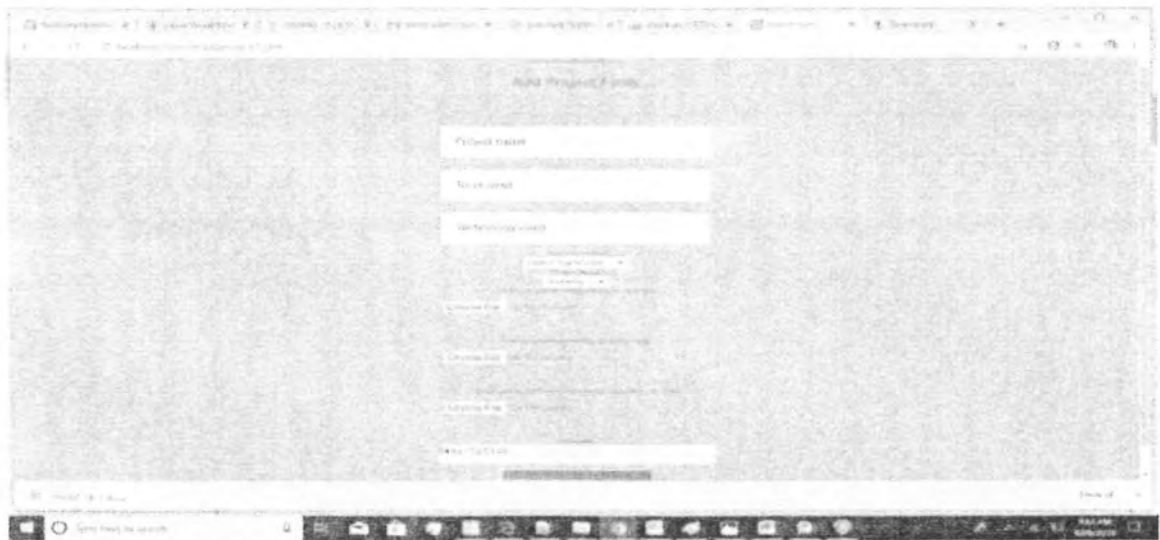


Figure 6.10 Add project

6.2.11 Add Proposal:

Figure 6.11 represents Add Proposal screen

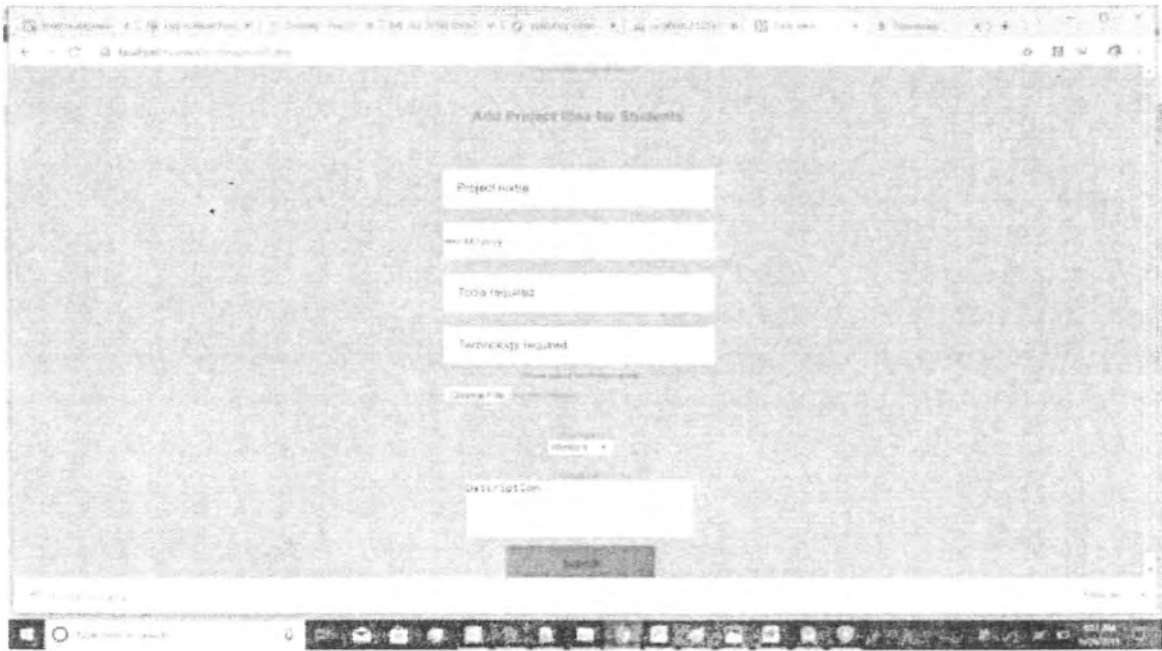


Figure 6.11 Add Proposal

ANDROID INTERFACES

6.2.12 Signup Screen:

Figure 6.12 represents Signup screen on android phone.

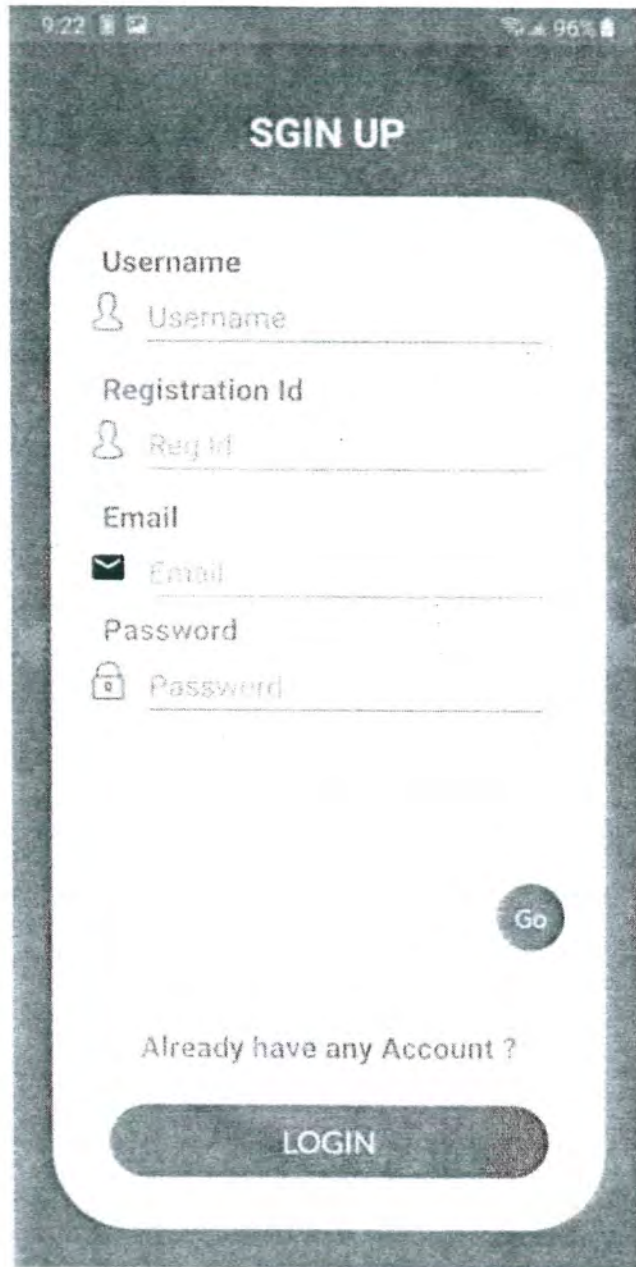


Figure 6.12 Login page

6.2.13 Login Screen:

Figure 6.13 represents login screen for users to access the system on their android phones..



Figure 6.13 Login Screen for user

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