Generic Job Readiness System

Thesis submitted in partial fulfilment

Of the requirements of the degree of

Bachelor of Computer Application

In

Mobile Application and Cloud Technology

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CERTIFICATE

This is to certify that the dissertation entitled **"Generic Job Readiness System" is** a bonafide work of "**Sanjyot Mankar" (2020-B-03022003)**, "**Kunal Bhargava" (2020-B-18022002A), "Kunal Patel" (2020-B-12062002**) **and** "**Amisha Jadhav" (2020-B-22102002**) submitted to the School of Engineering, Ajeenkya D Y Patil University, Pune in partial fulfillment of the requirement for the award of the degree of *"**Bachelor of Computer Application in Mobile Application and Cloud Technology**".*

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This is to certify that the dissertation entitled **"Generic Job Readiness System"** submitted by **Sanjyot Mankar (2020-B-03022003), Kunal Bhargava (2020-B-18022002A), Kunal Patel (2020-B-12062002) and Amisha Jadhav (2020-B-22102002)** is a record of original work carried out by him/her under my supervision and guidance in partial fulfilment of the requirements of the degree of **"Bachelor of Computer Application In Mobile Application and Cloud Technology".** Neither this dissertation nor any part of it has been submitted earlier for any degree or diploma to any institute or university in India or abroad.

Dr. Paras Chawla	**Mr. Chandan Prasad**
Supervisor	Co-Supervisor

Declaration of Originality

I, *Sanjyot Mankar (2020-B-03022003), Kunal Bhargava (2020-B-18022002A), Kunal Patel (2020-B-12062002) and Amisha Jadhav (2020-B-22102002)* hereby declare that this dissertation entitled "**Generic Job Readiness System**" presents my original work carried out as a bachelor student of School of Engineering, Ajeenkya D Y Patil University, Pune, Maharashtra. To the best of my knowledge, this dissertation contains no material previously published or written by another person, nor any material presented by me for the award of any degree or diploma of Ajeenkya D Y Patil University, Pune or any other institution. Any contribution made to this research by others, with whom I have worked at Ajeenkya D Y Patil University, Pune or elsewhere, is explicitly acknowledged in the dissertation. Works of other authors cited in this dissertation have been duly acknowledged under the sections "Reference" or "Bibliography". I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission.

I am fully aware that in case of any non-compliance detected in future, the Academic Council of Ajeenkya D Y Patil University, Pune may withdraw the degree awarded to me on the basis of the present dissertation.

Date:

Place: Lohegaon, Pune

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I remain immensely obliged to **Dr. Paras Chawla & Mr. Chandan Prasad** for providing me with the idea of this topic, and for his invaluable support in garnering resources for me either by way of information or computers also his guidance and supervision which made this Project happen.

I would like to say that it has indeed been a fulfilling experience for working out this Project.

Sanjyot Mankar,

Kunal Bhargava,

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Amisha Jadhav

Abstract

Now a days the education era is highly equipped in terms of the technology for the knowledge sharing, information gathering, learning methodology and innovative digital tools. These approaches help in the learning styles as well as the teaching styles in consideration of different types of the learners such as visual, auditory, and kinaesthetic. In early days the learning style was also digital in the way systems built based on the standalone software applications. These stand-alone software applications and web-based application was not so interactive and follows the VAK Module. With the development of mobile technology and the accessibility of smart mobile devices and networks the learner is highly available online. In terms of social application as well as connectivity with the world. Here, we proposed a system which will focuses on the type of the learner as per knowledgeable. In this platform learner can work on himself from the beginning of his/her undergraduate till the completion of graduation in terms of knowledge enhancement and job readiness in the swift information technology era.

It is equipped with different segments such as aptitude, technical interview skills, and programming skills. The proposed system is contributed as in the registration of college and provides a platform where the learner can equip for their interviews by giving practise questions for each subject as per the industry interview suggested by the faculty. It will also help to the educational institution to test student's skills and improve their performance course wise.

The proposed system will display a quiz menu with multiple-choice questions and technical content support in terms of doc and give tutorials.

The quiz includes functions: - 1) Hint, 2) Skip, 3) Randomize questions, 4) Timer, 5) Audio quiz. We are offering VAK (Visual-auditory- kinaesthetic learning) module implementation since it discusses the learning style model, which offers a simple and rapid reference to various or preferred learning styles. The learner can utilise these features while they complete the quiz. Through various quiz sets, it enables learners to assess their knowledge and skills, improve their learning capabilities and excel in any interview situation.

Keywords: - Admin, Faculty, Student, Test, MCQ, Tools, College, Test preparation, VAK Module.

Contents

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List of Abbreviations

LMS	Learning Management System
GUI	Graphical User Interface
DB	Database
KL	Kinaesthetic Learning
VL	Visual Learning
AL	Auditory Learning
VAK	Visual-Auditory-Kinaesthetic
UT	Unit Testing
GJRS	Generic Job Readiness System
C&M	Control and Management
DFD	Data flow Diagram

CHAPTER 1

INTRODUCTION

1.1 Project Idea

This project work is synchronization of various system as in one to get improved version of professional skills development tools which maintain the reusability factor of existing skills in future on the students on from various platform. The above novel approach realization is only possible by valuable thoughts of my father, he enlightens my path with his experience and skills. To get the improved development rate and reusability factor, we design system tool which has three layers. C layer, S layer and K layer. C layer use for probability distribution for elements of ERP, once the hypothesis is generated equal uniform distribution is assigned to each instance. S layer is use for hypothesis which maps the values of instance for students which helps to take future decision for Skill enhancement. K layer provides the Meta data to next layer for proper skill rating. We must improve the skill development rate so that we use one to one mapping function in proposed system tool for generation of ERP which is help for creation and re-creation of generic system.

Generic Job Readiness System is graphical user interface that usually based on a better learning system that facilitates student understanding of topics while preparing for various interviews and subjective examinations directly through smart phones and tablets. We are introducing new features as well as unique learning techniques. This study's title, "A Job Readiness application," was chosen based on the study's context and problem formulation. With the help of this research, the application will have a quiz menu with questions that take the form of multiple-choice tests (MCQs). When all the multiple-choice questions have been answered, the quiz score is displayed right away, saving the faculty the time and paper required for manual checking of each student's response, which can take a long time.

1.2 Motivation

Now a days the (LMS) Learning Management System has changed and need revolution in perspective of skills development. Today each domain of person is willing to work in Graphical User Interface (GUI) environment as working in GUI makes an interactive session and easy to understand the process of skill development. This approach helps to improve its readability, maintainability, innovativeness, transformation, and refactoring. The recent (LMS) Learning Management System & ERP provide various functionalities which works on quiz module. These tools and others which are present in current environment provide immense contribution to the system tool usability in very friendly manner to develop almost 90% application. But the existing systems are lacking in context of generic components for development.

In this project we are streamlining an approach of development in an immensely innovative way via Generic Job Readiness system which makes more generic tools to enhance the skill development. These results bolster to the researchers, tool developers and system tool designers to rethink about future of development or design tools.

1.3   Literature Survey

1) Vaibhavi Balaji Kunale, Sharvari Sandip Shinde (IJERA): Quiz App using Android Studio

The Main objective or focuses of this research on a quiz app with a set of questions that, when answered, shows a simple result with the number of questions that were answered correctly, incorrectly, and overall. It verifies the accuracy of the user's response and offers a selection of questions and answers that have been carefully chosen. The questions are navigated using dynamic programming.

2) Mohamed Abdullah, Marwa Hussain Ali (IJSE): Quiz application development using android-based on google forms

The quiz app that deals with the building of an android-based Google Forms application is the major subject of this study. There will be preset fields or categories, such as network, data structure,

and site design. This makes it easier to quickly compile responses in one location and create some charts and graphs that show the overall outcome. Organising multiple exams concurrently.

3) P.P. Bastawade, Abdulkarim Shaikh (IJARCCE): Android Quiz Application

The research primarily focuses on a straightforward quiz app that includes brand-new features like hint, skip, and pause. Users will typically use these features just once, and the quiz's results will be displayed at the conclusion. There is a function that lets you share or send the quiz results to your registered email address after you finish it. There is also a function that allows them to schedule the quiz (day, time, and month). It mostly focuses on the computer field; for example, this application offers courses in python, java, and other technical/programming issues. Design plots, layout plots, java codes, on create plots, and computation plots are all included. However, there remains room for advancement in the next years. It might be able to improve its usability by giving it more diverse functionality.

4) Mr. A. Ganesan, Mr. C. V. Balaguru, Mr. D. Naveen (IJCRT): Quiz Management System

This study outlines how to lead teams to provide the quiz takers with greater performance and service. This system displays the results following the completion of examinations or quizzes, and faculty/teachers have complete control over the question posting and are responsible for creating the quiz schedule. Additionally, the entire system that is offered will be under administrative control.

5) D. Suganya, R.P. Harshini (IJRESM): Web Based Quiz Application to Validate Knowledge

This research referees to web-based quiz application which mainly focuses on subjective exams according to curriculum of their respective college like semesters and predefined courses. This system has been successfully created a platform where student can take the test, review their test performance, and display the score at the end of the test. It allows huge number of students to take the test at a time and provide convenience to the users. By use of this technology a platform is created where students can take the test for free at anywhere and faculty can save their time and workload.[6]

6) Shivkumar Hegonde, Sanket Walke (IRJET): Kids Learning Zone a 3D Android Application

This research is mainly focuses on the learning style for kids and student. The VAK (Visual-Learning, Auditory-Learning, and Kinesthetics-Learning Style) Model is the learning style adopted in this application and it offers a simple and rapid reference to desired learning style.

It helps kids to improve in things like logic building, thinking Enhancement, Virtual-Reality Learning. [3]

7) Maulidia Tifani Alfani Nur Hardiana (IJRR): The Effectiveness of VAK Model In learning of Summary Writing.

This research is mainly focuses on the VAK model in learning of summary writing. This research was an experiment with pretest-posttest Control group design. So according to the research Russell states provide learning steps using VAK model: - 1) Stage of preparation, 2) Stage of delivering and training, 3) phase of performance of result.

8) Beatriz Andres, Raquel Sanchis, and Rahul Poler (CDIEGI): Quiz Game Application to Review the Concepts learnt in class: An Application at the University Context.

This study outlines the comparison on the multiple quiz game tools: - Infuse learning, QuizSocket, Kahhot, Verso, Socrative, Poll Everywhere etc.

9) Prof. (Dr.) Praveen Gupta, Mr. Mukesh Kumar (IIJCS): Architecture for Mobile Quiz application using Android Application Fra.

This study primarily focuses on the work used to create an engaging mobile application based on the Android architecture to hold quizzes on various technical subjects. The only thing it does is give a framework or prototype for the quiz system that students can access remotely from anywhere.

10) P.Subha, I.L fefina, C.Niranjana Devis (IJARCCE): College Management System

This study outlines how college management system works with multiple perspective.

1.4 Existing Systems Apps

1.4.1 Online MCQ Quiz Application

The project's goal is to automate the current manual approach and assist the examiners in conserving both their time and crucial data. In addition, the data stored in this system will be readily accessible and last for a long time. The initiative aids the assessors in

They effectively manage their services and give their customers superior service.

The purpose of this project is to manage the details of students, examinations, marks, courses, and papers in a good manner. The functioning of the programme will be totally managed by administrator and administrator can guaranty any one to access. The project would reduce the manual process in managing examinations and all concerns relating that.

Advantage of the System: -

1)   The Users data is stored for longer period.

2)   The Functionalities of the application is fully-managed by administrator.

3)   Quiz provided with timer and Instant Result after completion.

4)   It reduced manual checking of papers.

Limitation of the system: -

1)   It has limited features provide to users.

2)   Absence of Security.

1.4.2 Online Quiz Application for Informatics and Information System

Students (Task Portal Development)

For Information Systems students, the aim of this study is to develop an online quiz application that will save both lecturers and student's time when grading and processing the results. Making an application can aid in the development of traditional processes using technology and in real-time. The steps taken to carry out this research are Requirements Planning, User Design, Construction, and Testing / Evaluation, followed by the creation of the final report. This study will display a multiple-choice quiz with questions on it. The correct and incorrect answers, grades, and information on whether to pass will all be displayed straight away. The study's findings will help minimise the stack of paperless documents, and the interaction between students and lecturers is no longer conventional.

Advantage of the System: -

1)   Teaching Get Interactive & interesting.

2)   Quiz Menu with questions in the forms of multiple choice & immediate   result will be helpful.

3)   Paperless study will be possible.

4)   Teaching will be easy due to electronic device.

Limitation of the system: -

1)   Can Lack Behind if system is not updated.

2)   If System failure occurs or no electricity available it will not be helpful.

3)   Need to be with internet connection & network area always.

4)   Not affordable to everyone & every time.

1.4.3 JAGRAN Josh Computer General Knowledge Quiz

The Computer General Knowledge Quiz part is a collection of multiple-choice questions regarding topics relevant to the computer area that will help you understand the changing nature of competitive examinations. A generic computer quiz is being given. This test is helpful for preparing for any field exam for computers. In this quiz app, questions are presented along with four options, and the answer is also provided at the conclusion. Students can use the quiz after studying to gauge their degree of readiness.

Advantage of the System: -

1)   Timer feature for the quiz.

2)   Leader board is provided.

3)   Score will be display after quiz submission.

Limitation of the system: -

1)   Limited subjects/topics given in the Web application.

2)   Quiz is not work dynamically from the database.

3)   Absence of security.

1.4.4 Web Based Quiz Application to Validate Knowledge

Web based quiz application system is very much important for any educational institution to prepare their students for exams by saving the time in this critical period. In this website, the list of courses with respect to the semesters is provided. The multiple-choice questions for each course are included. It is helpful for students to test their course wise knowledge on their own. This excludes the need of human efforts for managing question sets. It is designed to replace existing paperwork and manual correction which is not applicable in this pandemic time.

The motive is to computerize the existing manual system and help the examiners to save their valuable time and important data. Apart from this, data which are exist in this system, will exist for long period of time and will be easily accessible. It will reduce the manual process in managing examinations and all issues regarding that. Correct answers will be evaluated by system and students can see their scores either after submitting the test or the faculty can send it manually after some period. The interface is very easy and can be maintained by anyone.

This familiar GUI will make the user feel more comfortable to navigate and view the data on the system. It allows user to take test and make them improved. It can be completely controlled by admin and the admin can be able to modify the questions.

Advantage of the System: -

1)   Provide proper user management system.

2)   Easy GUI.

Limitation of the system: -

1)   Limited subjects/topics.

2)   Quiz is not work dynamically.

1.4.5. College Management Android Application

    The system's design and implementation are aimed at serving institutes and colleges. The system will replace the current paper records by offering a thorough student information system and user interface. Automation of all college or university functions is the primary goal of the College Management Application.

You may manage all aspects of college administration using this system, including admission, payment of tuition, scheduling classes, and announcement of results. You may simply examine or change statistics and information on students and employees with this college management system. Our suggested application includes modules like Login. Once a user registers an

institution, they take on the role of the college administrator. All information is safely kept in a database that the college.

Advantage of the System: -

1)   Provide proper user management system.

2)   Student and staff data can be managed easily.

3)   Payment gateway is provided for tuition.

Limitation of the system: -

1)   Verification is time taking.

1.5   Taxonomy Chart

The taxonomy chart given below shows the comparison of various existing systems. The parameters used here to for comparison gives us clear idea wherein a concrete work can be done.

Features / Papers/ Systems	Visual	Auditory	Kinesthetic	Questions	Study Material			Dashboard	Leaderboard	Result	Progress
					Videos	Documents	Notes				
1. QA-Google Form (Quiz application development- Based Google form)	x	x	✓	✓	x	x	x	✓	✓	✓	x
2. Quiz App (Quiz app using android studio Research-paper)	x	x	x	✓	x	x	x	x	x	✓	x
3. Android Quiz Application (Research-Paper)	x	x	x	✓	x	x	x	x	x	✓	x
4. Online Quiz Application for Informatics and information System Students	x	x	x	✓	x	x	x	✓	x	✓	✓
5. Quizzes (Quiz App- Based MIT APP Inventor)	x	x	✓	✓	x	x	x	x	x	✓	✓
6. Quizzy (Quiz application)	x	x	✓	✓	x	x	x	x	x	✓	✓
7. Kids learning Zone	✓	✓	✓	x	✓	✓	x	x	x	✓	x

Figure 1: Taxonomy Chart (1)

Features / Papers/ Systems	Visual	Auditory	Kinesthetic	Questions	Study Material			Dashboard	Leaderboard	Result	Progress
					Videos	Documents	Notes				
8. Online MCQ Quiz Application	x	x	x	✓	x	x	x	x	x	✓	x
9. Kahoots	✓	✓	✓	✓	x	x	x	x	✓	✓	x
10. Quizlet	✓	✓	✓	✓	✓	x	x	x	x	✓	✓
11. Socrative	x	x	x	✓	x	x	x	x	x	✓	✓
12. QuizUp	x	x	✓	✓	x	x	x	x	✓	✓	✓
13. Trivia Crack	x	x	✓	✓	x	x	x	x	x	✓	✓
14. Current Affairs Quiz	x	x	x	✓	x	✓	x	✓	x	✓	✓
15. Quiz Management System	x	x	x	✓	x	x	x	✓	x	✓	x
16. Proposed System	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Figure 2: Taxonomy Chart (2)

9

1.6 **Exiting Systems Architecture:**

The visualisation of the many systems that our team's research covered is shown in this diagram.
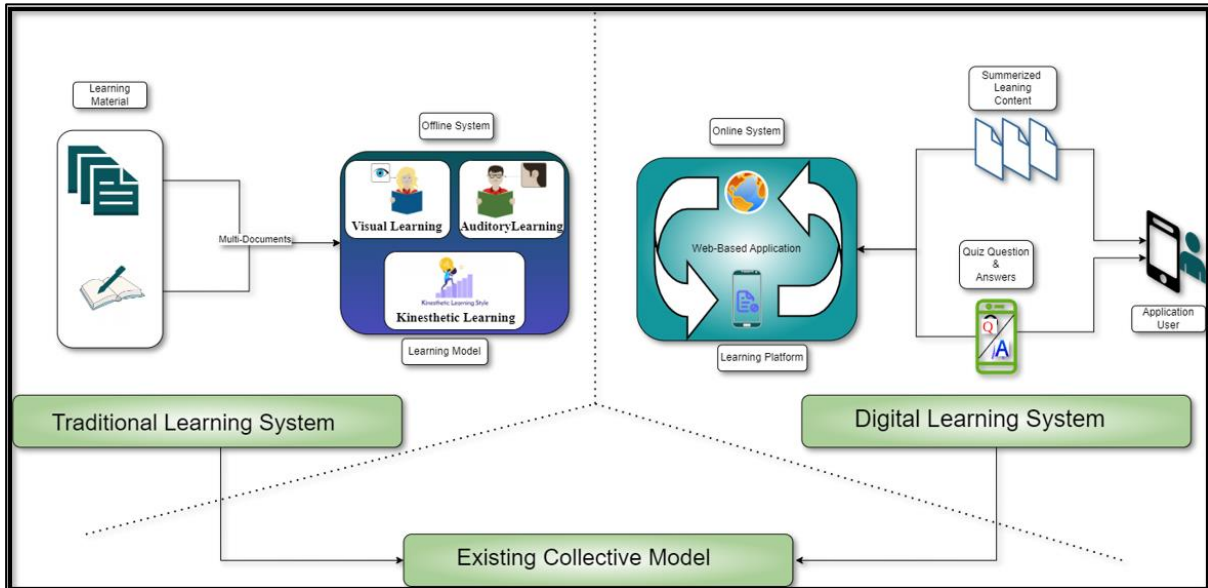
Figure 3: Existing Systems Architecture

Nowadays the digitalization has enhanced the area for learning methodologies and learning platforms. There are lots of traditional learning system/approaches for interview preparation and subject wise preparation for students learning such as Hands-on practise, Videos, Audios, etc.

1) Traditional Learning System:

The traditional learning system, also known as the classroom-based learning system, has been the primary mode of education for centuries. It is a system where a teacher imparts knowledge and skills to students in a physical classroom setting. This method of learning is still widely followed in colleges and universities around the world. The existing system architecture of traditional learning consists of a physical classroom where a teacher delivers lectures, assigns homework, and evaluates student progress. The learning materials, such as textbooks and other reading materials, are provided to the students. The students are expected to attend classes regularly, complete assignments, and participate in classroom discussions. The teacher provides guidance and feedback to the students throughout the learning process. This system has been the cornerstone of education for many years, but with the advancement of technology, new learning systems such as online learning have emerged. Despite the emergence of new learning systems, the traditional learning system remains relevant and effective for many students.

2) Digital Learning System:

Nowadays the digital learning system is vastly growing, there were several platforms which provides multiple features like study materials, Q & N in Web-based application, but there is no such platform which provides the interview preparation aspects with daily learning.

1.7 Proposed System Architecture
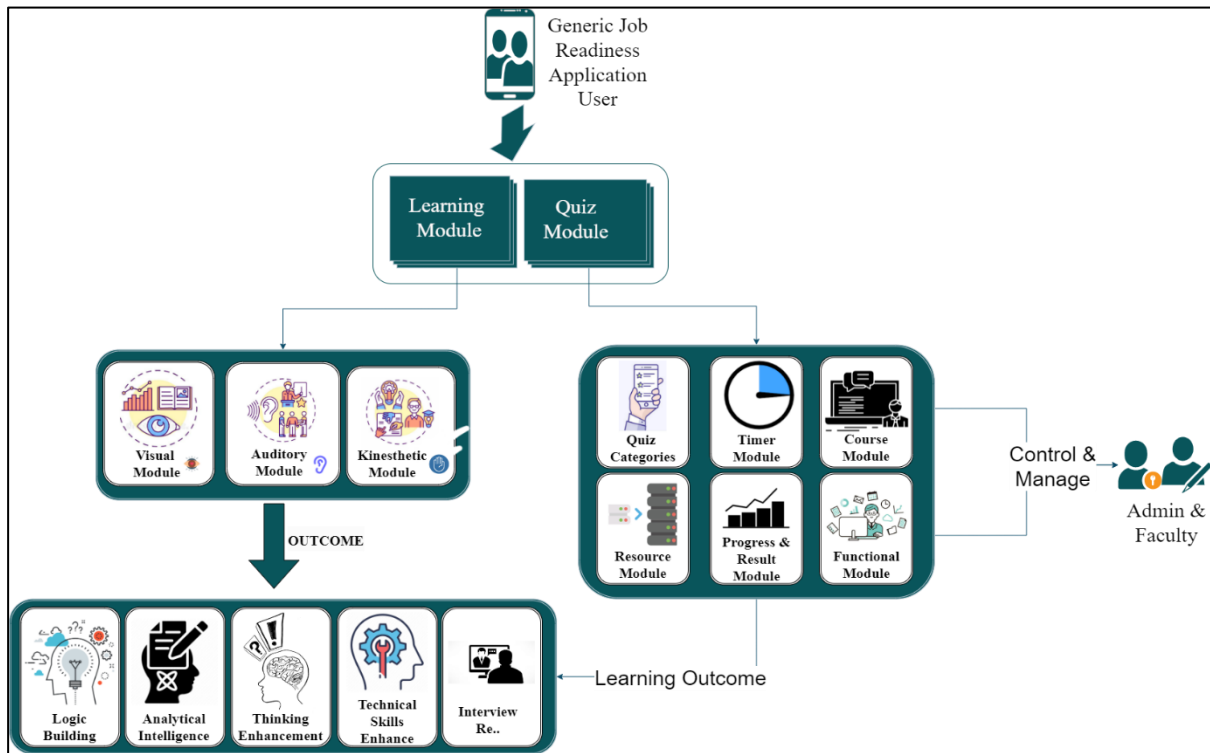
Figure 4: Proposed System Architecture

Learning Module: - VAK Module (Visual, Auditory & Kinesthetics Module [3].In order to study effectively, VAK Module makes the assumption that students' potential will be explored together with their learning preferences. [10]

Visual Learning Style: - It is a typical learning method is to observe or see things. The clearest illustration of this is when professors used to bring some visually appealing items to display in class. From the standpoint of the student, they observe and retain information that they see visually in front of their eyes. It is interesting that visual learner characteristics have shown that knowledge and skills imprinted with the helped of visually exciting materials remain in our memories for a long time. In the modern classroom, teachers adopt visual teaching techniques by

using whiteboards, handouts, photos, films, presentations, and other visual aids to help students understand concepts in a more effective way.[3][10]

Auditory Learning Style: - Auditory learning means that a student learns most effectively by listening. Students learn using this method through listening to spoken text, watching videos, participating in conversations, and expressing their emotions aloud. Q&A sessions are excellent for keeping aural learners interested and help them quickly absorb crucial knowledge about topics.[3] Mostly students prefer to discuss the ideas or shear the important information in groups instead of reading the papers or books.[3]

Kinesthetics Learning Style: - Kinaesthetic learning is a style of obtaining information. Instead of simply leasing the concepts or watching the presentation, most students prefer hands-on practice. The best learning results may be anticipated when students engage in some physical exercise while they are learning. [3]

CHAPTER 2

PROBLEM DEFINITION AND SCOPE

2. 1   PROBLEM STATEMENT

A platform is to be developed that fills the gap between the faculty and the learner and regularly improves the learners' ability to gain a job-ready approach in the rapidly evolving IT field. This platform will have various functionalities such as easy UI for the faculty and learner to use, easy monitoring approach of progress for learner, subject related learning materials and different learning styles materials such as visual, kinaesthetic, and auditory.

The generic Job readiness system is web-based platform as well as android app-based platform for the students and the faculties to maintain the connectivity with the system in terms of the operations such as college registration, program creation, specialization creation, subject allocation, faculty allocation, student registration & many more.

The GJRS system has following main components: 1. Super-Admin 2. Admin 3. Faculty 4. Student. The GJRS system has following main functionalities such as: 1. Control and Mange admins accounts, 2. Control and Manage college account, faculties account, students account, 3. Upload different types of study-material, 4. Quiz Creation as per the subject & visualization in leader board.
.

2.1.1 DESCRIPTION OF PROBLEM

The problem statement on GJRS highlights the lack of job readiness skills among learners. Many learners lack the opportunity to gain job readiness experience, which leads to high rates of unemployment and underemployment. One of the main reasons for this problem is the lack of access to job readiness training and resources. Additionally, many learners struggle to effectively communicate their job readiness skills to potential employers. This leads to missed job opportunities and decreased job prospects. The lack of job readiness skills is a significant problem for individuals and society.

Therefore, there is a need for a generic job readiness system that can help learners develop and showcase their job readiness skills to potential employers. This system should provide learners with access to job readiness training and resources and allow them to easily demonstrate their skills to potential employers through an online platform.

2.1.2 GOALS AND OBJECTIVES

The Generic Interview Quiz Application's main goal is to get students ready for upcoming interviews and subjective tests. It handles information on students, exams and quizzes, teachers, programs, specialization, courses, subjects, and leader board. Since the project is entirely administrative, only the administrator is given access. The project's goal is to develop an application that uses MCQ quizzes to reduce the additional preparation time needed for interviews and subjective examinations.

We will follow to achieve these objectives in this project. –

1.   To create an appropriate platform for best managing of MCQ test;

2.   To provide the platform where students can easily prepare for their interviews in favourite domain.

3.   To overcome the time-consuming issues and taking MCQ tests;

4.   To display the score of the quiz as soon as possible;

5.   To display the leader board after completing the quiz;

6.   To display the individual analysis of the course: - like where are you standing where you can improve yourself.

2.1.3 STATEMENT SCOPE

The scope of the GWJRS on is to provide learners with a platform to develop their skills for the potential job opportunities.

The system will give a scope for the learners as well as the faculties to work in Era where primary goal is to get ready for the skill enhancement. Here the faculties will understand the learning style of the learner and upload the content as per the learning style of the learner such as visual, auditory & kinaesthetic.

This system is enabled to deploy a flexible college structure, including mapping programs, specializations, subjects, students, and faculties. The application will also include features such as job readiness training, resources, and knowledge enhancement. The scope of this system is to address the learning style of the learner and improve their skills as per their learning style and providing the questions & study-material.

2.1.4 MAJOR CONSTRAINTS

- This utility will be used by a developer for developing a Generic Job Readiness system which is applicable for web-based and as well as app based.
- This utility will be available to a developer and will provide the generic logic along with the liberty to add his/her own logic.
- The Product will avail the developer various facilities such as designing flexible college structure like adding and mapping programs, specializations, subjects, students, and faculties etc.
- The utility should be designed to accommodate scalability and high user traffic as it will be used by many learners and potential employers.

2.1.5 APPROACH FOR SOLVING PROBLEM

To solve the problem described in the modules, we can use a software development approach that involves several steps. First, we need to include the super-admin, admin, faculties, and students. This involves understanding their needs, expectations, and concerns, and documenting them in a requirements document. Next, we need to design the system architecture and database schema that will support the required functionality. This involves identifying the various modules and components needed to implement the system, their relationships and dependencies, and the data that will be stored and processed. Once the design is finalized, we can start implementing the system using a programming language and development framework of our choice. This involves writing code for each module and component, integrating them, and testing the system to ensure that it works as expected. We can then deploy the system on a suitable infrastructure, such as a cloud-based platform or a dedicated server, and provide access to the relevant stakeholders, such as super-admin, admins, faculties, and students. Finally, we need to maintain the system by fixing bugs, addressing user feedback, and updating the system as needed. This involves using various tools and techniques to monitor the system's performance, identify issues, and resolve them in a timely and efficient manner. By following this approach, we can build a robust and scalable system that meets the needs of all stakeholders and provides a seamless and intuitive user experience.

2.2 SOLVING APPROACH

The proposed solution for the system involves four modules - Super-Admin, Admin, Faculty, and Student. The Super-Admin module is designed for the intended user to manage admin user information, access admin accounts, and restrict access to the admin panel. The admin module allows college admins to register their colleges with their respective names, icons, and other relevant information, as well as create the college's structure and curricula, including programs, semesters, specializations, and subjects. This module also provides access to teachers and students. The faculty module is intended for faculties to schedule quizzes and provide study materials for specified subjects, including timed exams that assess students' knowledge from an objective and subjective standpoint. Finally, the Student module is designed for students to sign up and access the program once their use of the system is validated. This module provides daily, monthly, or

periodic quizzes for students to assess their knowledge from both objective and subjective interview standpoints.

2.2.1 OUTCOME

The proposed system has the potential to bring multiple benefits to educational institutions that implement it. Firstly, it would streamline academic program management, enabling administrators and faculty to focus more on education quality and less on administrative tasks. Secondly, the system would improve the learning experience of students by providing timely and relevant study materials and quizzes that assess their knowledge from both objective and subjective perspectives. This could help them prepare better for exams and acquire relevant knowledge and skills to get the Ready for the Job they want to do. Thirdly, the system could foster collaboration between administrators, faculty members, and students, leading to a more conducive learning environment that promotes innovation, critical thinking, and problem-solving skills. Overall, the system could enhance operational efficiency, improve learning outcomes, and create a dynamic and collaborative learning environment for educational institutions.

2.3 HARDWARE AND SOFTWARE REQUIREMENTS

Hardware Requirements:

1)   System: Core 2 Duo, 2.5GHz.

2)   Hard Disk: 1 TB.

3)   RAM: 2GB

Software Requirements:

1)   Operating System: Microsoft Windows 7, 8, 10, 11.

2)   Coding Language: Java, XML, PHP, HTML, CSS, JavaScript, and MySQL.

3)   Other Software: Android Studio, Visual Studio Code, Canva.

CHAPTER 3
PROJECT PLAN

Sr. No.	Modules	Period Required for Project	Start Date	End Date
1.	Finding Research Papers	10 Days	20 January 2023	2 February 2023
2.	Design Abstract, Problem Statement, and Introduction	1 Week	3 February 2023	13 February 2023
3.	Preparation For Review-1	1 Week	13 February 2023	21 February 2023
4.	Design Database	2 Weeks	22 February 2023	13 March 2023
5.	Design Super-admin Panel	10 Days	14 March 2023	27 March 2023
6.	Design Admin Panel	13 Days	28 March 2023	13 April 2023
7.	Preparation of Review-2	2 Days	14 April 2023	17 April 2023
8.	Restructuring Database	3 Days	17 April 2023	19 April 2023
9.	Creating Research Paper	2 Days	20 April 2023	24 April 2023
10.	Creating Report	2 Days	24 April 2023	25 April 2023
11.	Design Faculty Panel	6 Days	26 April 2023	1 May 2023
12.	Design Student Panel	5 Days	1 May 2023	5 May 2023
13.	Unit Testing, Integration Testing & Performance Testing	2 Day	6 May 2023	8 May 2023
14.	Result Analysis	1 Day	9 May 2023	10 May 2023

3.1 RISK MITIGATION MONITORING AND OVERVIEW OF (RMMM)

Management Plan

A major objective of the risk mitigation, monitoring, and management plan is to locate all potential risks. Following the identification of all risks, each one will be assessed to ascertain its likelihood of happening and the impact it would have on the system. Then, strategies will be developed to mitigate each risk, monitor each risk to see if it is more or less likely to materialise, and prepare for those risks should they do so.

3.1.1 SCOPE AND INTENT OF RMMM ACTIVITIES

The goal of the risk mitigation, monitoring, and management plan is to identify all potential risks. Once all potential risks have been identified, they will be quantified to ascertain their likelihood of happening and the impact they might have on the software system. Following that, strategies will be developed to avoid each risk, track each risk to see whether it is more or less likely to occur, and make plans for those risks if they do. To produce a high-quality product, it is the obligation of the organisation to carry out risk reduction, monitoring, and management. The more quickly risks can be detected and avoided, the less likely it is that those risks' consequences will have to be dealt with. Risks are potential issues that could prevent a software project from being successfully completed. A software development team is expected to benefit from the understanding and management of uncertainty provided by risk analysis and management.

Elements of risk management are as follows:

1. Risk Transference: - This has many risks caused by the workspace selection, project selection, language selection and database selection.

2. Risk Mitigation: - This has many risks that come with using drag and drop and code generation.

3. Risk Acceptance: - This is characterized by indirect risks based on external factors, such as language specification.

4. Risk Avoidance: This is characterized by risks based on different syntax and semantics used by the different languages and databases.

3.2 IMPLEMENTATION TASK

A project implementation task is used to track implementation-related activities to make sure sufficient planning and backup plans have been made.

3.2.1 TASK 1: - DESIGN PANELS

There is total 4 panels in this project super-admin, admin, student, and faculty.

1. Required Software: To run program we required
    *   Operating System: Windows 7 (64Bit), Windows 8 (64Bit), Windows 10 (64Bit), Windows 11 (64Bit).
    *   Coding Language: HTML, CSS, JAVASCRIPT, PHP and MySQL.
2. Install Software:
    *   Download Visual Studio: - For Design's.
    *   From: https://visualstudio.microsoft.com/
    *   Download Canva: - For Design Logo's and Banners.
    *   From: https://www.canva.com/
    *   Buy Live Server from GoDaddy: - To host the Website
    *   Download MySQL

3.2.2 TASK 2: - IMPLEMENTATION OF SUPER-ADMIN MODULE

1. Design Database According Requirements.
2. Create basic designing structure according to requirement for the super-admin module.
3. Super-admin module is mainly design for the user-management for all the panels. Super-admin module has the authority to perform any action for all the panels present in this project.

Features: -

1. Activations of all the users.
2. CRUD Operations.
3. Creating admin account with verification.

3.2.3 TASK 3: - IMPLEMENTATION OF ADMIN MODULE

1. Design Database According Requirements.
2. Create basic designing structure according to requirement for the admin module.

Features: -

1. Can Register the College.
2. Update College Details.
3. Can Add the Students account for their college.
4. Can Add the Faculty accounts for their college.
5. Perform CRUD Operations.
6. Can Add the programs, Specialization, subjects and then Mapping according to the required semesters, specialisations, and Programs.

3.2.4 TASK 4: - IMPLEMENTATION OF FACULTY MODULE.

1. Design Database According Requirements.
2. Create basic designing structure according to requirement for the faculty module.

Features: -

1. Can View Subject Assign to them by Admin
2. Can Upload study-material as per assign subjects
3. Can Upload Quiz daily as per assign subjects
4. Can view students' scores & ranking as per assign subjects

3.2.5 TASK 5: - IMPLEMENTATION OF STUDENTS MODULE

1. Design Database According Requirements.
2. Create basic designing structure according to requirement for the student's module.

Features: -

1. Can view subject as per their program, specialization & semester
2. Can view Study-Material uploaded by the faculty
3. Can take the quiz uploaded by faculty as per the respective subjects
4. Can view the result
5. Can view the Leader board.

3.2.6 TASK 6: - PROPER RESULTS

After the Creation of these 4 modules this system can flexible in any college ERP and College can prepare the students for their interviews with the curriculum of their programs.

CHAPTER 4

SOFTWARE DESIGN AND SPECIFICATION

4.1 INTRODUCTION

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references, and overview of the SRS. The aim of this document is to gather and analyse and give an in-depth insight of the complete Generic Job Readiness System.

Once the high-level design was completed, we focused on developing a detailed-level design. First a general UML module diagram for the standalone system was generated. Then we discussed what design patterns could be used to enhance the general design. Then we decided that factory, strategy, and command design patterns were appropriate for using indifferent portions of the general design. A more thorough version of the design was generated including the chosen design patterns. Then we went through each class in the design and decided upon major functions and attributes. Various parameterized objects were added for intersystem communication.

Finally, we used sequence diagrams to verify that the design is capable of satisfying use case, as specified in the Software Requirements Specification. The process of generating sequence diagrams lead to discovery of design flaws and modifications to the design was made as needed. The purpose of this document is to specify the detailed-level design for the Generic Job Readiness System.

This document will act as a map for the implementation of the system. Sequence diagrams are used to ensure that the design can carry out the functional requirements of the system.

4.1.1 PURPOSE AND SCOPE OF DOCUMENT

The purpose of this document is to provide a comprehensive description of the proposed education management system and its functionalities. It outlines the key features of the system, including its user interface, data management, and communication capabilities. Additionally, it identifies the primary stakeholders of the system, such as administrators, faculty members, and students, and describes their roles and responsibilities within the system.

The scope of this document is to provide an overview of the education management system and its potential benefits for educational institutions. It also includes details on the system's architecture, its deployment and maintenance requirements, and the potential risks associated with its implementation. The document aims to provide a clear understanding of the system's functionalities and benefits, as well as to guide the stakeholders in the planning and implementation of the system. It is intended for use by educational institutions looking to improve their management of academic programs, as well as software developers who are tasked with implementing the system.

4.2 OVERVIEW OF RESPONSIBILITIES OF DEVELOPER

Developers are those who add new code or modifications to the documentation or make other helpful contributions to the project. Contributions from developers are always acknowledged. All programmers who contribute to a source file in source code are allowed to add their names to the list of authors for that file. When building, developers take into account various factors:

- The waterfall planning model has a sequential design. Before moving on to the next phase, a set of instructions from the previous phase must be followed and recorded. The most popular model, albeit it might not always be the best choice for big, complicated projects.
- Programmers utilise a technique called structured programming development to create programmes that have the best possible coherence, security, accuracy, and understand ability. Its approach involves layering, modularity, and segmentation and typically calls for the definition of processes as well as the evaluation of each sequence or phase. One of the most popular development models is this one.

- Iterative development, specifically the prototype model, was created to address the flaws in waterfall-based approaches. A tiny section of code is prototyped, tested, and improved using the following four processes in the prototype model:
  1. Definition of initial concept.
  2. Implementation of initial prototype.
  3. Refinement of prototype until functional.
- Complete and release the final version.
- Instead, then being based on actions, object-oriented programming is centred on the organisation of things. The processing instructions and a chunk of data are enclosed in a self-contained module that employs pre-assembled programming code. Once produced, a block of programming code can be utilised in countless other programmes. The idea behind this style of development completely changed how computer programmes are created.
- The spiral model combines the waterfall and prototype models, employing the waterfall approach to create and test a prototype. From the core outward, considerations for improvements are implemented; hence, the name. The spiral approach also incorporates risk assessment. An assessment of the development's ability to continue producing is done during the risk assessment.
- Software that is of the highest calibre is developed using the clean room methodology. The purpose of testing for bugs and flaws at every stage of development is to identify issues early on. The clean room approach aims to have a bug-free application at the time of delivery.
- The extreme programming model emphasises communication, daring, feedback, and simplicity. Having the entire development team, managers, and customers in one place makes planning easier so that accurate assessments and feedback can be given. The product is typically fragmented, yet this model typically operates swiftly.
- A technique for using computers to assist in the methodical analysis, development, design, and implementation of software is known as computer-aided software engineering. Visual and object-oriented programming are now included in it. This works best for intricate, large-scale projects since it makes application development and overall security easier.

4.3 PRODUCT OVERVIEW

This Generic Job readiness system provides flexibility to Users. There is total 4 modules presents or Panel presents Super-admin, admin, faculty, and student. Super-Admin has the control of the functionalities of the System who can Control & Manage all the Users and Users permissions. Admin must register their college and design the college structure like adding programs, specialization, subjects as well as register/add student and faculty accounts in their college. Respective College faculty can login to the faculty panel if they got permission from the admin along with that, they can view their assign subjects can add the study material, quiz which are scheduled according to the faculty. Faculty can view the leader board and individual student tests. Respective College student can login to the student panel if they got permission from the admin. Student can view their subjects according to the program, specialization, and Semesters. They can view the study material, and take the test in scheduled time can view the result, leader board and can analyse the overall score.

4.4 USAGE SCENARIO

An example of how one or more individuals or organisations interact with a system in the actual world is described by a use scenario, or scenario for short. They outline the actions, steps, and/or events that take place during the contact. Usage scenarios can be quite specific, showing every step of a user's interaction with the user interface, or they might be high-level, outlining the crucial business operations without demonstrating how they are carried out. Numerous development approaches use usage scenarios, frequently in unique ways. They are used to assist with the transition from use cases to sequence diagrams in UP derivatives. Writing the scenario as an instance of a path through a use case, or through a piece of a use case, is the fundamental method.

4.4.1 USER PROFILES

A user profile, or customised desktop environment, is a visual representation of personal information related to a particular user. Therefore, a profile is an explicit digital depiction of an individual's identity. A user model's computer representation, or user profile, might be thought of as the same thing. A user model is a representation of a group of private information connected to a particular user. It serves as the foundation for any adaptive modifications to the behaviour of the system. The model's inclusion of certain variables relies on the application's goal. It may contain

personal data on users, such as their names and ages, interests, knowledge, abilities, plans, preferences, and dislikes, as well as information about their behaviours and interactions with the system. A profile can be used to keep a description of a person's traits. Systems that consider the person's traits and preferences can use this information. Profiling is the process of creating a profile by extracting information from a set of data. Operating systems, computer programmes, suggested systems, and dynamic websites (including online social networking sites or bulletin boards) all have user profiles.
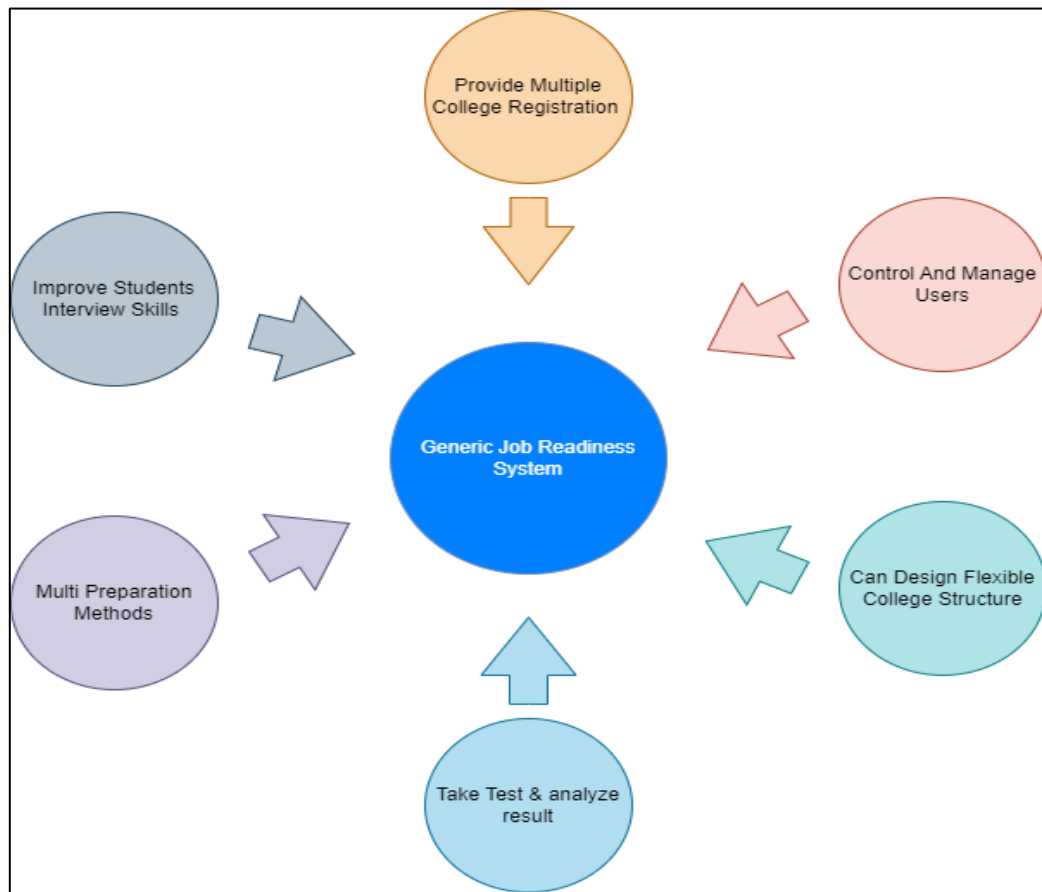
Figure 5: User Profile Representation (1)

1. **Super-Admin Panel**
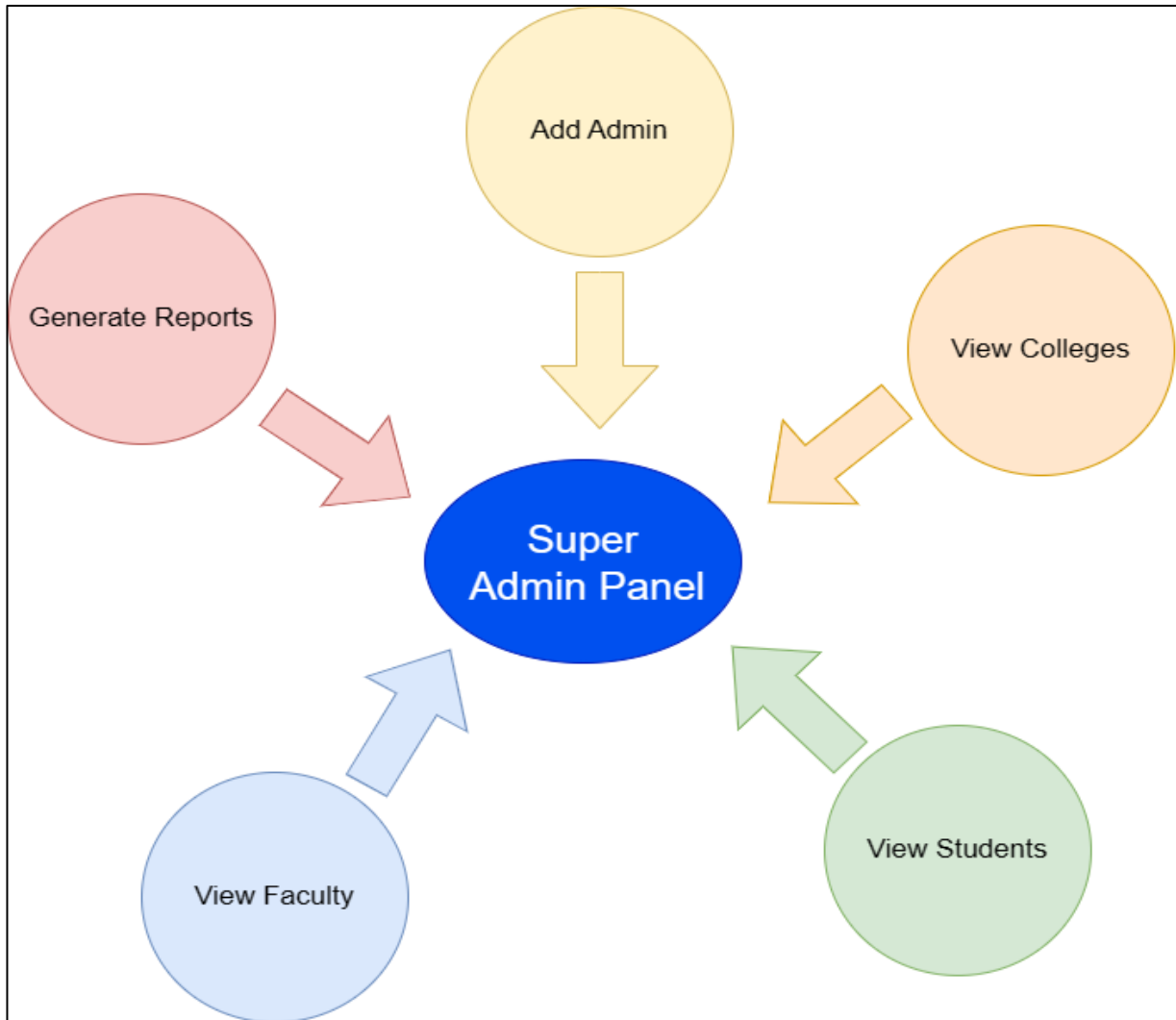
Figure 6: Super-Admin Panel (2)

A key element of the proposed system is the Super-Admin Panel, which gives system administrators control over the system's numerous modules and features. The Super-Admin Panel has several features, including the ability to generate reports, view colleges, view students, and add new administrators. The Super-Admin Panel streamlines system management and makes it simpler to keep track of multiple activities by enabling administrators to carry out these tasks from a single, central location. The Super-Admin Panel offers a great degree of control and visibility over the system, which is one of its main advantages. Super-admin can monitor system performance and, if necessary, take corrective action by having access to colleges, students, and faculty members. Additionally, the capability of producing reports offers perceptions into the overall performance of the system, which can assist administrators in making data-driven

decisions to enhance the effectiveness and efficiency of the system. In general, the Super-Admin Panel is a crucial tool for successfully operating.

2. **Admin Panel**
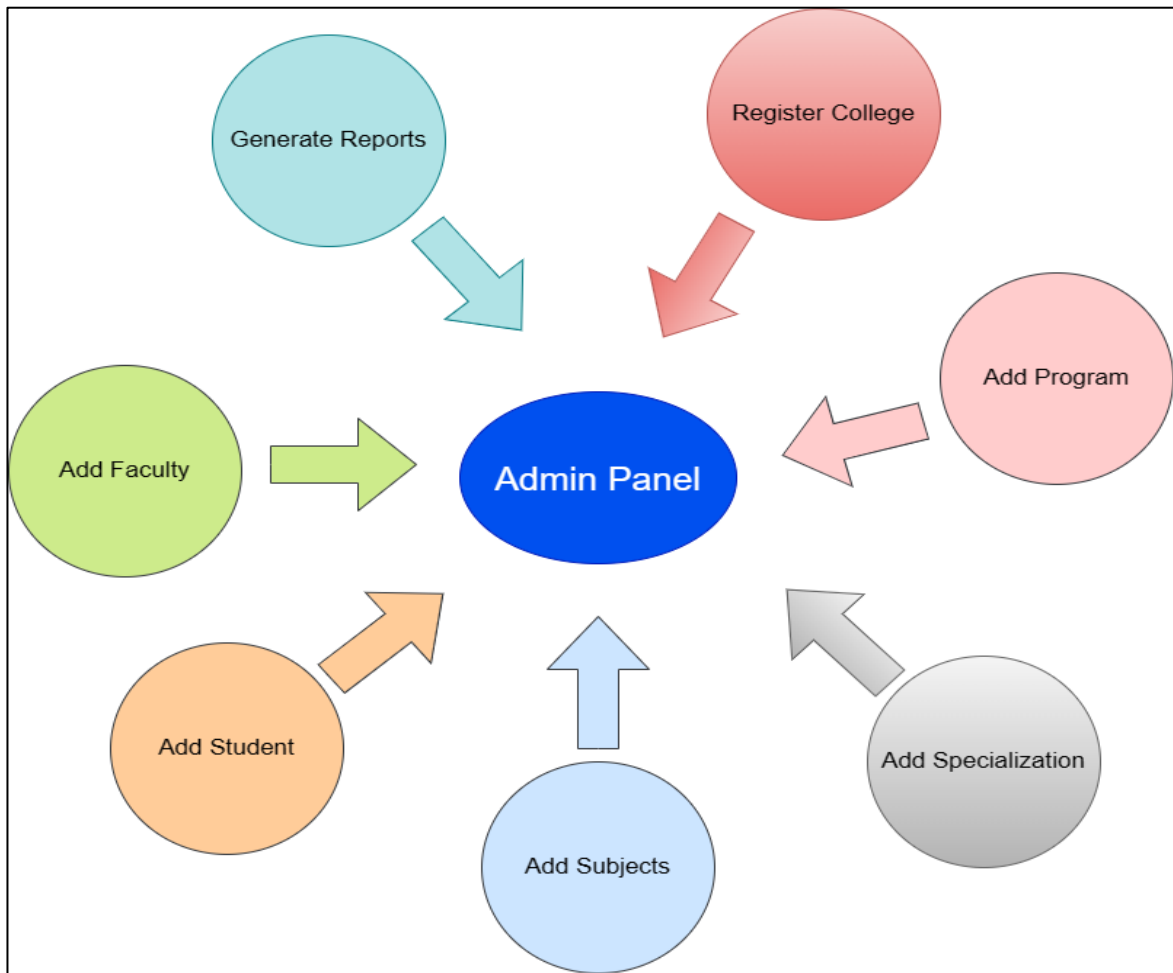
Figure 7: Admin Panel (3)

The Admin Panel is a crucial component of system as it enables administrators to manage various aspects of the system. The panel offers features such as registering new colleges, adding programs, specializations, and subjects, which can help administrators to effectively manage academic offerings. Additionally, the panel facilitates the addition of new students and faculty members, which is crucial for maintaining accurate records of enrolled students and teaching staff. The system also provides the ability to generate reports, which can help administrators make data-driven decisions based on metrics such as student enrolment, faculty performance, and academic program performance. The Admin Panel offers a user-friendly interface, enabling administrators to carry out their tasks easily and efficiently. The system provides the ability to

add, edit, and delete information, ensuring that all records are accurate and up-to-date. Furthermore, the panel offers the ability to generate reports that provide critical insights into various aspects of system.

3. Faculty Panel
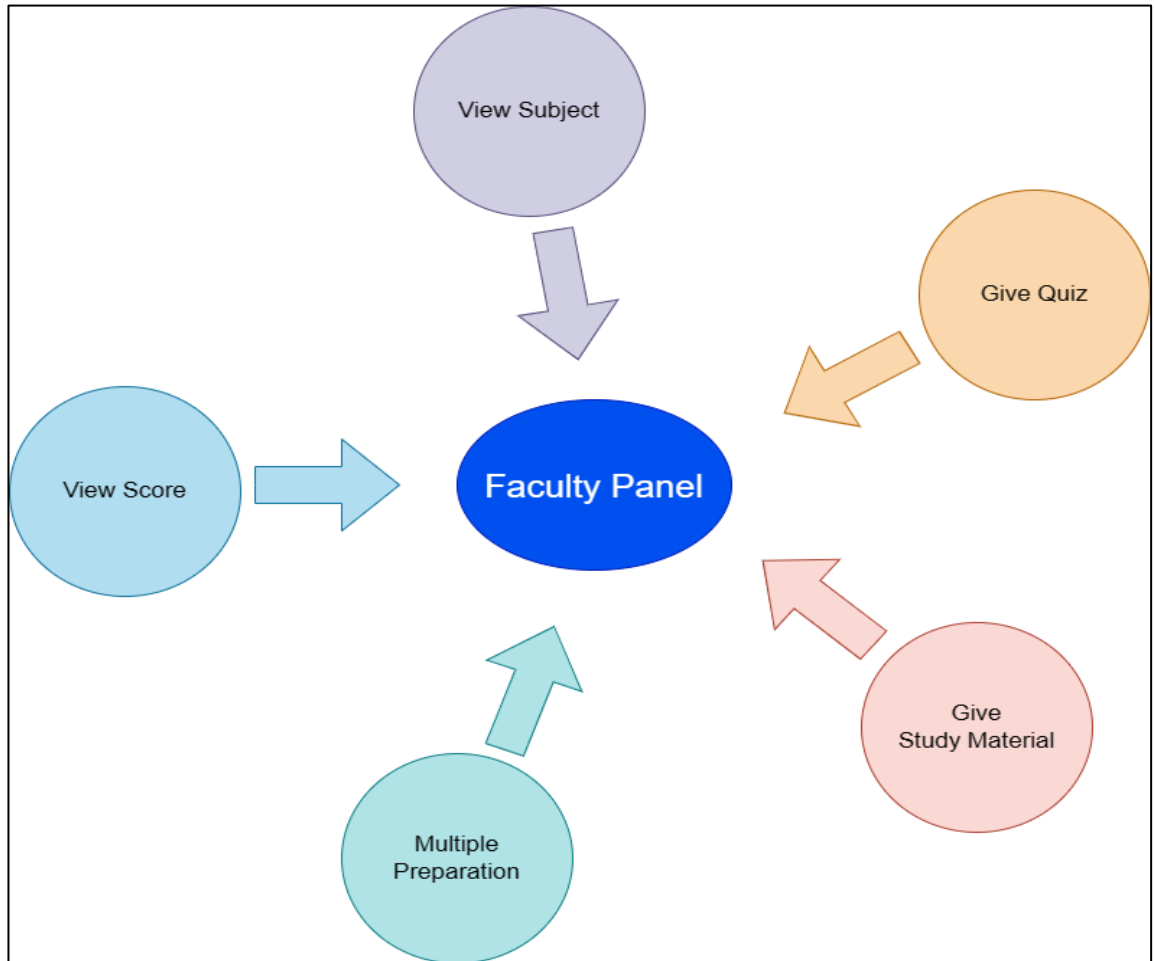
Figure 8: Faculty Panel (4)

The Faculty Panel is an essential part which allows the faculty members to manage the academic program effectively. The panel has a view subject option that enables faculty members to view the subjects they are assigned to teach and their schedules. They can also give quizzes to students and upload study materials, including lecture notes, videos, and other relevant resources. Additionally, the panel allows faculty members to view the scores of their students, which helps them assess their performance and provide feedback accordingly. Overall, the Faculty Panel

offers a user-friendly interface that makes it easier for faculty members to manage their classes and deliver high-quality education. It saves time by automating administrative tasks, such as scheduling quizzes, uploading study materials, and managing grades. Secondly, it enhances the learning experience of students by providing them with access to relevant study materials and allowing faculty members to deliver quizzes that assess their understanding of the subject matter. Lastly, it helps faculty members monitor and evaluate the performance of students, which enables them to identify areas for improvement and take necessary steps to enhance the quality of education provided.

4. **Student Panel**
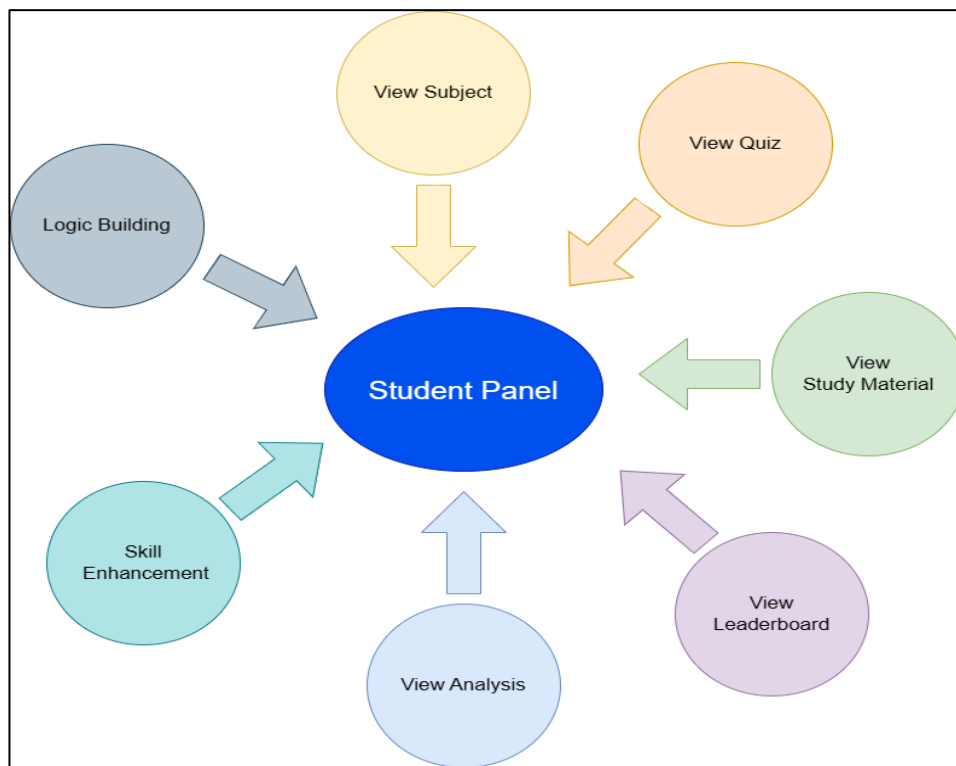
Figure 9: Student Panel (5)

The Student Panel is a comprehensive system that allows students to access a range of features and tools to enhance their learning experience. One of the key functionalities of the Student Panel is the ability to view their subjects and associated study materials. Students can easily access course content, including lecture slides, notes, and other resources provided by the faculty. Additionally, the panel enables students to view quizzes and assignments for each subject, providing an opportunity for them to test their knowledge and prepare for exams. Another significant aspect of the Student Panel is the availability of features that facilitate skill enhancement and logic building. Students can view their performance analysis and leader boards, allowing them to gauge their progress and identify areas that require improvement. The system also provides various tools, such

as practice quizzes and mock exams, to help students prepare effectively for their assessments. Overall, the Student Panel is a powerful tool that empowers students to take control of their learning journey and achieve their academic goals.

4.4.2 USE CASE

A use case is a method for locating, defining, and organising system requirements. The use case is made up of several potential user-system interactions in a particular environment that are linked to a particular goal. It is composed of a number of parts (such classes and interfaces) that can be combined to have effects that are bigger than the sum of their parts. The use case should cover all system operations that are important to users. In fact, the phrases "use case" and "goal" are sometimes used interchangeably. A use case can be thought of as a collection of potential outcomes linked to a certain target.

A use case (or set of use cases) possesses the following features:

• Arranges functional demands.

• Actor/user interactions are modelled in terms of their objectives.

• Logs the routes (also known as scenarios) between trigger events and goals.

• Describes one primary flow of events (also known as a basic course of action), as well as potential additional ones known as exceptional flows of events (also known as of action). is multi-level, allowing one use case to utilise the features of another.

Use cases can be used in the planning of system requirements, design validation, software testing, and user handbook and online assistance manual outlines, among other phases of software development.

4.4.3: USE CASE DIAGRAM

In the Unified Modelling Language (UML), a use case diagram is a form of behavioural diagram that is defined by and produced by a use-case study. Its objective is to provide a graphical picture of a system's functionality in terms of actors, their objectives (expressed as use cases), and any dependencies among those use cases. A use case diagram's primary objective is to identify which system functions are carried out for which actor. The system's actors can be represented by their roles. Real system needs can be found sooner in the design phase by keeping both the user and the system in mind. Use cases are not only easily understood by developers and testers, but also by customers, users, and executives, as they are written primarily in a narrative style.

1) In Super-admin panel Use cases are

1. Start the system.
2. Add the admin accounts in the system.
3. View all the register colleges in the system.
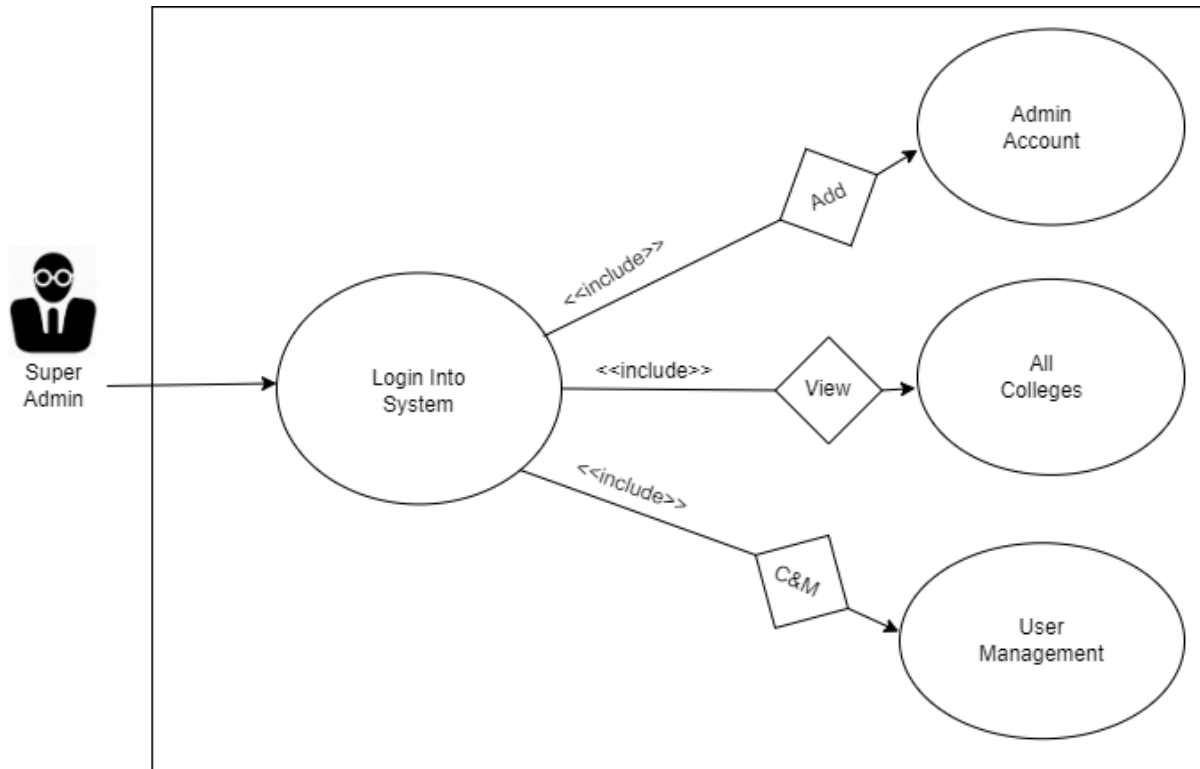4. Control and managed Users in the system.

Figure 10: Use Cases of Super-Admin (1)

2) Admin panel Use cases are

1. Start the system.
2. Register their college in the system.
3. Add programs in the college structure.
4. Add specializations in the college structure.
5. Add subjects in the college structure.
6. Add student in the college structure.
7. Add faculty in the college structure.
8. Map specializations according to programs in the college structure.
9. Map subjects in the college structure.

10. Map students in the college structure.
11. Map faculty in the college structure.
12. Control and managed Users in the system.
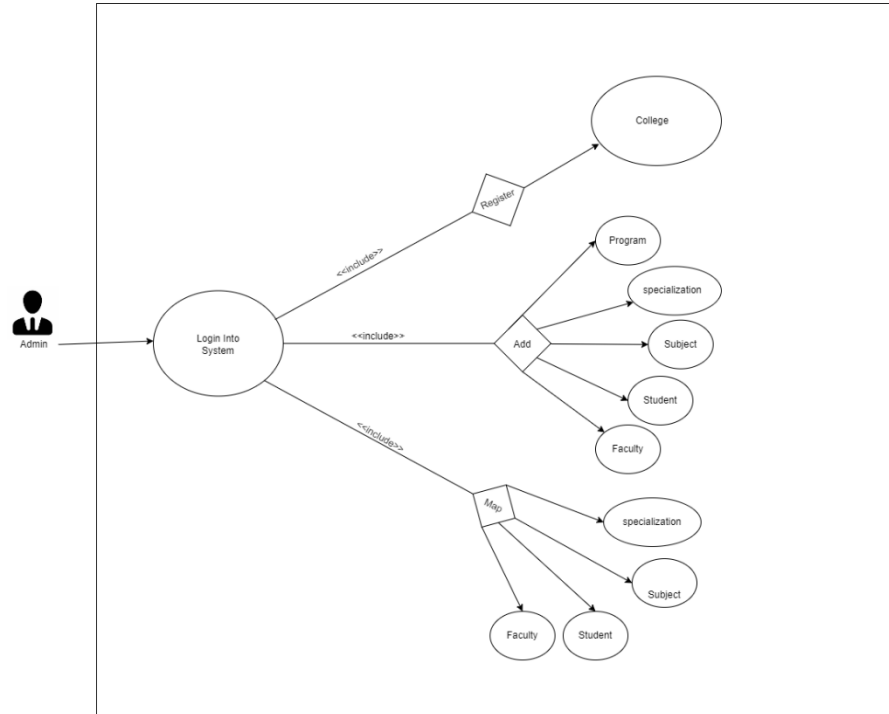
Figure 11: Use Cases of Admin (2)

3) Student panel Use cases are
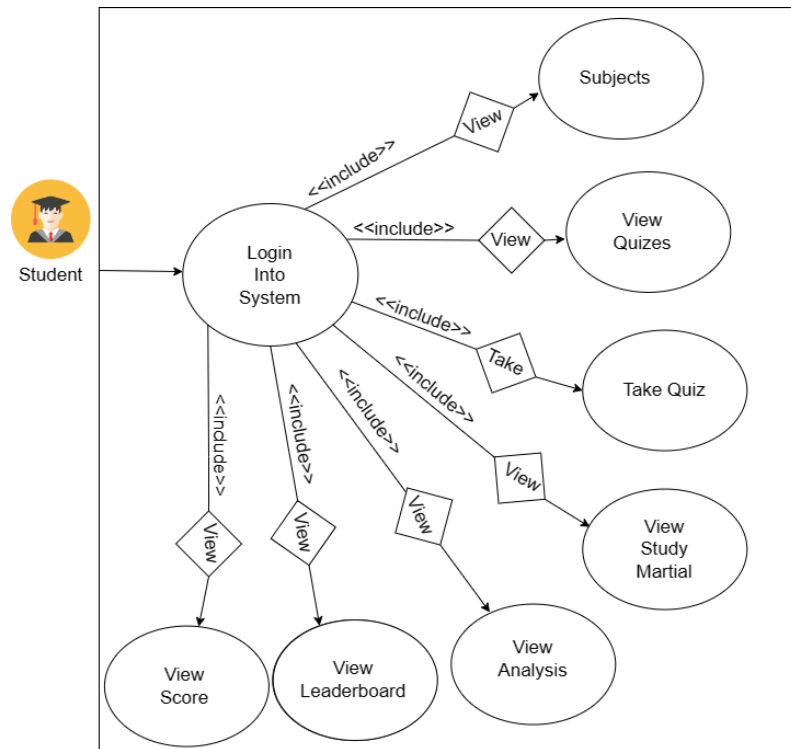
Figure 12: Use Cases of Student (3)

The use cases of a student in the proposed system. The first and foremost use case is for the student to sign up for the application and choose their college, if one has been added by the administrator. Once the student's use of the program has been validated as belonging to the chosen college, they can access the system to view their course structure, including programs, semesters, specializations, and subjects, as per the curricula defined by the administrator. Students can also access study materials and take timed quizzes that assess their knowledge from both objective and subjective standpoints. They can view their grades and track their academic progress through the system. In addition, students can interact with their faculty members through the system, ask questions, and get feedback on their performance. Finally, students can also access the system's messaging functionality to communicate with their peers and collaborate on projects and assignments.

4) Faculty panel Use cases are:
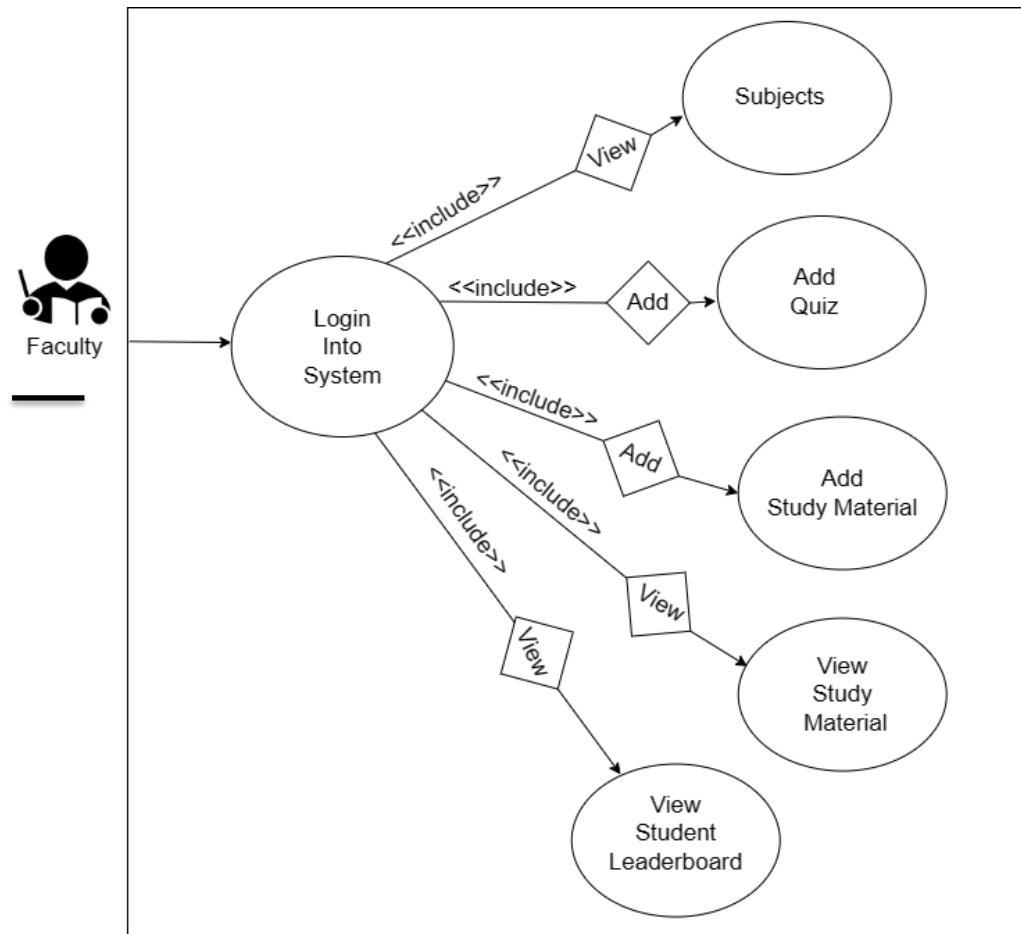
Figure 13: Use Cases of Faculty (4)

The use case diagram for the Faculty module includes several use cases, each representing a specific functionality that the system offers to the faculty members. The first use case is the Login use case, which allows the faculty member to log in to the system and access their account. The second use case is the Schedule Quiz use case, which enables faculty members to schedule quizzes for their students based on the subject and the curriculum. The third use case is the Manage Study Materials use case, which allows the faculty members to upload study materials, such as presentations and notes, for their students to access. Another use case is the View Quiz Results use case, which allows the faculty members to view the results of quizzes taken by their students. The next use case is the Edit Quiz use case, which enables faculty members to modify quizzes that have already been scheduled. The final use case is the Manage Profile use case, which allows faculty members to update their profile information and change their account password.

4.5 ACTIVITY DIAGRAM:

Activity diagrams are visual depictions of workflows with choice, iteration, and concurrency supported by activities and actions. Activity diagrams, also known as workflows, are used in the Unified Modelling Language to represent both organisational and computational operations. Activity diagrams display the entire control flow.

1) Super-Admin Panel
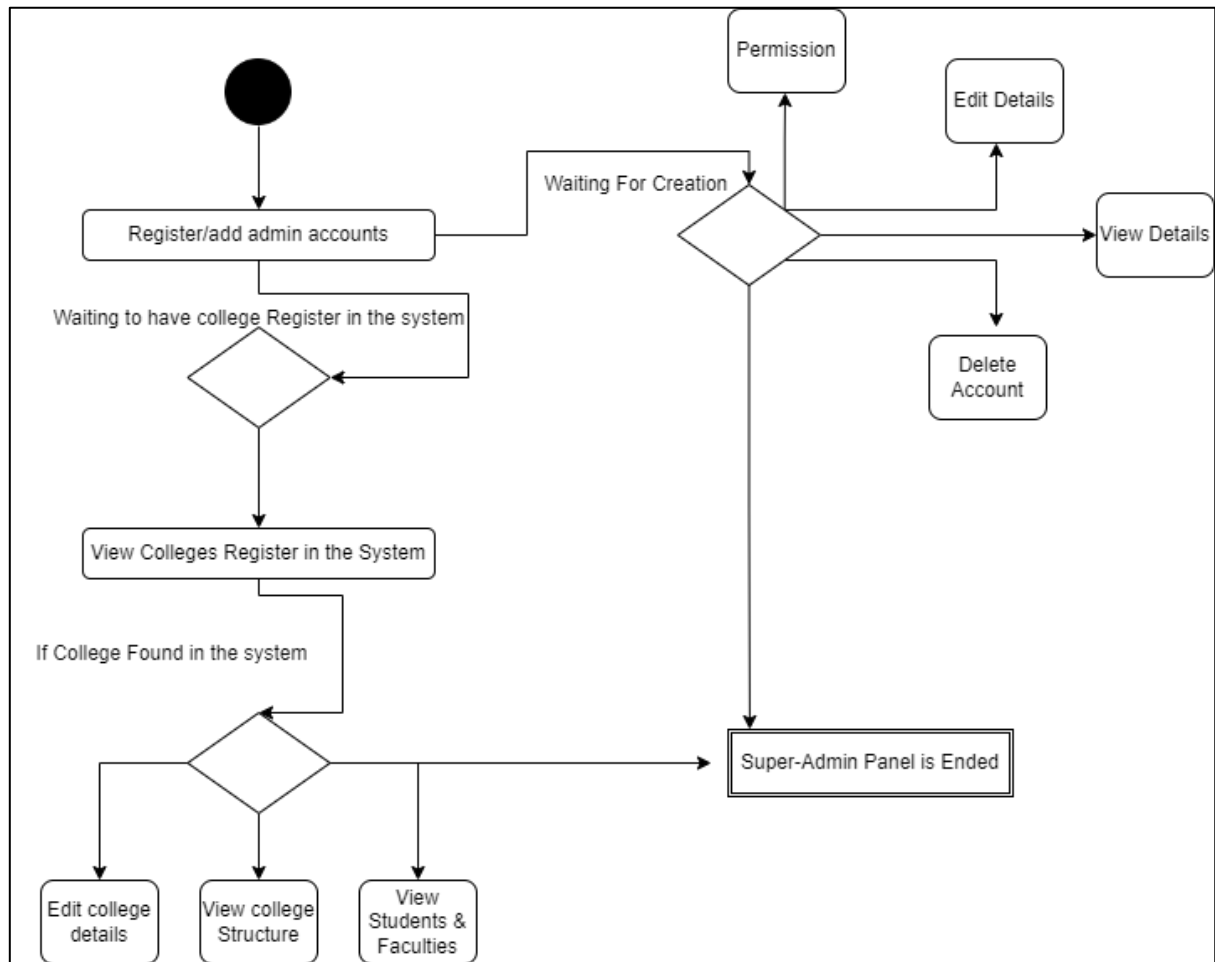
Figure 14: Activity Diagram of Super-Admin (1)

The Super Admin system is a crucial tool for managing multiple administrators effectively. The activity diagram for this system starts with the Super Admin initiating the system by logging in. Once they have access, the Super Admin can add or register admin accounts in the system. This is a continuous loop that allows the Super Admin to add or register as many admin accounts as necessary. After the accounts are created, the Super Admin can control and manage user management, granting permission, editing details, viewing details, or deleting accounts as needed. The Super Admin can also view all colleges in the system and their details, such as the college

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structure, students, and faculties. Additionally, the Super Admin can view individual college details, providing valuable insight into the performance of each college and allowing them to take corrective action as needed.
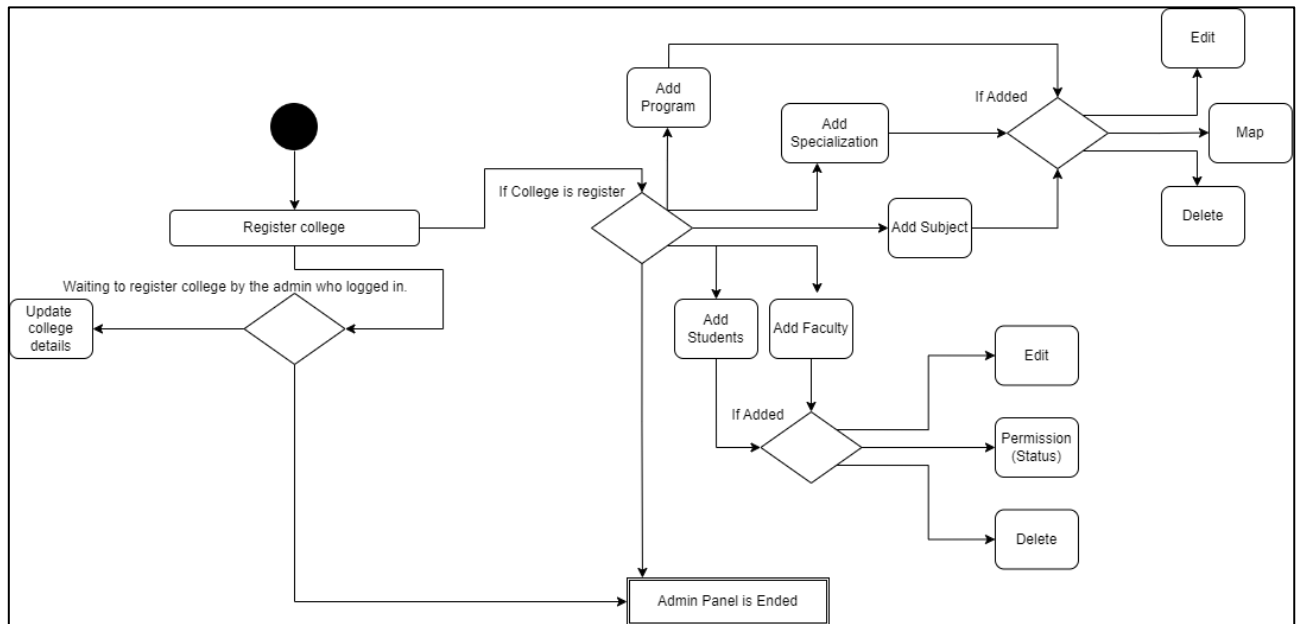
2) Admin Panel

Figure 15: Activity Diagram of Admin (2)

The Admin system is an important component of any system. The activity diagram of the Admin system starts with the Admin panel, where the administrator logs in to access the system. Once logged in, the administrator can register a college and add various components such as programs, specializations, subjects, students, and faculty. The process of adding can be repeated as needed. After adding these components, the Admin has the ability to edit, map and delete them. This allows for better management and organization of the system. The Admin can make changes to the programs, specializations, subjects, and other components as required. Additionally, they can map the subjects and specializations to specific programs and faculties, allowing for better tracking and management of the system.

3) Faculty Panel
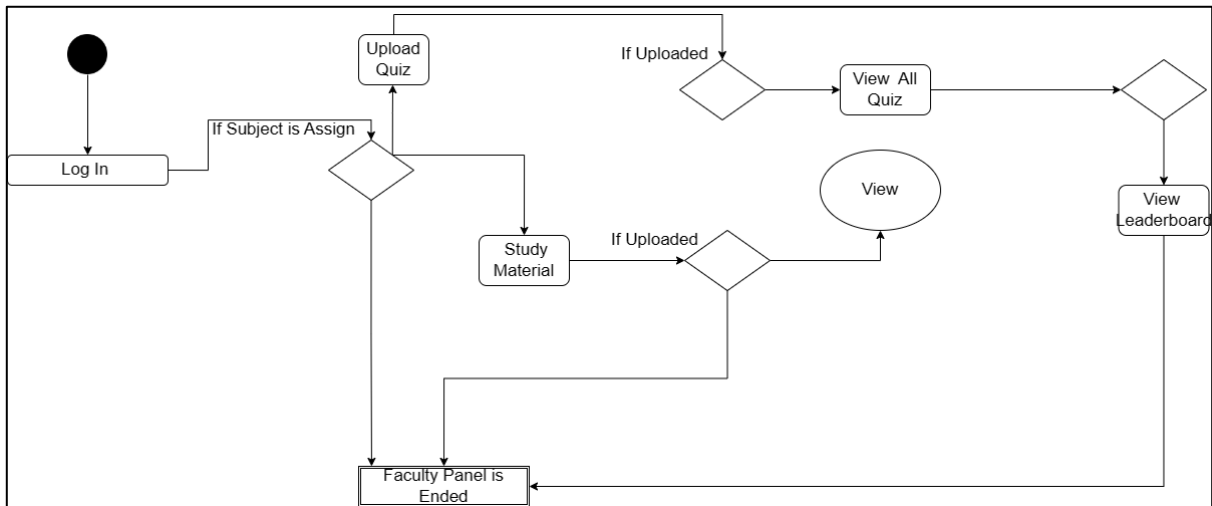
Figure 16: Activity Diagram of Faculty (3)

The activity diagram of the faculty starts with the login process. Once the faculty member logs in, the system checks if the faculty member is assigned to any subject. If the faculty member is assigned to a subject, then the faculty member can proceed to upload study material relevant to that subject. After uploading the study material, the faculty member can view all the quizzes that are present and available for the students to take. The faculty member can then view the leaderboard to check the performance of the students in the quizzes. Once the faculty member has completed all the necessary activities in the faculty panel, the system ends the activity diagram.

4) Student Panel
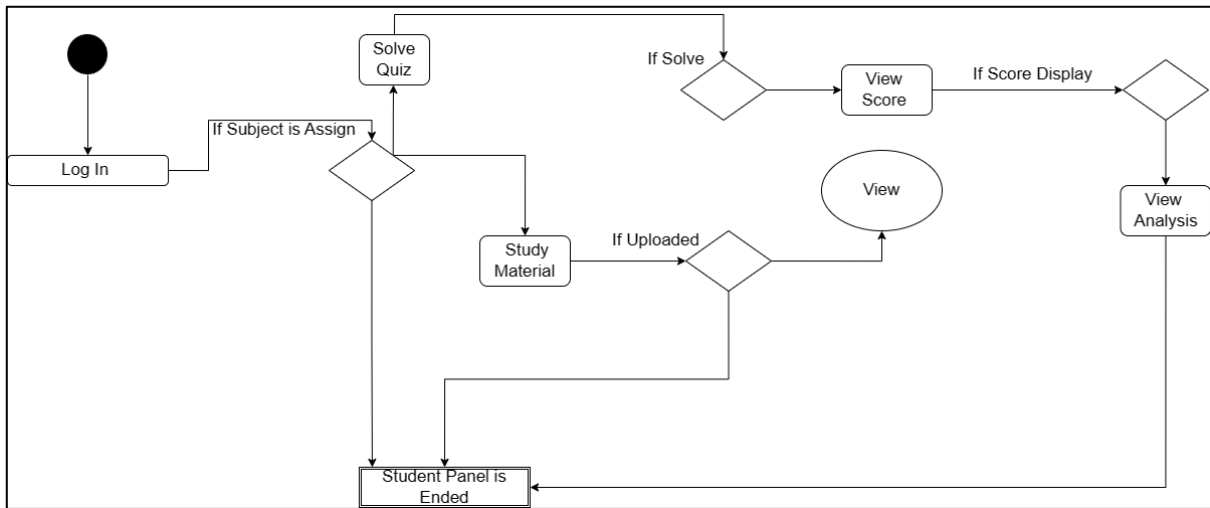
Figure 17: Activity Diagram of Student (4)

The activity diagram of the student starts with the login process, followed by the view of the assigned subjects. If the student has been assigned a subject, they can then proceed to access the study material associated with it. After going through the material, the student can take the corresponding quiz and view their scores. The student can also check their position in the class by viewing the leaderboard. Once the student has completed these activities, the student panel ends.

4.6 FUNCTIONAL MODEL AND DESCRIPTION

The functional model of a system shows the functions and how they relate to one another. In the context of the proposed education management system, the functional model would describe the various tasks that the system would perform and how they would work together to achieve the system's goals.

At a high level, the system's functional model would include management of academic programmes, semesters, specialisations, subjects, scheduling quizzes, providing study materials, assessing student knowledge, and promoting collaboration between administrators, faculty members, and students.

The sub-functions and processes connected to each of these functions would be fully described in the functional model. Managing academic programmes might include things like building and maintaining a database of programmes, laying out the requirements for each programme, and selecting faculty to instruct the courses in each programme.

The functional model of the proposed education management system would, in general, provide a clear and comprehensive overview of how the system would function and how its many functions would be integrated to support the objectives of the educational institution.

4.6.1 FLOW DIAGRAM

A diagram that depicts a flow or a group of dynamic relationships in a system is known as a "flow diagram" collectively. A complex system can be organised and explained using flow diagrams, which also show how the components are arranged and interact.

1) Super-Admin Panel
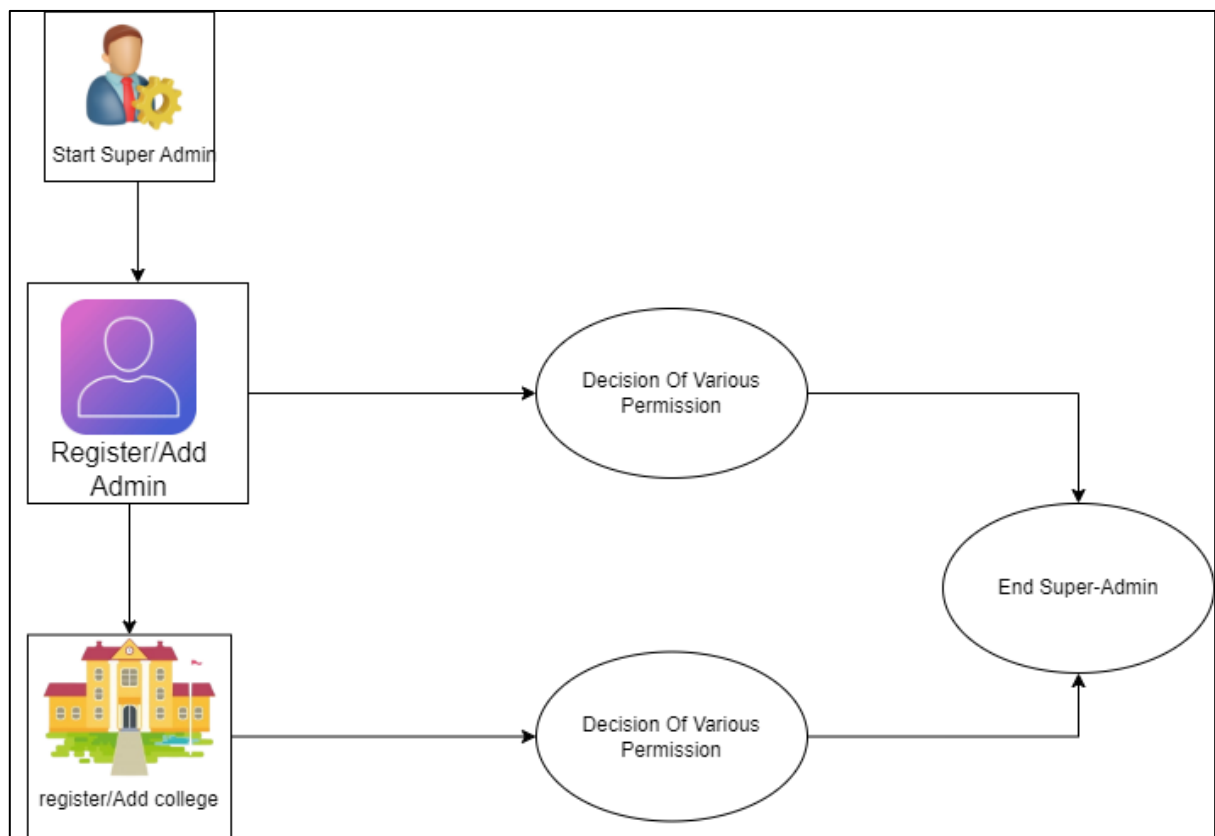
Figure 18: Flow Diagram Super-Admin (1)

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The super admin system starts with the initiation of the super admin by logging in. The next step is to add and register admin accounts, which can be repeated as many times as necessary. Once the admin accounts are in place, the super admin can control and manage user management, ensuring that each administrator has the appropriate level of access to the system. The super admin can then view all colleges and their details, providing valuable information about the organization's structure and operations. Finally, the super admin can view individual college details, allowing them to closely monitor the performance of each college and take corrective action as needed.
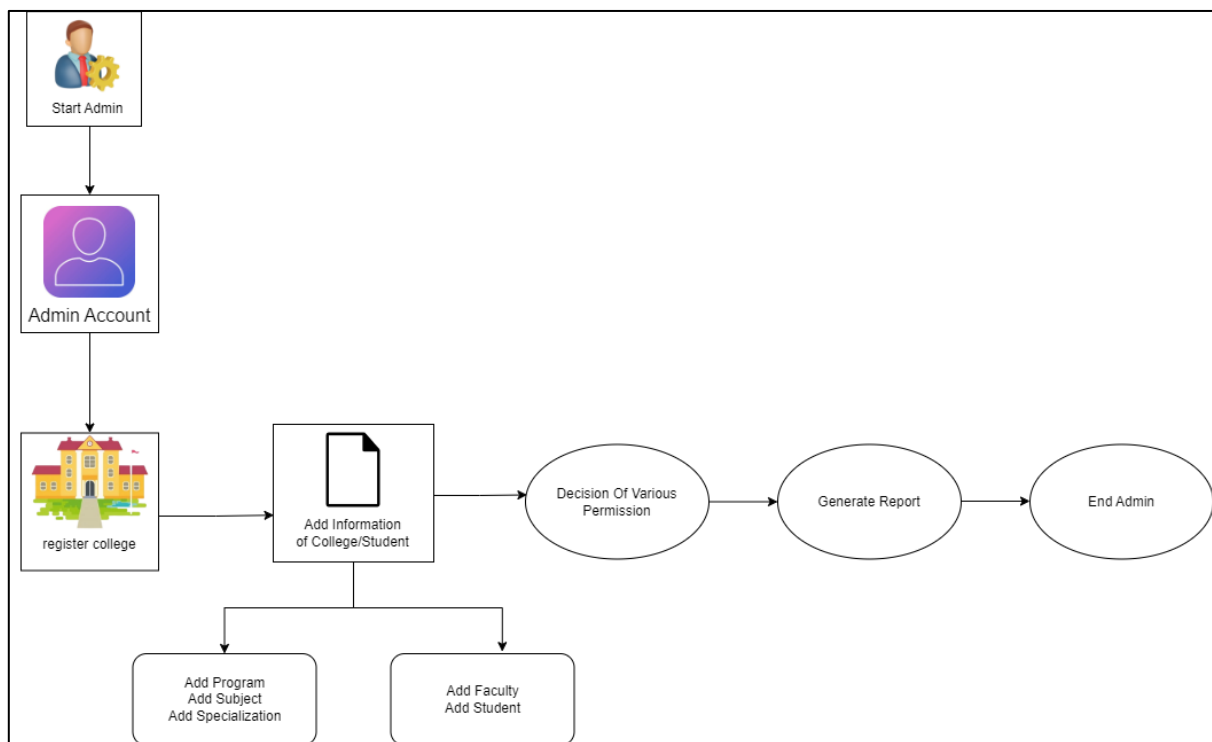
2) Admin Panel

Figure 19: Flow Diagram of Admin (2)

The admin system starts with the admin panel where the admin can register a college. Once the registration is complete, the admin can add programs, specializations, subjects, students, and faculty to the system. The admin can keep adding these elements until all the necessary information is entered. After everything is added, the admin can then edit, map, and delete all the information they have entered. These options provide the admin with complete control over the system, ensuring that all information is up-to-date and accurate. Once all the necessary updates are made, the admin can end the admin panel, completing their work for the day.

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3) Faculty Panel
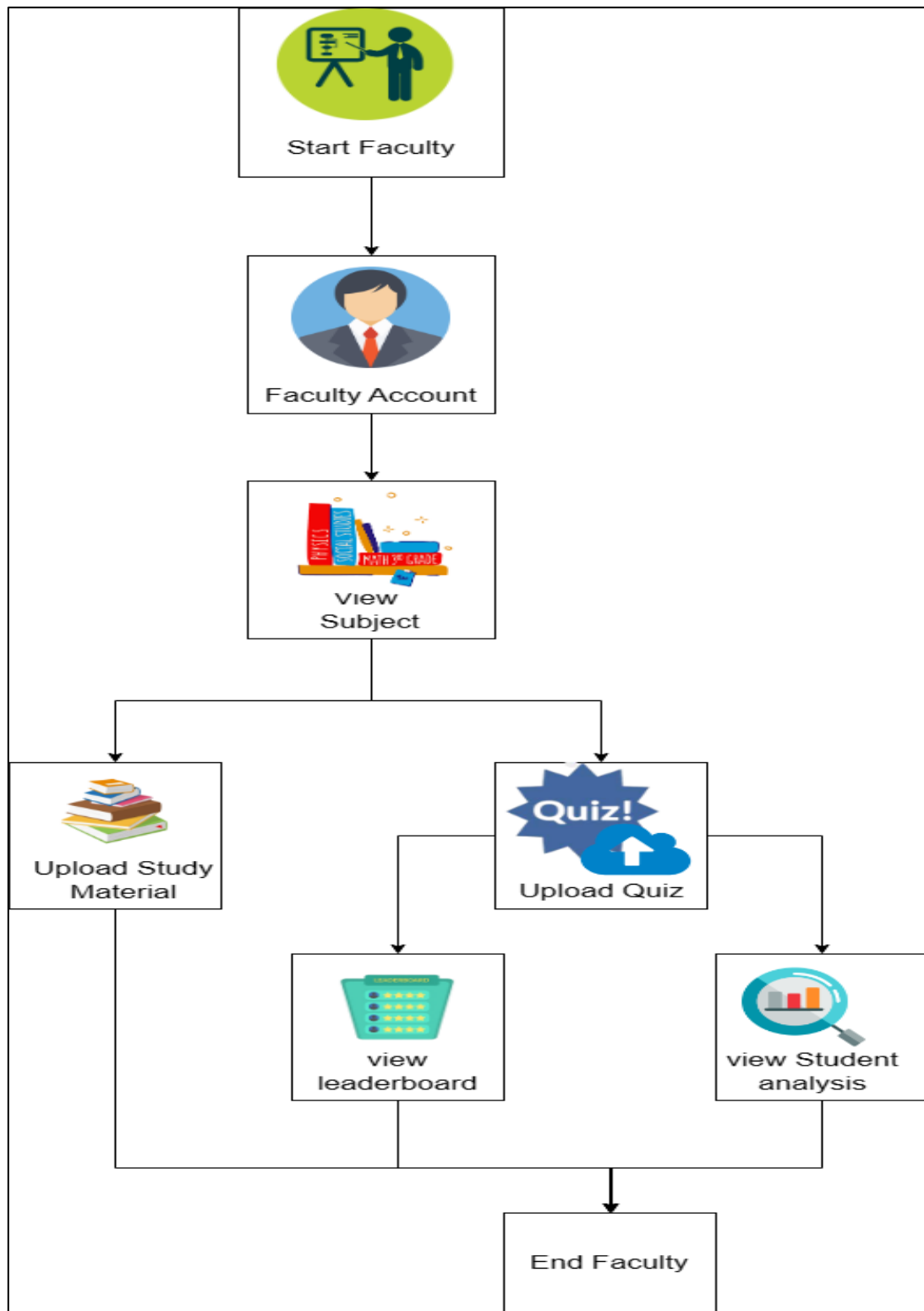
Figure 20: Flow Diagram of Faculty (3)

The flow diagram of faculty begins with the faculty logging in to their account. Upon successful login, they can access their account and view the list of subjects they are responsible for teaching. They can then upload study materials related to the subject, such as notes, presentations, and videos. Additionally, they can create quizzes related to the subject and upload them for students to take. The faculty member can also view the leader board to see how students are performing in the quiz. They can also view the analysis of students' performance to identify areas where they need improvement. At the end of their session, the faculty member can log out of their account.

4) Student Panel
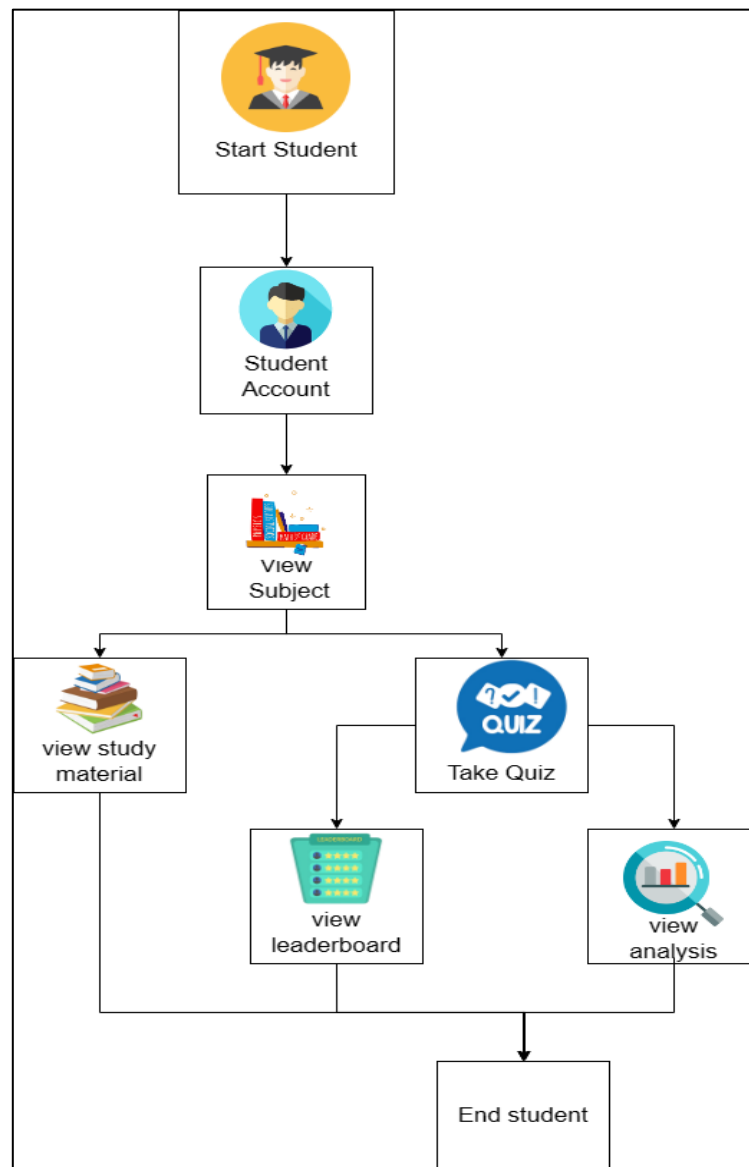
Figure 21: Flow Diagram of Student (4)

The flow diagram of the student panel begins with the login to the student account. After login, the student can view the subjects that are available to them. Then, they can access the study materials related to that subject. The student can also take the quizzes related to the subject, which will assess their knowledge from both objective and subjective standpoints. After taking the quiz, the student can view their position on the leaderboard and see how they performed in comparison to their peers. Additionally, the student can view the analysis of their performance in the quiz, which can help them identify their strengths and weaknesses. Finally, the flow diagram ends with the logout of the student account.

4.6.2 DATA FLOW DIAGRAM LEVEL (0) DIAGRAM

A Data Flow Diagram (DFD) is a diagram that models the procedural characteristics of the "flow" of data through an information system. The first step in creating a system overview that can subsequently be developed is frequently the creation of a DFD. Provides an overview of the system's data inputs and outputs.
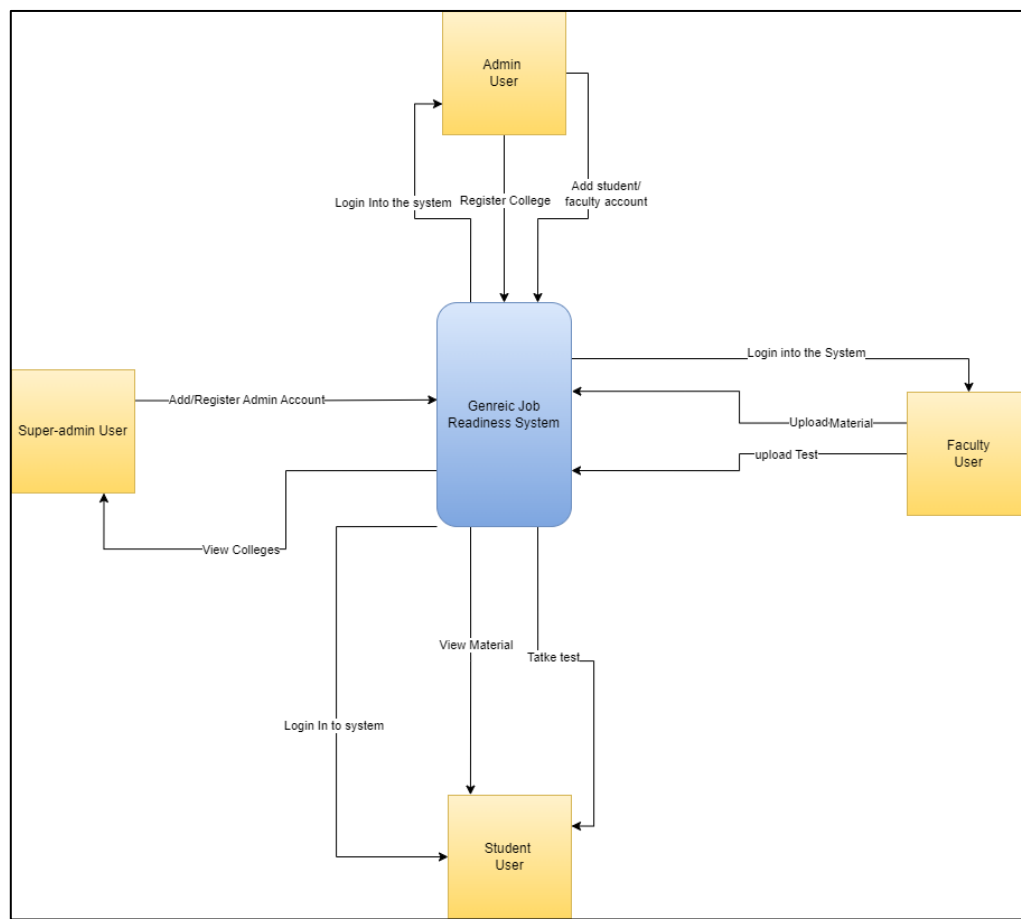
Figure 22: DFD Level 0 Diagram

4.6.3 DFD LEVEL (1) DIAGRAM

The context-level DFD (DFD Level 0) is then "exploded" to create a Level 1 DFD that displays some of the system's finer details. The Level 1 DFD demonstrates how the system is broken down into smaller units (processes), each of which handles with a particular data flow to or from an external agent and which, when combined, offer the system's entire capability. Additionally, it depicts the data flow between the system's various components and indicates internal data stores that are necessary for the system to function. Explains the inputs, outputs, and how the data flows through the system as visible on the context diagram (DFD Level 0).
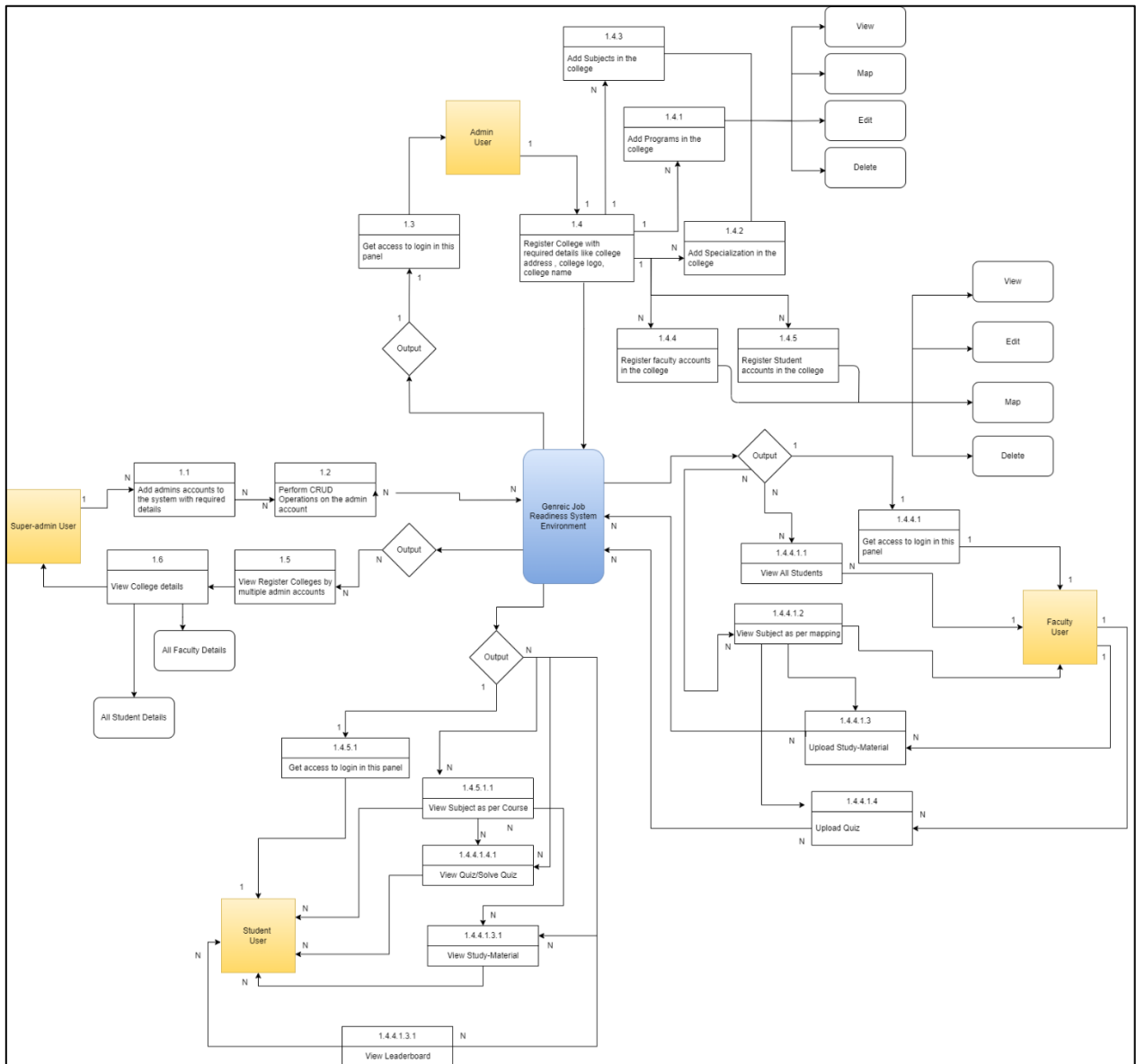
Figure 23: DFD Level 1 Diagram

4.6.4 SEQUENCE DIAGRAM

UML Sequence Diagrams are interaction diagrams that describe the steps used to complete an operation. They depict how items interact within the framework of a cooperation. By using the vertical axis of the diagram to represent time and the messages that are transmitted and when, sequence diagrams, which have a time focus, can visually depict the order of an interaction. A collaboration's interaction that either implements a use case or an operation (using instance diagrams or generic diagrams) high-level interactions (sometimes referred to as system sequence diagrams) between the system and the system's user, the system and other systems, or between subsystems

1) Super-Admin Panel
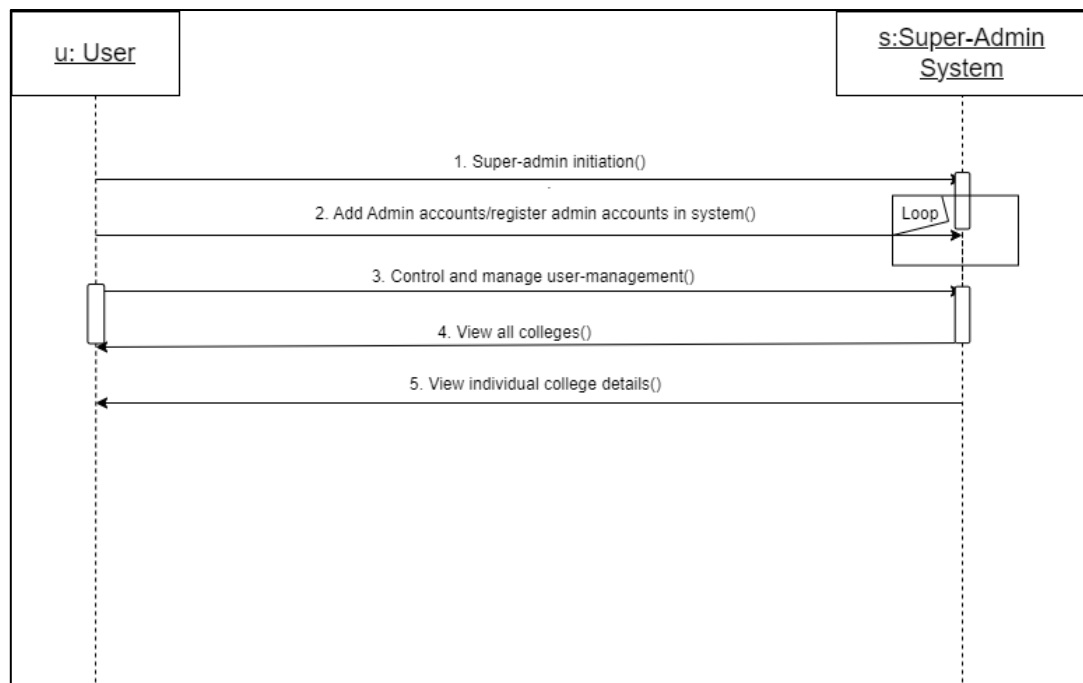
Figure 24: Sequence Diagram of Super-Admin (1)

The Super Admin system is a crucial component of any organization that relies on multiple administrators to manage its operations. The system provides the Super Admin with a range of powerful tools that enable them to manage and oversee the work of other administrators. To begin, the Super Admin must initiate the system by logging in. Once they have access, they can begin adding and registering admin accounts, a process that can be repeated as many times as necessary. With these accounts in place, the Super Admin can control and manage user management, ensuring that each administrator has the appropriate level of access to the system. Additionally, the Super Admin can view all colleges and their details, providing them with valuable information about the organization's structure and operations. Finally, the Super Admin

can view individual college details, allowing them to closely monitor the performance of each college and take corrective action as needed.
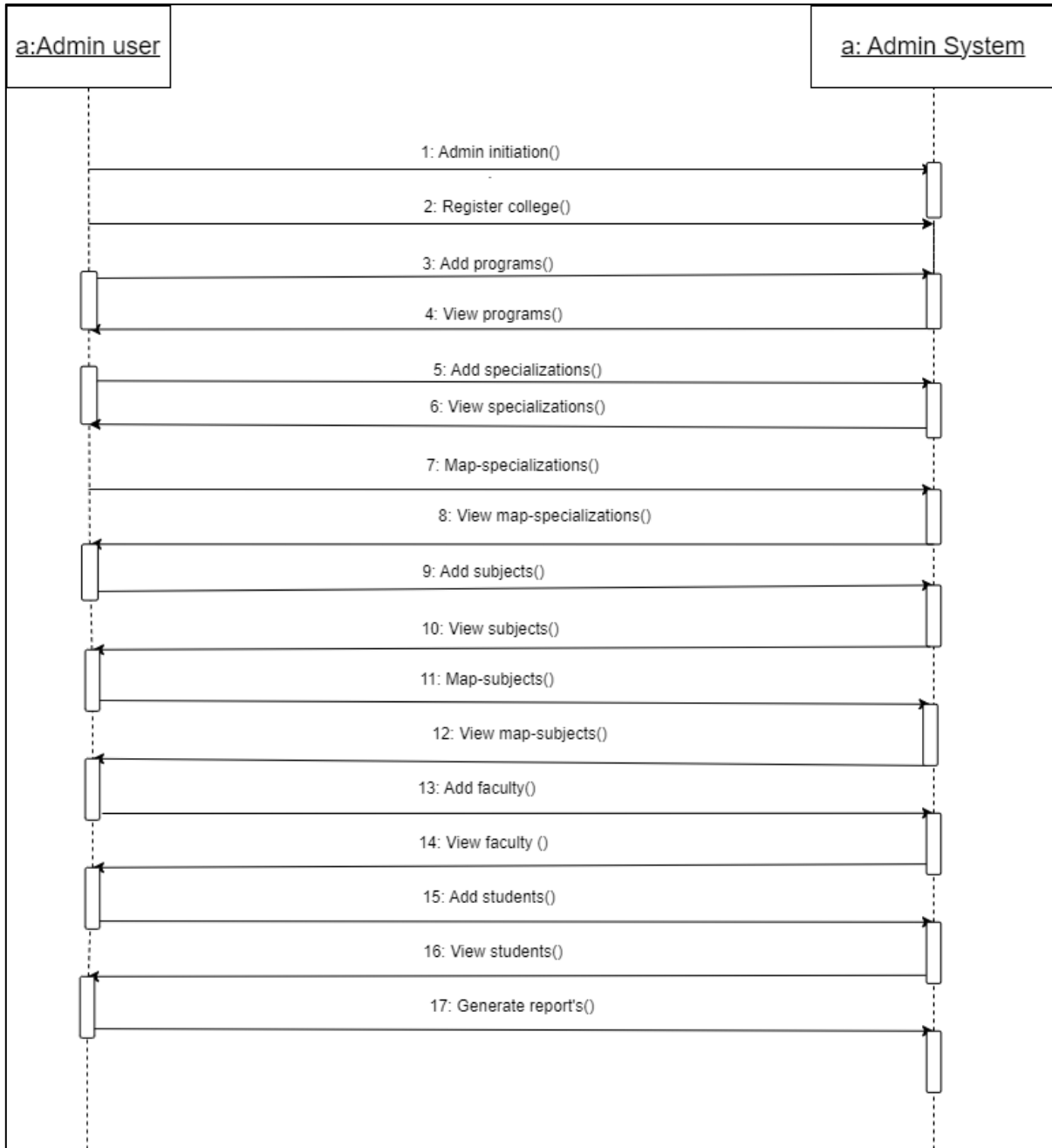
2) Admin Panel

Figure 25: Sequence Diagram of Admin (2)

The Admin system is an important component of any system. It provides college administrators with a range of powerful tools that enable them to manage and oversee the day-to-day operations

of the college. The system begins with the Admin initiation, which grants the administrator access to the system. Once they have access, the administrator can register colleges, add programs, and view programs. They can also add specializations, view specializations, map specializations, and view map specializations. In addition, the administrator can add subjects, view subjects, map subjects, add faculty, view faculty, add students, and view students. Finally, the administrator can generate reports, providing them with valuable insights into the college's performance and operations. This sequence diagram provides a clear and concise overview of the steps involved in the Admin system, highlighting the many powerful tools available to college administrators.

3) Faculty Panel
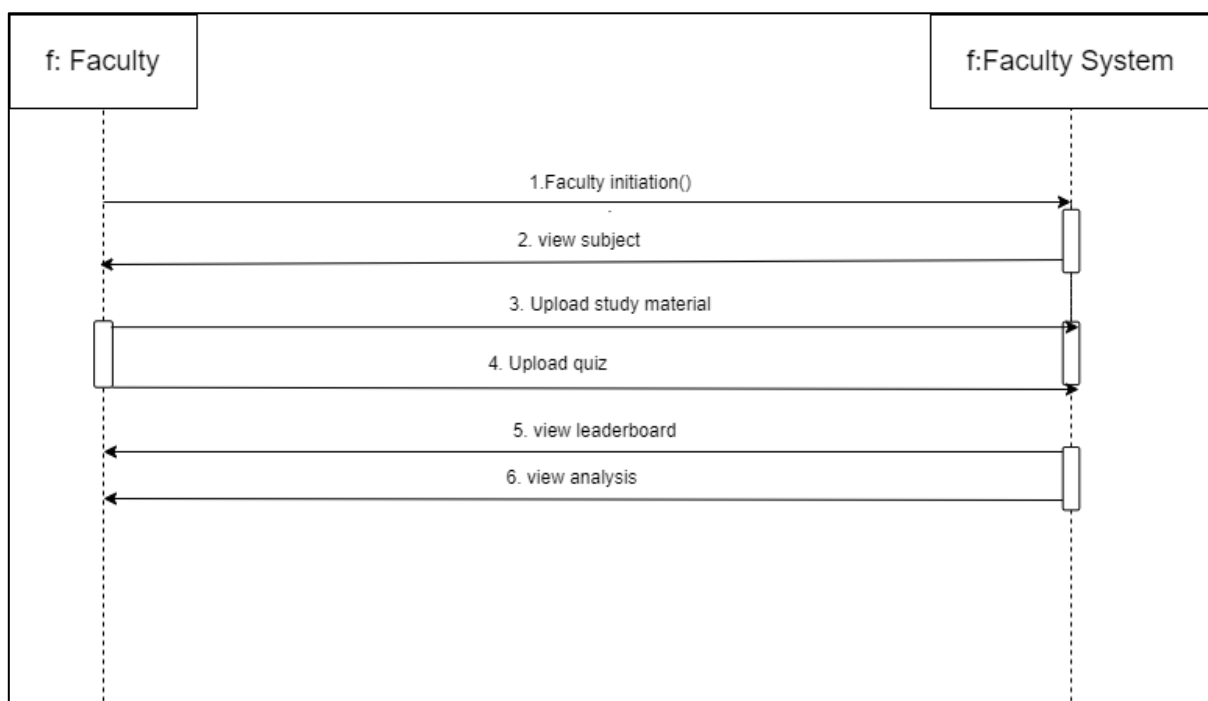
Figure 26: Sequence Diagram of Faculty (3)

The sequence diagram of the Faculty panel includes various actions performed by the faculty member. The first step is the starting point where the faculty member logs into their account. After successful login, the faculty member can view the list of subjects assigned to them. They can then select the subject they want to add study material to and upload the relevant files. Similarly, they can also upload a quiz for the subject they are teaching. Once uploaded, the system automatically makes the quiz available to students enrolled in the respective subject. The next step in the sequence diagram is the view leader board feature, which allows the faculty member to check the rankings of students based on their quiz performance. Additionally, the faculty member can also view student analysis to gain insights into their strengths and weaknesses. This can help the faculty member tailor their teaching approach to

address student needs better. Once all the necessary actions have been performed, the faculty member can log out of their account, marking the end of the sequence diagram.
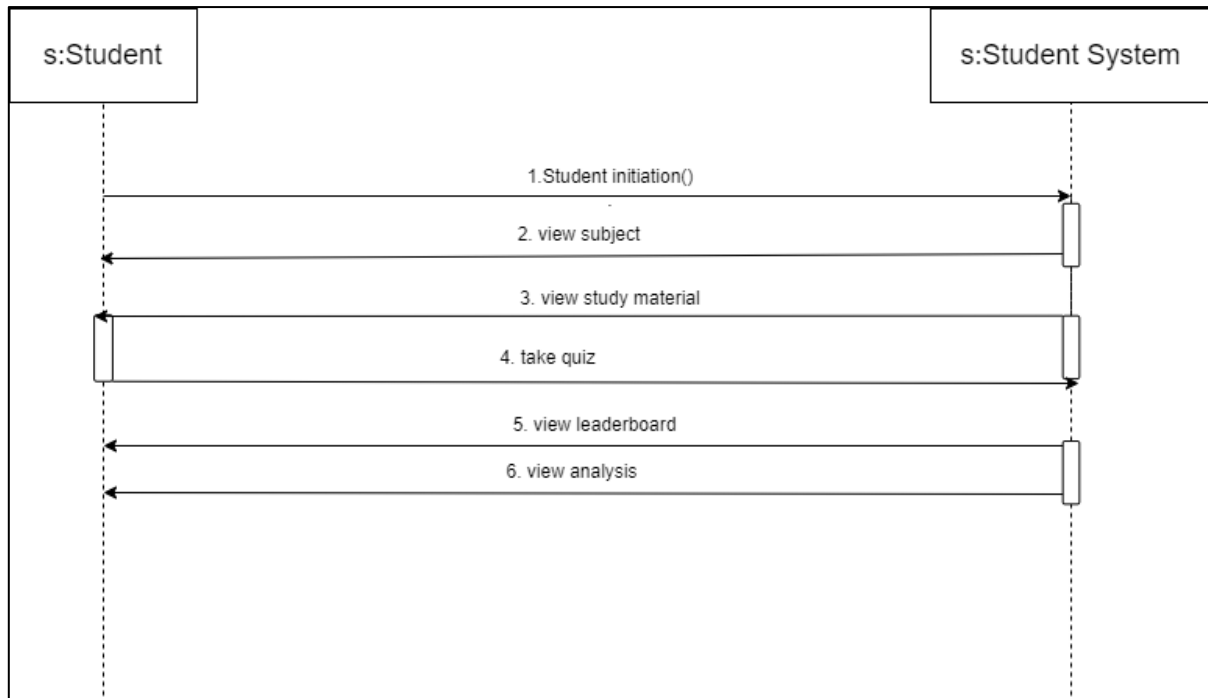
4) Student Panel

Figure 27: Sequence Diagram of Student (4)

The sequence diagram starts with the student logging into the system, and then they can see the subject. After that, they can view the study material that has been provided by the faculty for that subject. Next, the student can take the quiz of the subject. The quiz is evaluated by the system, and the student is provided with their score. After taking the quiz, the student can view the leaderboard, which displays the scores of all the students who have taken the quiz. The student can see where they stand in the class, and how they compare to their peers. Finally, the student can view the analysis of their performance in the quiz. The analysis provides information about the student's strengths and weaknesses, and areas where they need to improve.

4.6.5 SYSTEM DESIGN

A program's or computing system's software architecture is a representation of the system that helps with comprehension of how the system will operate. Software architecture acts as a blueprint for both the system and the project creating it, outlining the tasks that the design and implementation teams must complete. Performance, modifiability, and security are only a few of the system features that are primarily carried by the architecture and cannot be attained without a unified architectural vision. Architecture is a tool for early analysis to confirm whether a design

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strategy will produce a workable system. You may identify design risks and early-stage mitigate them by creating effective architecture. A transportable architectural design model. It stands for a collection of abstractions that let software developers predictably define architecture.
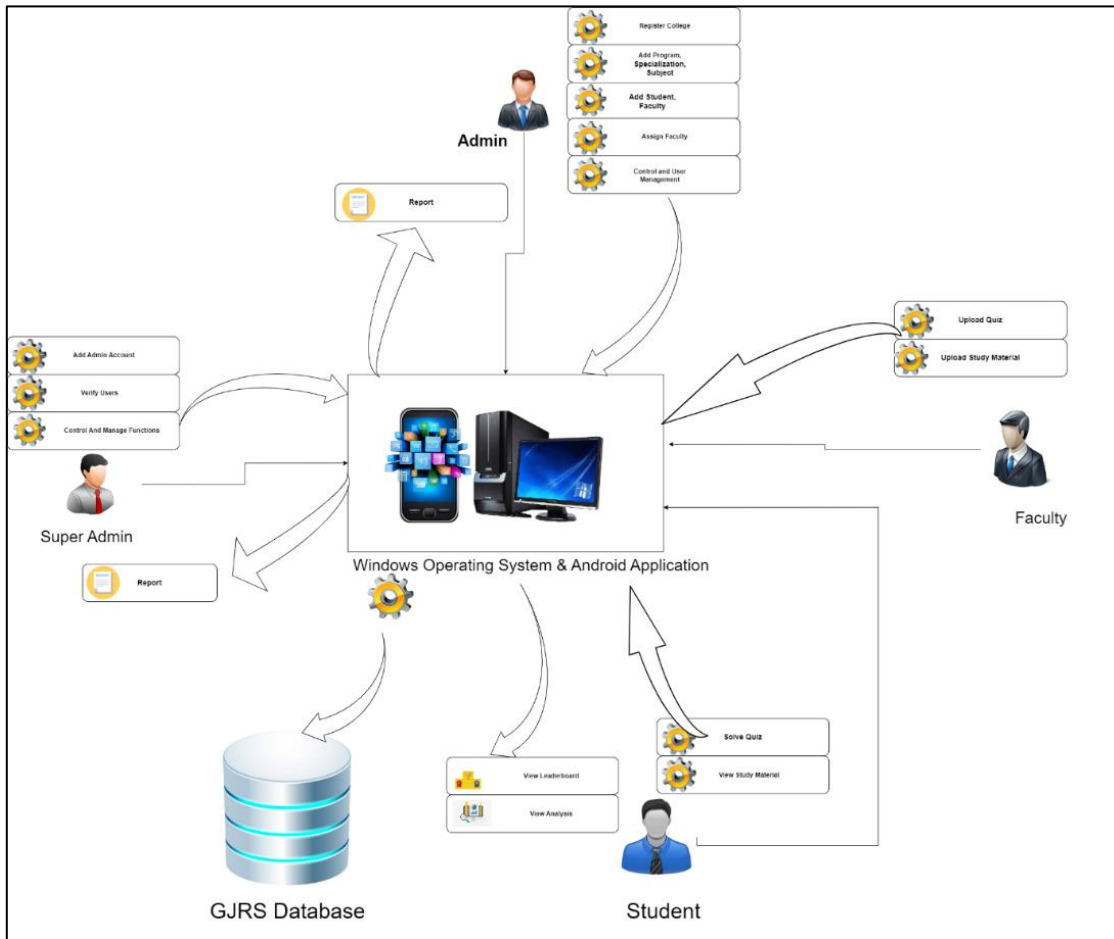

Figure 28: System Design
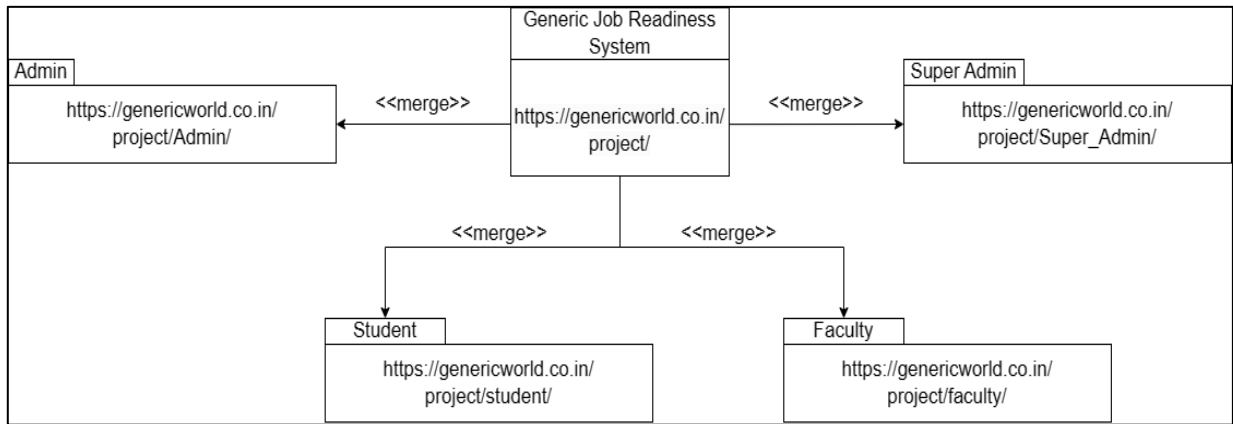
4.6.6 PACKAGE DIAGRAM

Figure 29: Package Diagram (Website)

A package diagram is a structural diagram that shows the organization of a system or website into packages or modules. In the case of a website with a super-admin, admin, faculty, and student modules, the package diagram would show these modules as separate packages with their own internal structure and interdependencies. The super-admin package would contain all the functionality and data related to managing and restricting access to the application, while the admin package would handle registration and management of colleges, placement programs, semesters, specializations, and subjects. The faculty package would provide tools for scheduling quizzes and providing study materials for subjects, and the student package would allow for the completion of quizzes and the assessment of knowledge from both objective and subjective interview standpoints. By organizing the website into distinct packages, the package diagram helps to clarify the structure of the website and simplify the development process.
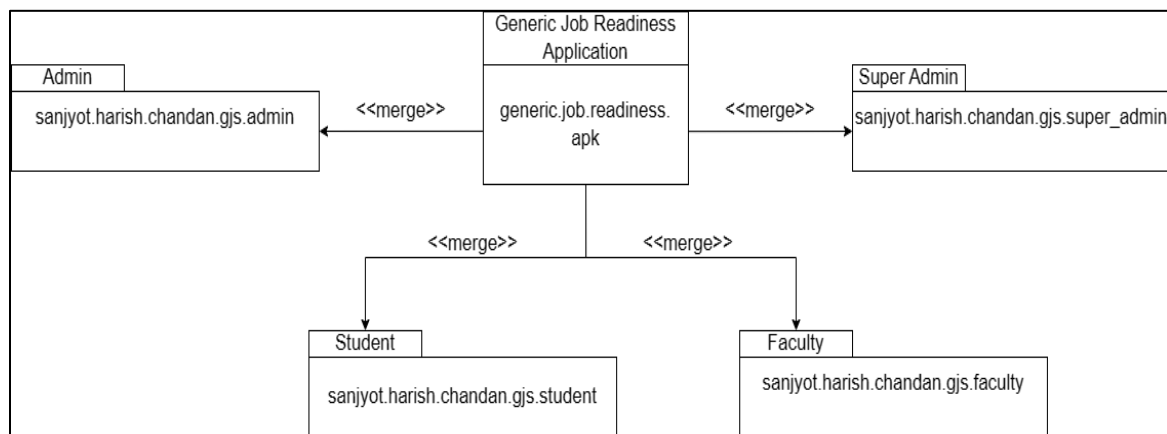

Figure 30: Package Diagram (Application)

A package diagram for an application with a Super-Admin, Admin, Faculty, and Student would depict the overall organization of the application's various components. The package diagram would show how the application is organized into separate packages, each containing a set of classes and interfaces that are relevant to the different users and their functionalities. The Super-Admin package would contain classes and interfaces for managing other admin users and restricting access to ensure application security. The Admin package would contain classes and interfaces for registering colleges and creating college structures for placement of programs, semesters, specializations, and subjects. The Faculty package would contain classes and interfaces for scheduling quizzes and providing study materials for subjects. The Student package would contain classes and interfaces for completing quizzes and assessing knowledge from both objective and subjective interview standpoints. The package diagram would show how these different packages are interconnected and communicate with each other to provide a seamless user experience.

4.6.7 BLOCK DIAGRAM

Process flow diagrams, software design, electronic design, and hardware design are all common applications for them in engineering. Block diagrams are widely used in less technical, higher-level descriptions with the goal of making broad concepts more understandable without worrying about implementation details. Contrast this with electrical engineering schematic and layout diagrams, which show the precise details of how electrical components are incorporated and constructed.
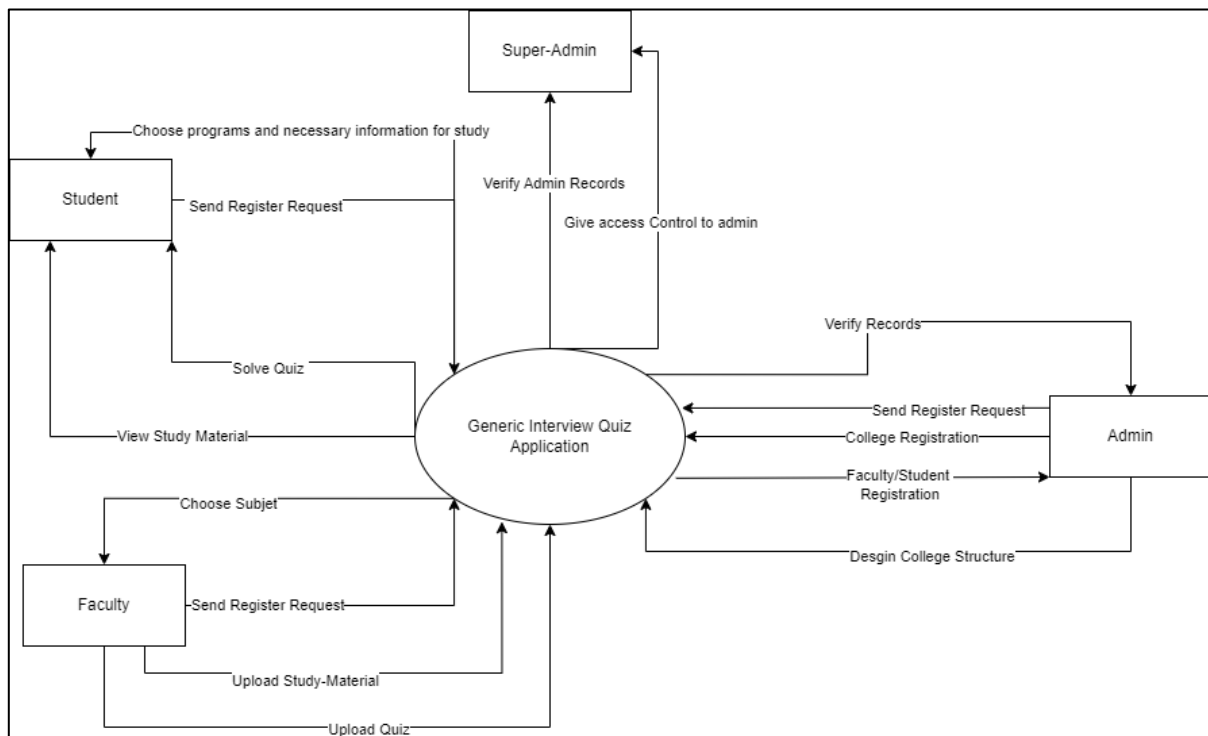

Figure 31: Block Diagram of Generic Job Readiness System

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4.7 DEPLOYMENT DIAGRAM

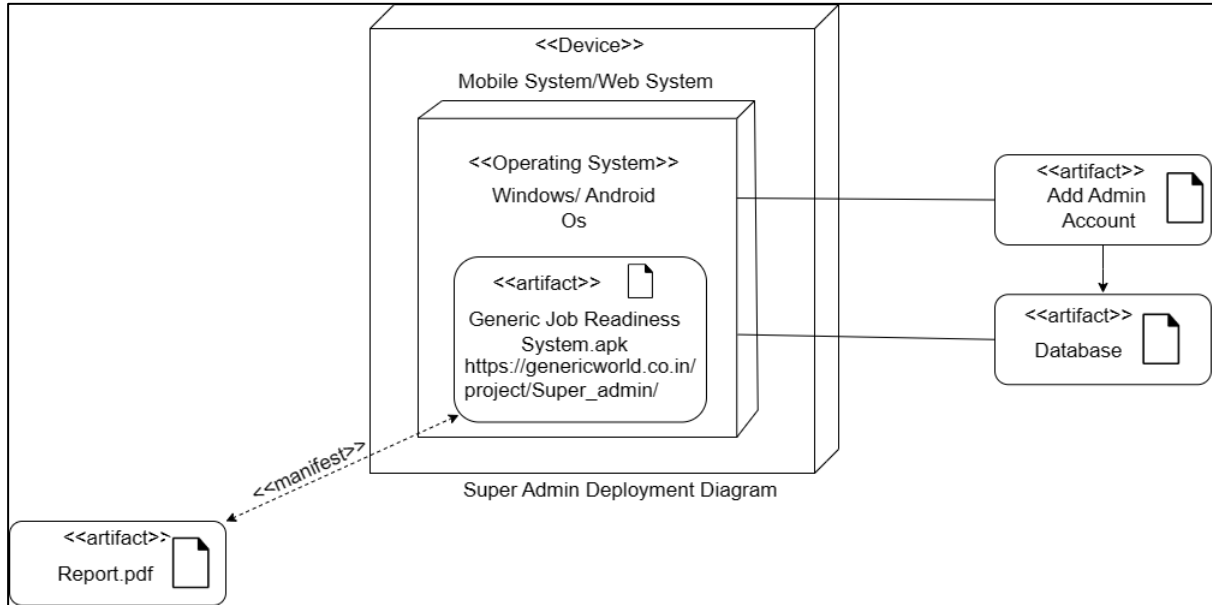### 1) Super-Admin Panel

Figure 32: Deployment Diagram of Super-Admin (1)
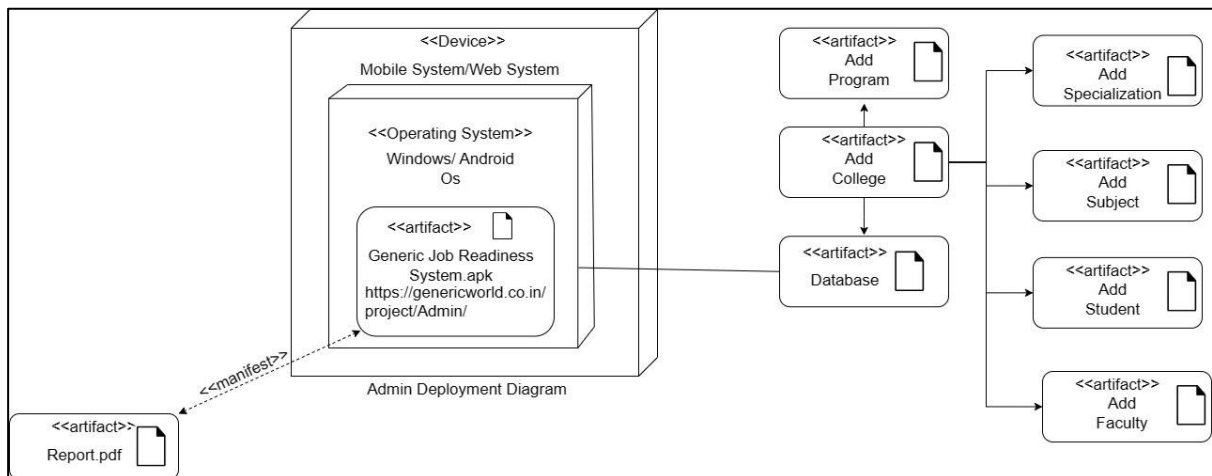
2) Admin Panel

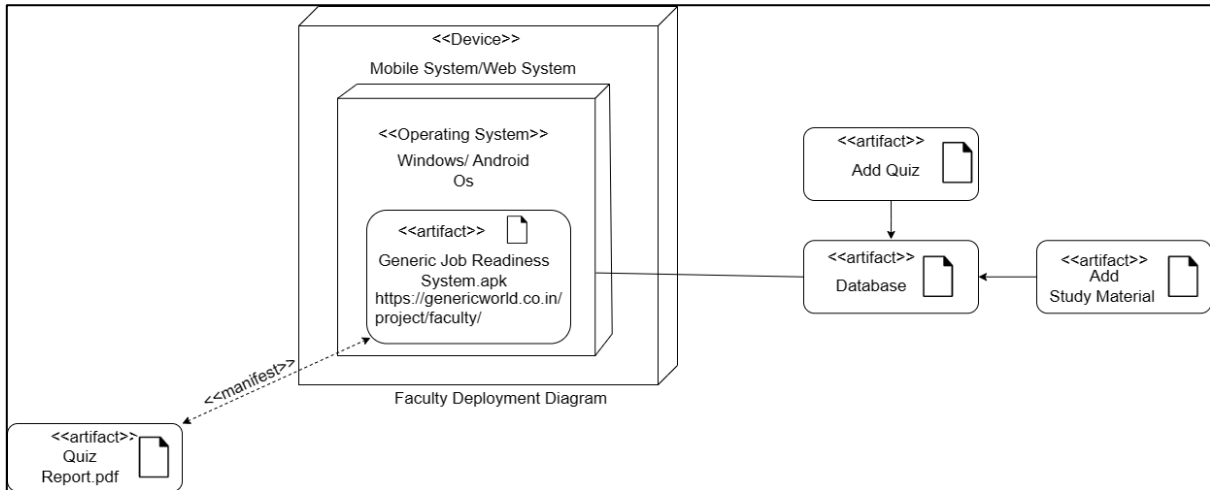Figure 33: Deployment Diagram of Admin (2)

3) Faculty Panel

Figure 34: Deployment Diagram of Faculty (3)
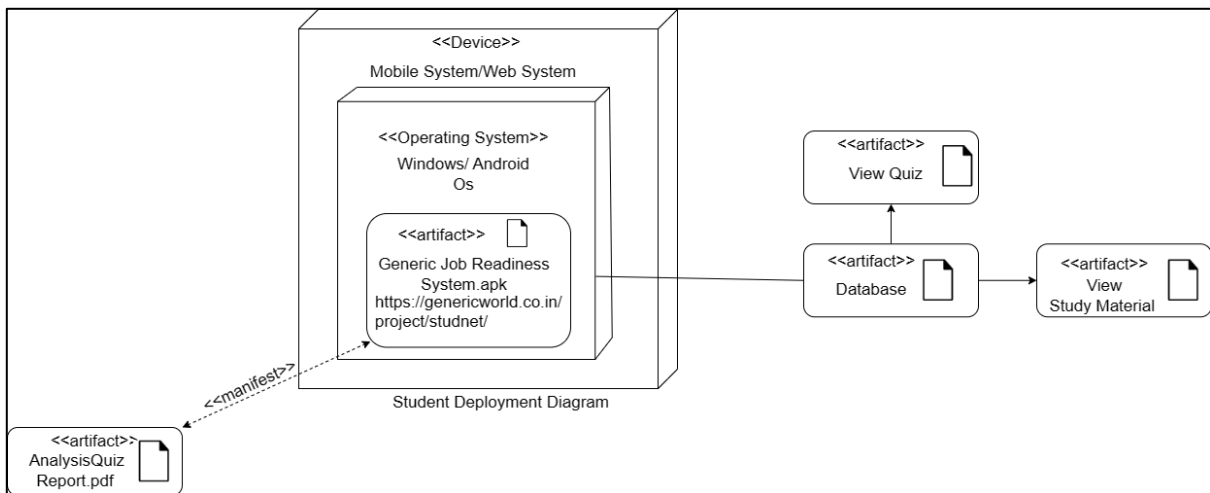
4) Student Panel

Figure 35: Deployment Diagram of Student (4)
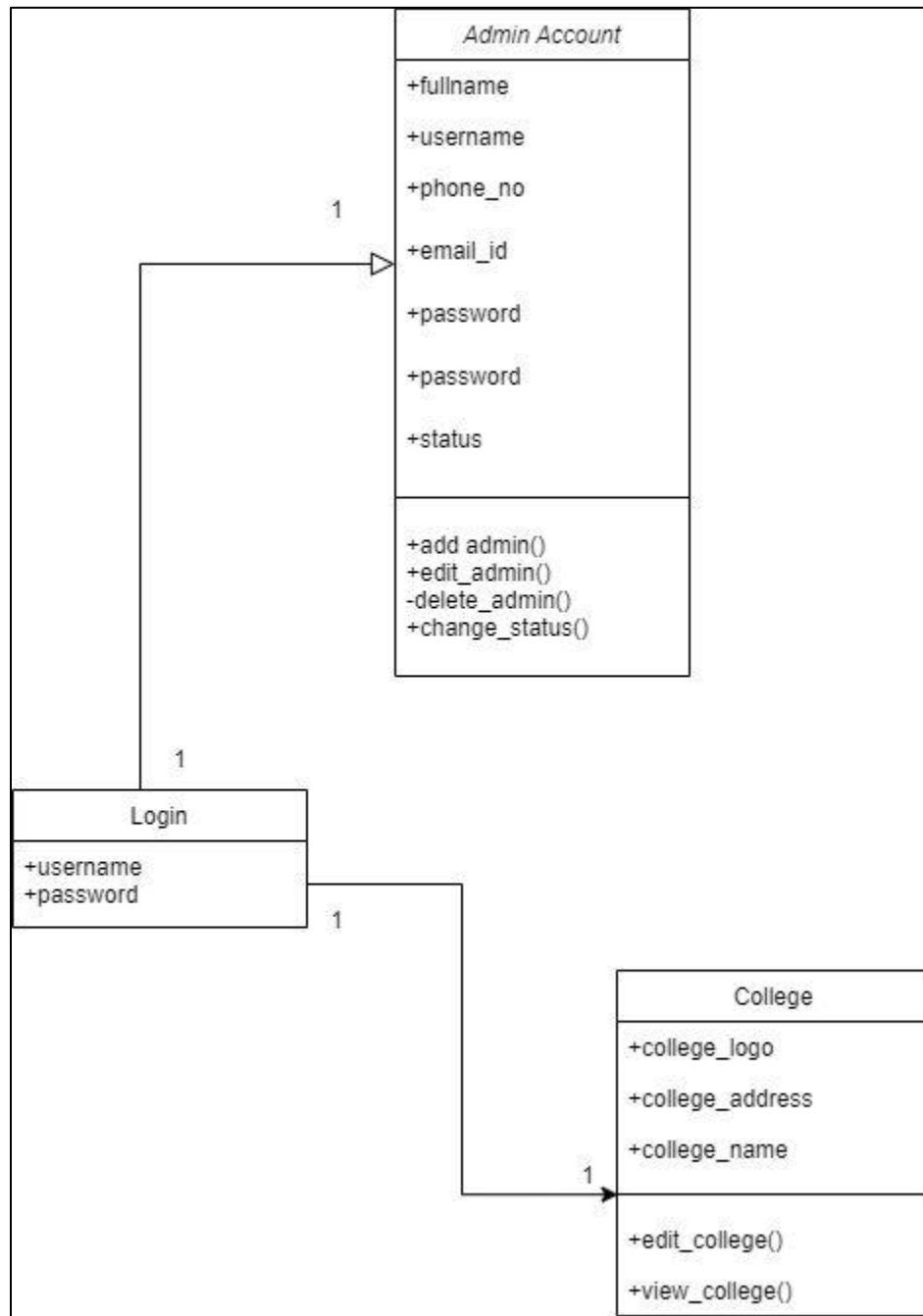
4.8 CLASS DIAGRAM

1) Super-Admin Panel

Figure 36: Class Diagram of Super-admin (1)
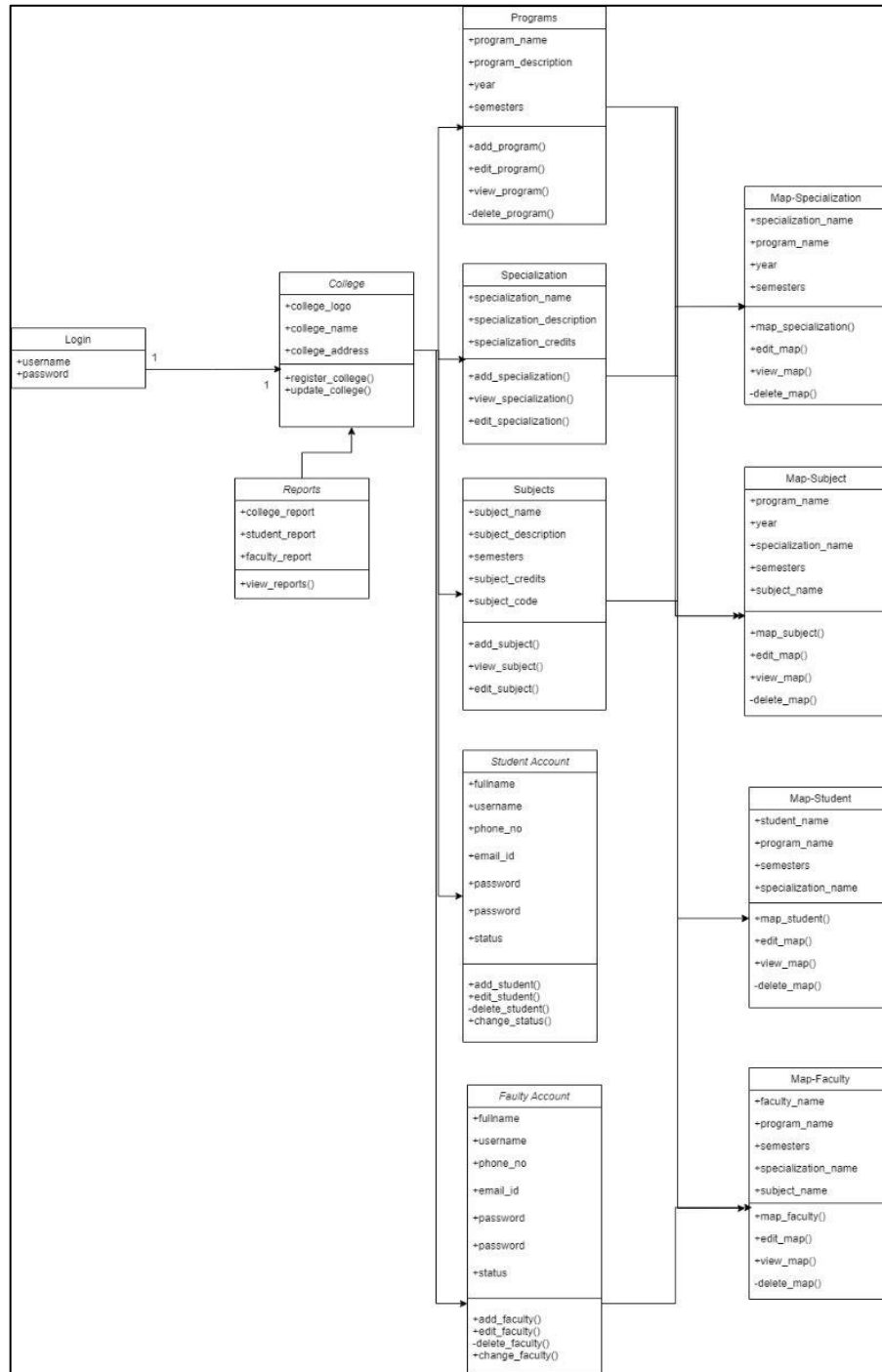
2)Admin Panel

Figure 37: Class Diagram of Admin (2)
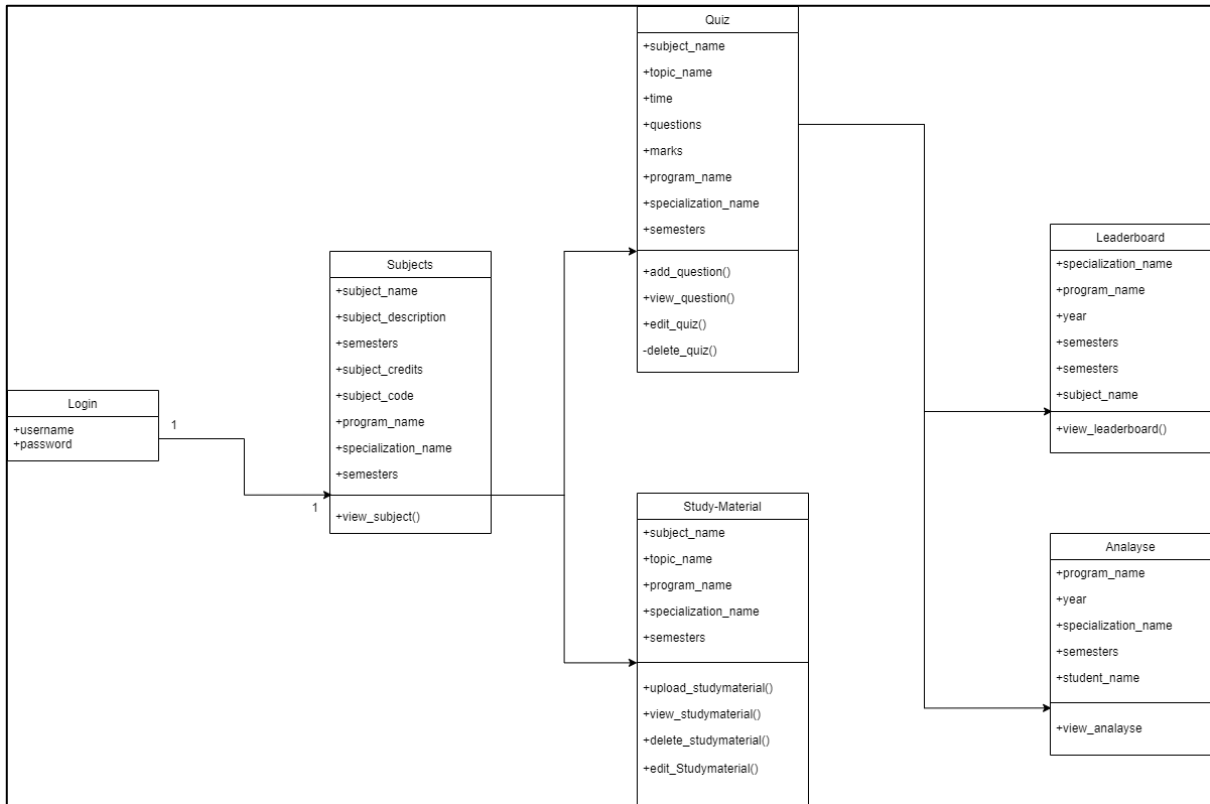
3) Faculty Panel:

Figure 38: Class Diagram of Faculty (3)
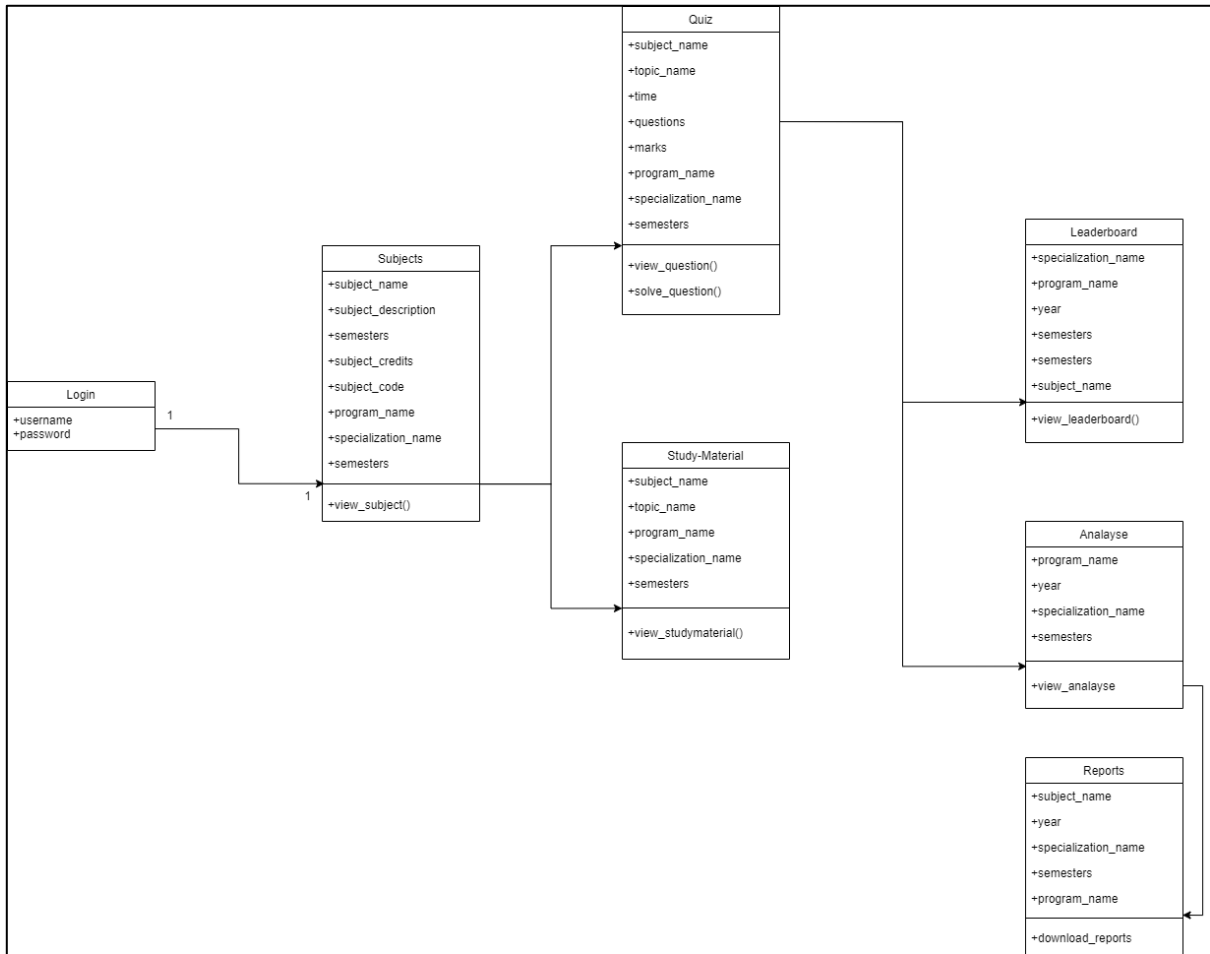
4) Student Panel

Figure 39: Class Diagram of Student (4)

4.9 USER INTERFACE DESIGN

User interface Design (UID) or User Interface Engineering is the process of designing software programmes, websites, computers, appliances, machinery, and mobile communication devices with an emphasis on the user's experience and interaction. The goal of user interface design, also referred to as user-centered design, is to make the user's interaction as simple and efficient as possible in order to meet user goals.

An effective user interface facilitates job completion without drawing attention to itself. Graphic design and typography are used to increase usability by altering how the user interacts with the interface and improving the design's visual attractiveness. The way a design looks can either make it easier or harder for users to use an interface's functionality.

The design process must strike a balance between technological functionality and aesthetic elements (such as a mental model) in order to create a system that is not only functional but also accessible and adaptable to changing user needs. Interface design is employed in many different applications, including as computer systems, cars, and commercial aeroplanes. Even though each of these endeavours calls on many of the same basic human interactions, they also each require a particular set of skills.

4.9.1 DESCRIPTION OF THE USER INTERFACE

Developers can drag and drop pieces into the user interface according to the requirements of the project in a drag and drop environment. Additionally, there is a property explorer where developers can view and alter each property element.

4.9.2 PANELS AVAILABLE

1. Super-Admin Panel
2. Admin Panel
3. Student Panel
4. Faculty Panel

CHAPTER 5

TEST SPECIFICATIONS

5.1 MANUAL TESTING

Manual testing is a crucial part of software development that involves the use of human testers to check the behaviour and functionality of a software application or system. Unlike automated testing, manual testing requires testers to follow predefined steps to verify if the application or system meets its specified requirements.

Manual testing involves a range of activities, including test planning, test design, test execution, and test reporting. Test planning involves identifying the scope of the test, selecting the test cases and scenarios, and choosing the testing environment. Test design involves creating test cases and scenarios based on the requirements and specifications of the software application. Test execution involves running the test cases and scenarios manually to check the software's behaviour and functionality. Test reporting involves recording and documenting the test results and defects found during the testing process.

Manual testing is a time-consuming and labour-intensive process, but it can be highly effective in finding defects that might be missed by automated testing. However, to get reliable results, it is crucial to ensure that the manual testers are skilled and experienced in testing. Manual testing is an important part of the software development lifecycle, as it helps to identify issues early in the development process and ensure that the software meets the end-user's requirements. However, manual testing can be time-consuming and labour – intensive, and it is often complemented by automated testing to improve efficiency and test coverage.

5.1.1 UNIT TESTING

Unit testing is a technique where software developers write automated tests for individual parts of their code to check if they are working correctly. These parts are typically functions, methods, or classes that are tested independently from the rest of the application. By running these tests early and often, developers can catch and fix issues before they become more serious problems later.

The main goal of unit testing is to ensure that each piece of code works as expected and produces the expected output for a given input. This helps developers to catch and fix bugs quickly, leading to higher-quality software that is less likely to break or fail when deployed.

Overall, unit testing is a simple but powerful technique that can help software developers to build better software by catching and fixing issues early in the development process. By breaking down their code into smaller, testable pieces, developers can build software that is more reliable, easier to maintain, and more resilient to change.

5.1.2 INTEGRATION TESTING

Integration testing is a type of software testing that evaluates how individual software components work together as a group. The objective of integration testing is to identify and resolve issues in the interface between these components, which can include data transfer, communication protocols, and other interactions. By testing how different components interact with each other, integration testing aims to ensure that the software system or application is reliable, functional, and meets the desired requirements.

Integration testing is performed after unit testing, where each individual unit of the software is tested in isolation. Once the individual units are tested and verified, they are integrated into the software system, and integration testing is performed to ensure that the integrated components work together as intended.

There are different types of integration testing, including big bang integration, top-down integration, bottom-up integration, and hybrid integration. Big bang integration involves integrating all the components of the software system at once, while top-down and bottom-up integration involve integrating the components in a specific order.

The benefits of integration testing include the early detection of defects in the interface between different components, increased software reliability and quality, and a reduction in development time and costs.

5.1.3 ACCEPTANCE TESTING

The super admin panel is a secure section of generic job readiness application that allows authorized super admins to manage user accounts, permissions, system settings, quiz management, user support, and security. It is an essential tool that helps ensure the system's reliability, security, and positive user experience.

5.2 TEST CASE AND TYPICAL WRITTEN TEST CASE FORMAT

1) Test case: Super-Admin Panel

The super admin panel is a secure section of generic job readiness application that allows authorized super admins to manage user accounts, permissions, system settings, quiz management, user support, and security. It is an essential tool that helps ensure the system's reliability, security, and positive user experience.

2) Test case: Admin Panel

Verify super admin login: Ensure that you can log in to the application as a super admin using the appropriate credentials.

Test user management: Verify that you can manage user accounts, including adding new users, editing existing accounts, and deleting accounts.

Test permissions: Ensure that you can manage user permissions, including granting or revoking access to specific features or sections of the application.

Test system settings: Verify that you can access and manage system settings, such as configuring email notifications or changing the application's appearance.

3) Test case: Student Panel

Objective: To verify that students can successfully log in to the generic job readiness application.

Test steps:

- Open generic job readiness application login page.
- Enter a valid username and password.
- Click on the "Login" button.
- Verify that the user is directed to the dashboard page.

Expected result: The user is successfully logged in and directed to the dashboard page.

Test case: Quiz functionality

Objective: To verify that the quiz functions generic job readiness application is working properly.

Test steps:

- Open the generic job readiness application dashboard page.

- Click on the "Start Quiz" button.
- Answer all questions in the quiz.
- Click on the "Submit" button.
- Verify that the user is directed to the quiz results page.
- Verify that the quiz results page displays the number of correct and incorrect answers, as well as the percentage score.

Expected result: The quiz functions of generic job readiness application are working properly and the quiz results page displays accurate information.4) Test case: Faculty Panel

4) Test case: Faculty Panel

Objective: To verify that the faculty panel functions of the generic job readiness application are working properly.

Test steps:

- Open the generic job readiness application faculty panel login page.
- Enter a valid username and password.
- Click on the "Login" button.
- Verify that the user is directed to the faculty panel dashboard page.
- Schedule a quiz in a time slot.
- Verify that the quiz is scheduled in the specified time slot.
- View the quiz results of a completed quiz.
- Verify that the quiz results page displays accurate information.

5.2.1 TYPICAL STRUCTURE OF A TEST CASE

1. Information

- Test case name: Verify user login functionality
- Test objective: To ensure that users can log in to the system successfully
- Preconditions: The user has a valid account and internet connection
- Test data: Valid username and password

2. Activities

- Launch the Interview Quiz application.
- Enter the valid username and password in the login page.

- • Click on the login button.
- • Verify that the user is successfully logged in to the system.
- • Verify that the user is directed to the dashboard page.

3. Results

- • Expected result: The user should be able to log in to the system successfully and be directed to the dashboard page.
- • Actual result: The user can log in to the system successfully and is directed to the dashboard page.
- • Pass/Fail: Pass

5.2.2 FUNCTIONAL DEPENDENCY GRAPH

A directed graph called a dependency graph shows how several things are related to one another. The dependency graph can be used to derive an evaluation order or the lack of an evaluation order that respects the provided dependencies. The following functions are used in this dissertation work:

1. login ()
2. profile ()
3. add admin ()
4. edit admin ()
5. delete admin ()
6. add students
7. add faculties
8. users_id ()
9. full name ()
10. email_id ()
11. username ()
12. phone_no ()
13. password ()
14. status ()
15. dashboard ()
16. search users ()
17. total admin ()
18. active admin ()
19. inactive admin ()
20. total students ()
21. active students ()

22.   inactive students ()
23.   total faculties ()
24.   active faculties ()
25.   inactive faculties ()
26.   all college ()
27.   register college ()
28.   college_id ()
29.   college address ()
30.   college name ()
31.   college logo ()
32.   college edit ()
33.   college delete ()
34.   notification ()
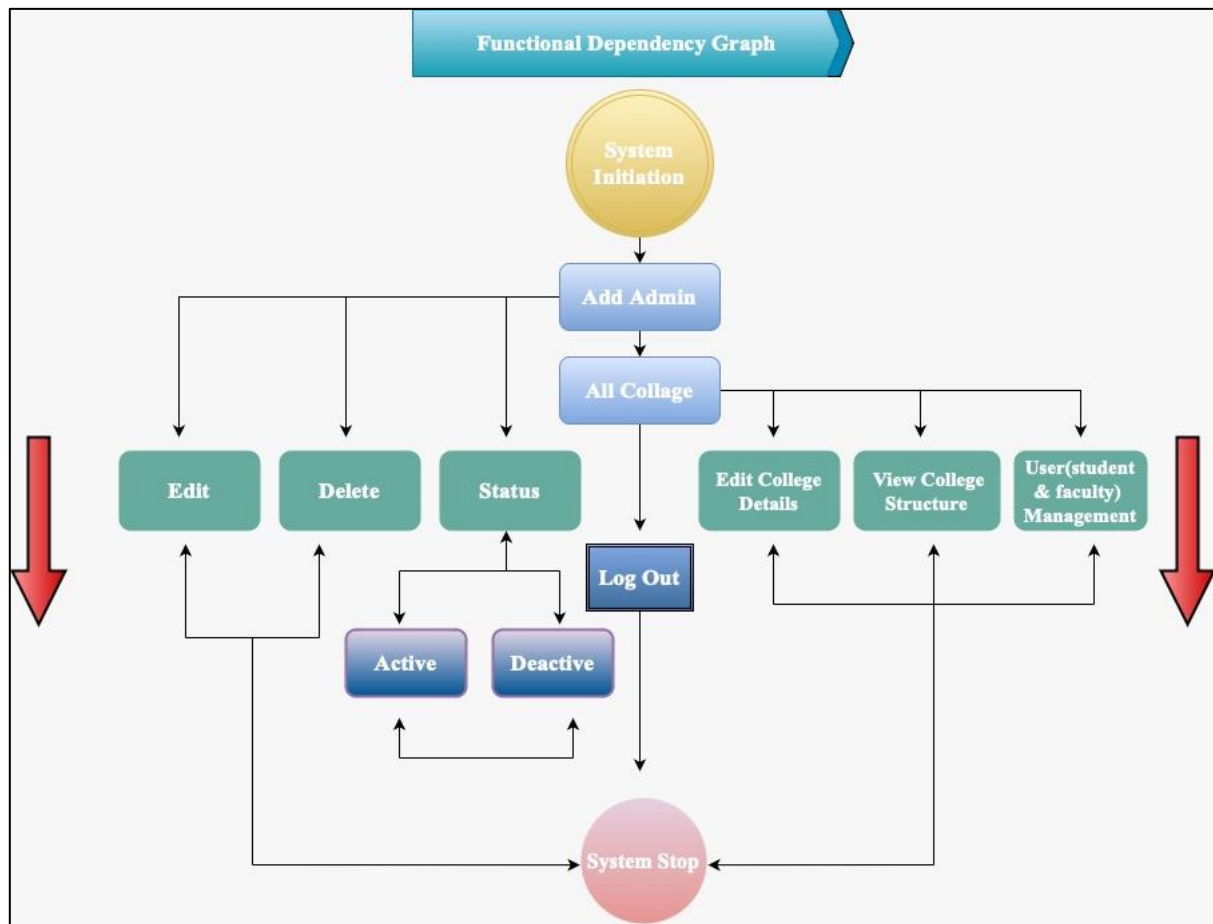35.   log out ()

5.3.1 Super-Admin

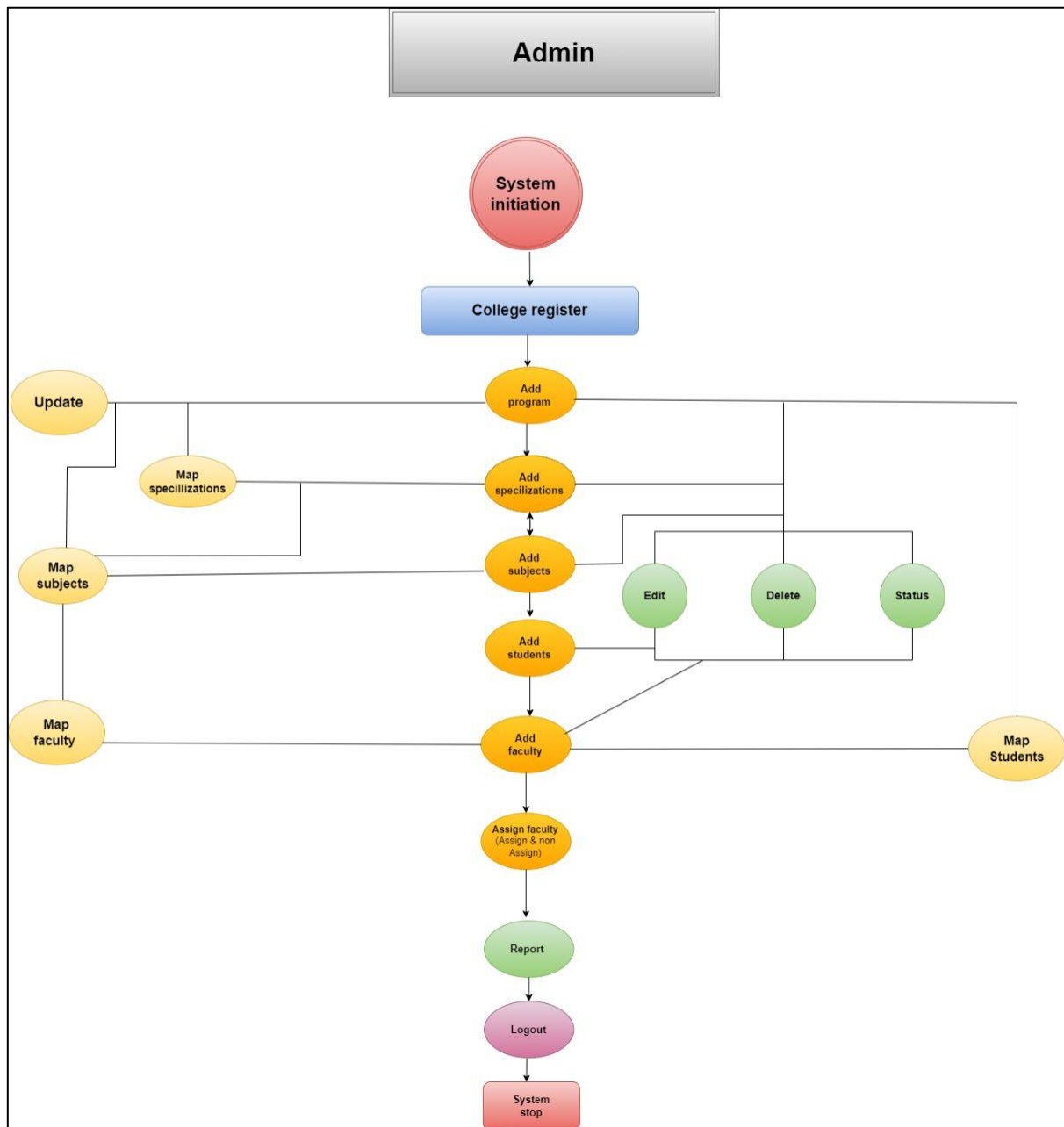Figure 40: Function Dependency Graph (1)
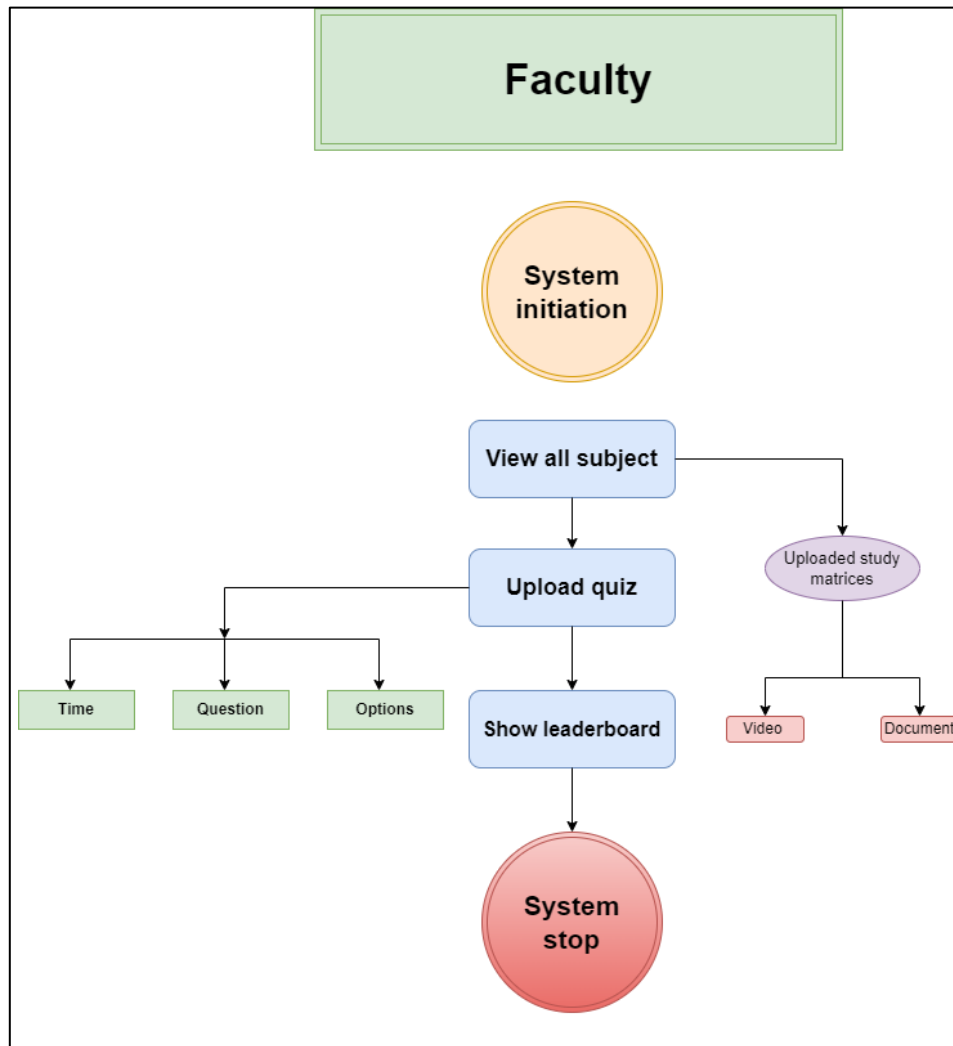
5.3.2 Admin

Figure 41: Functional Dependency Graph Admin (2)

5.3.3 Faculty

Figure 42: Functional Dependency Graph Faculty (3)

5.3.4 Student
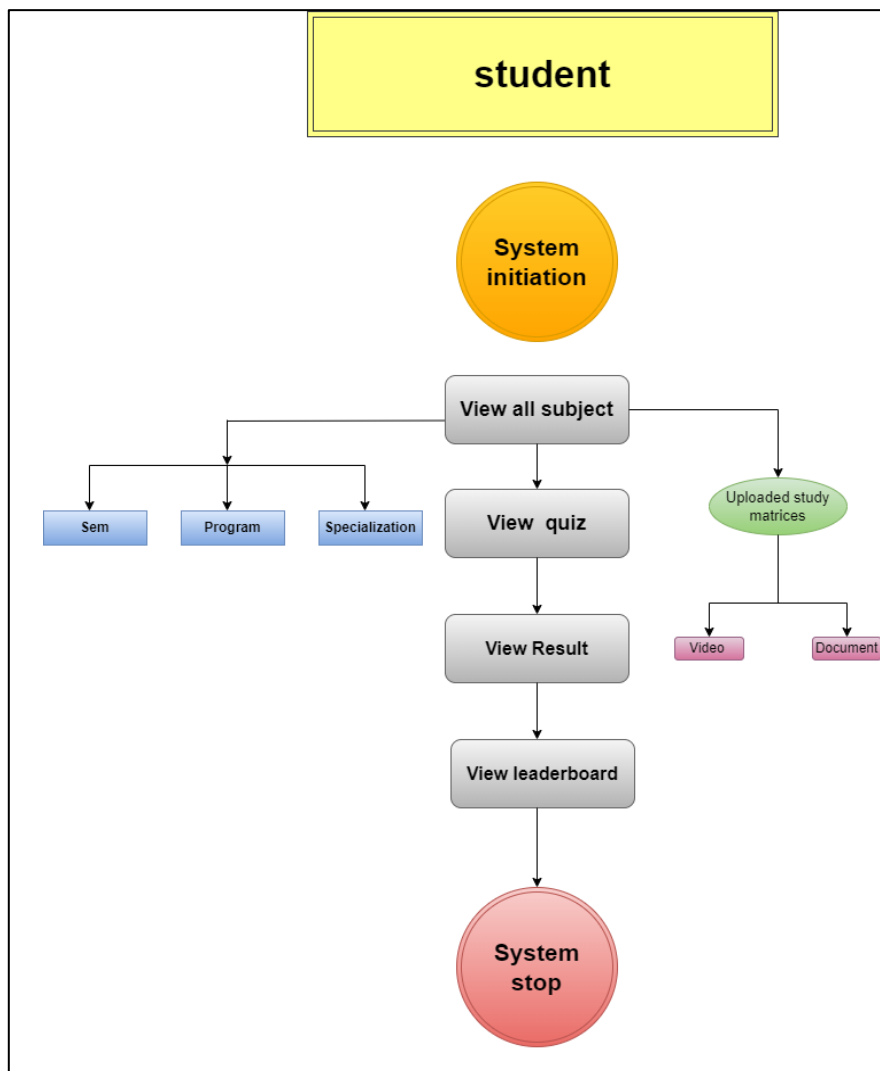
Figure 43: Functional Dependency Graph Student (4)

CHAPTER 6

RESULT AND ANALYSIS

Three parameter analyses, including those of analysis and experimental results are carried out to verify the effectiveness of the proposed framework.

6.1 ANALYSIS

After analysing this project, we discovered that it has a fully functional ERP system that can be utilised to produce any other ERP-related work, making it incredibly adaptable and capable of moving in any direction based on requirements. Furthermore, it has a quiz module that is unique and may be used to provide analysis of the student outcomes.

6.2 EXPERIMENTAL RESULTS

1) Super-Admin Panel

Figure 44: Super-Admin Login Screen
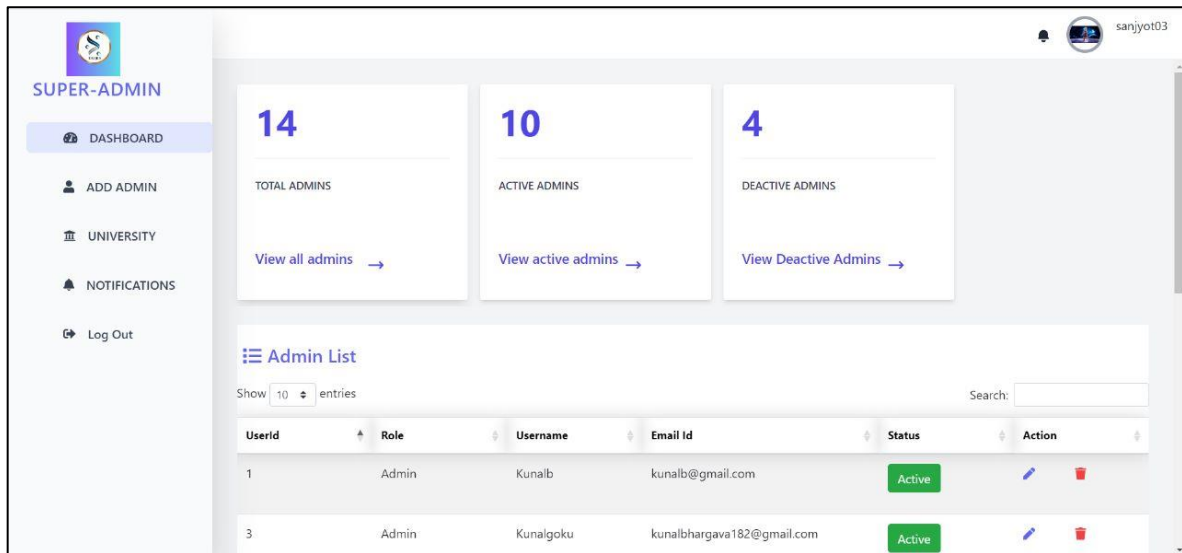
Figure 45: Super-Admin Dashboard
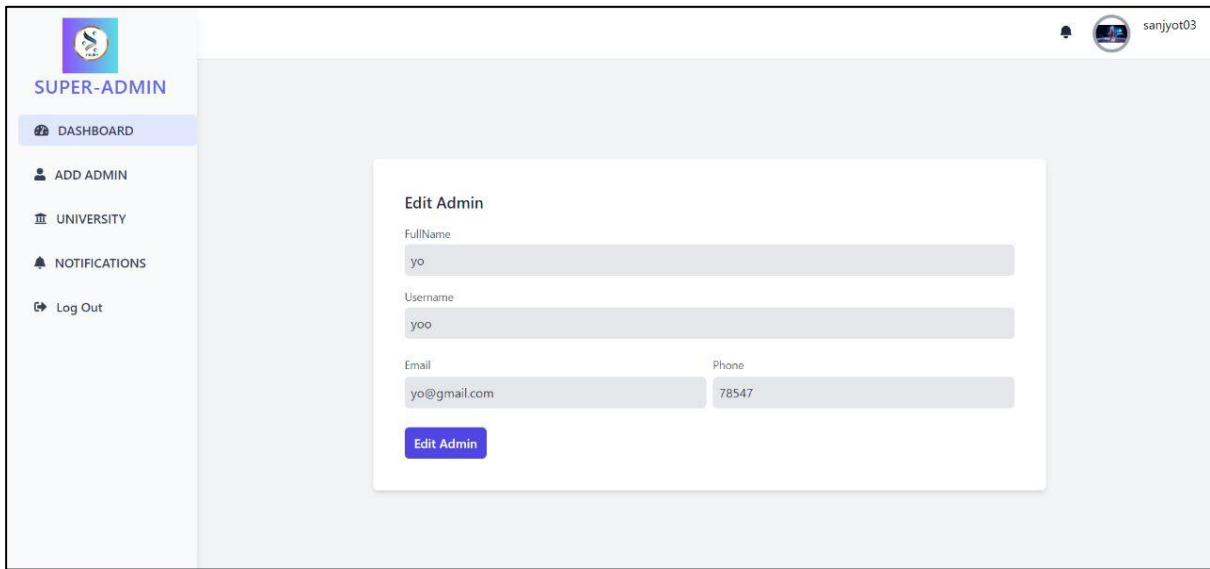

Figure 46: Super-Admin Add-Admin Page
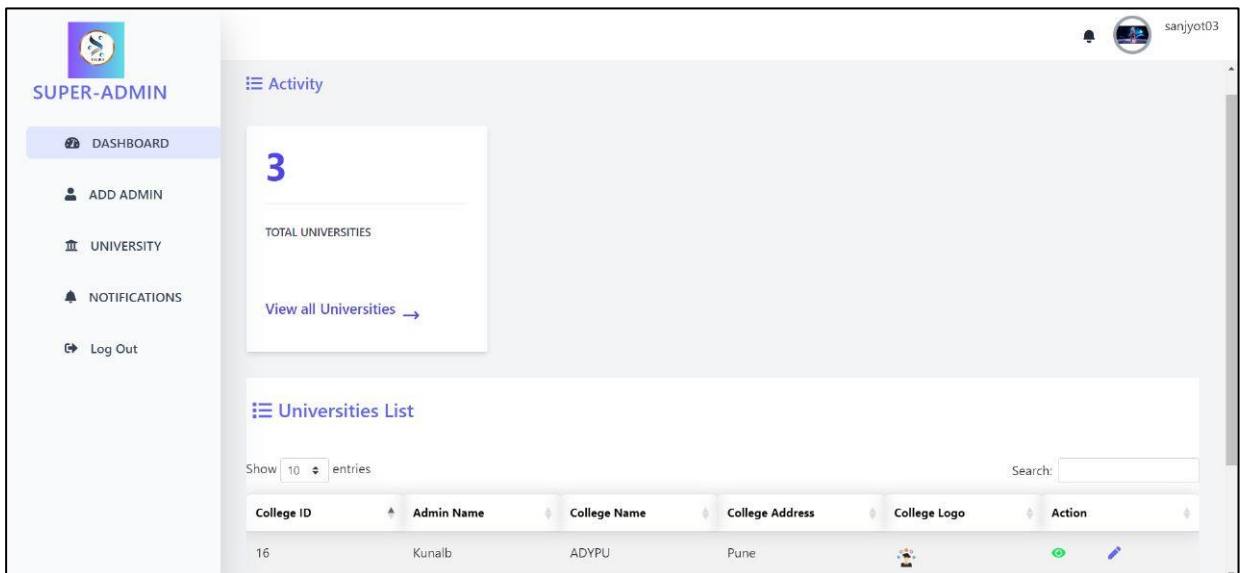
Figure 47: Super-Admin Edit-Admin Page
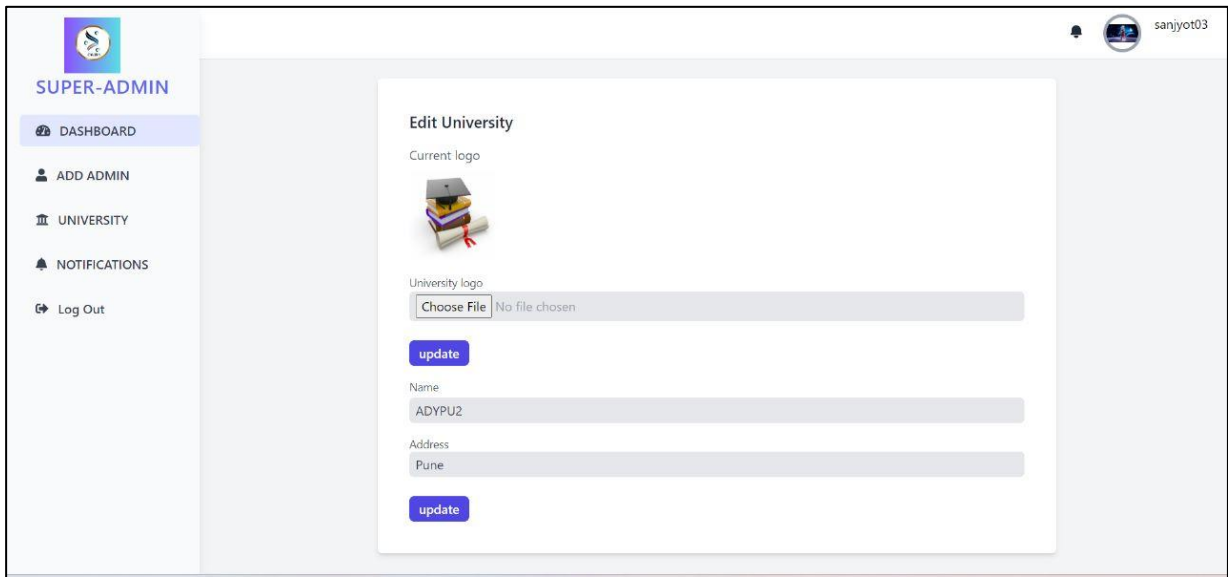

Figure 48: Super-Admin View all colleges Page
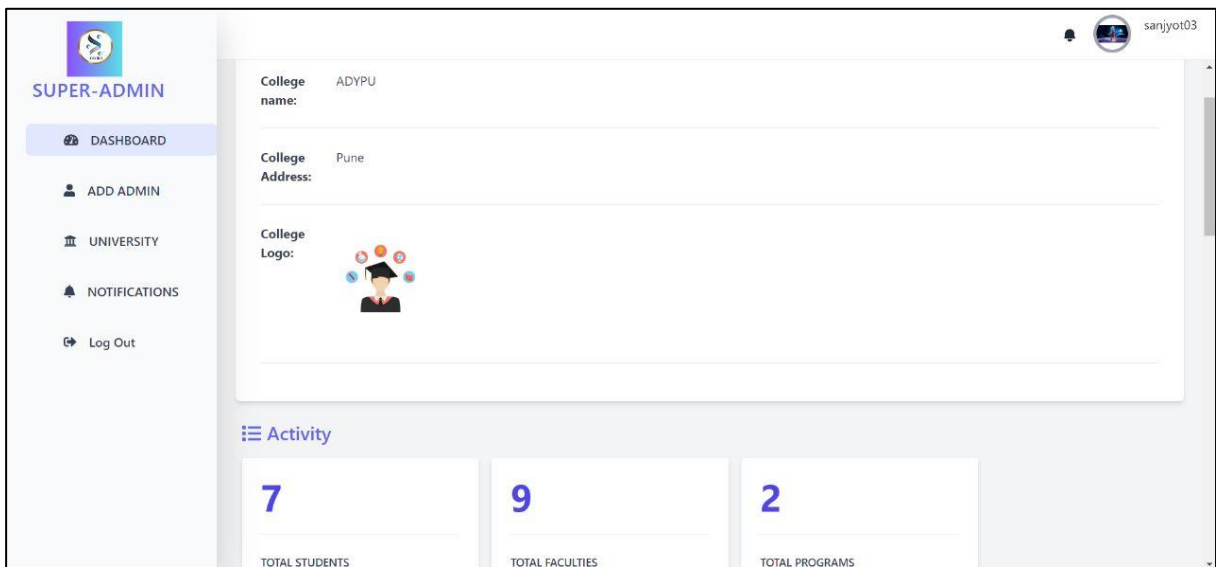
Figure 49: Super-Admin Edit college-details Page
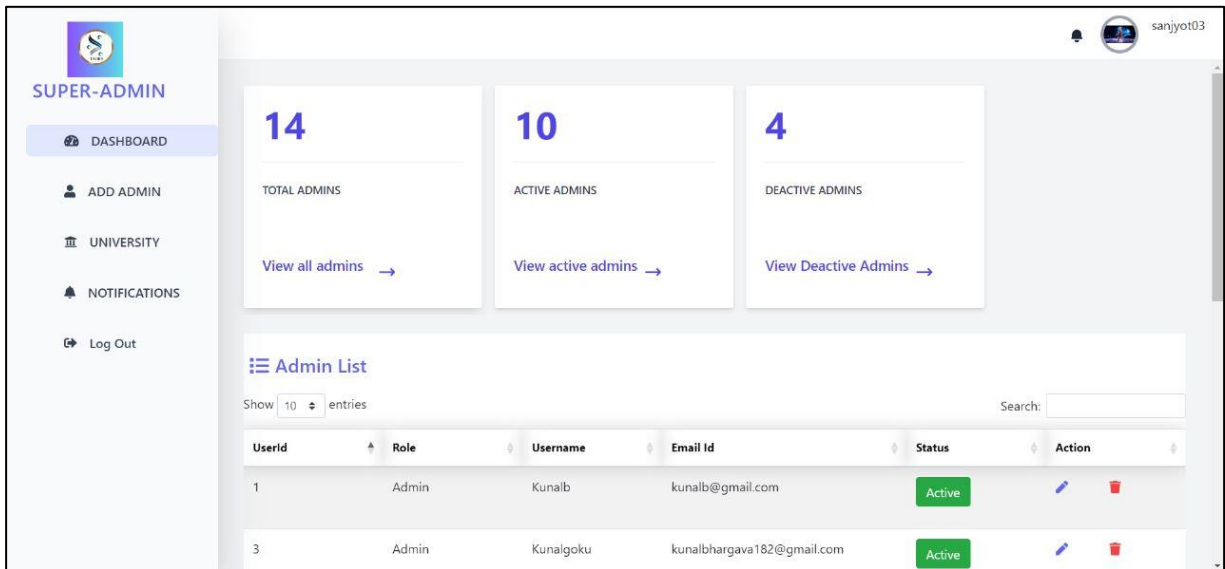

Figure 50: Super-Admin View College Page

Figure 51: Super-Admin View College Page

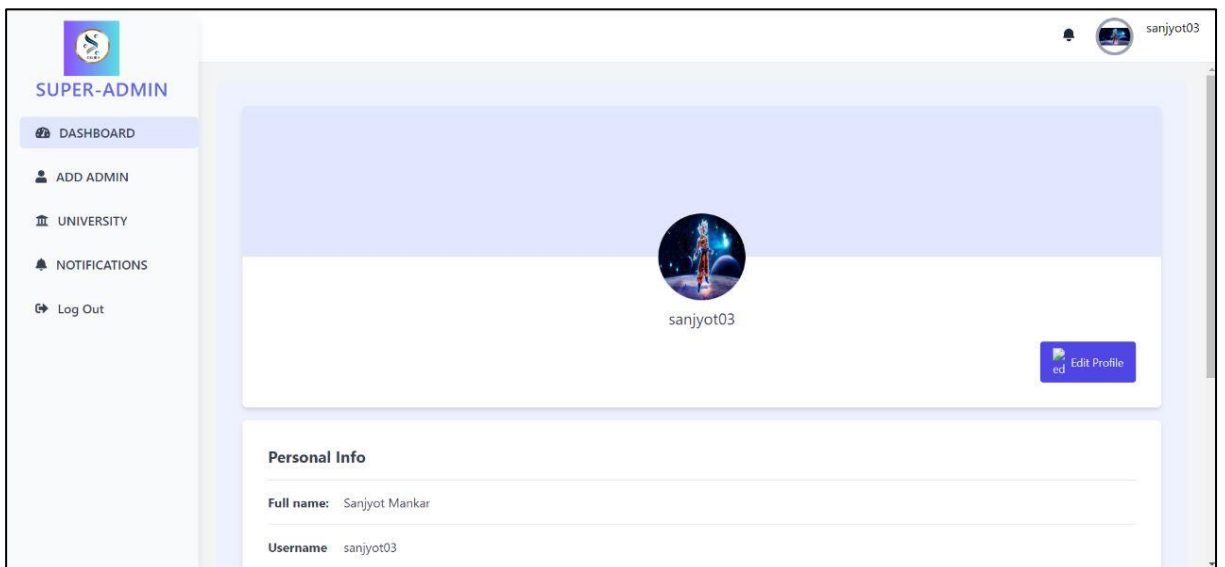Figure 52: Super-Admin View Profile Page

Figure 53: Super-Admin Update Profile Page

2) Admin Panel

Figure 54: Admin Panel Login Page
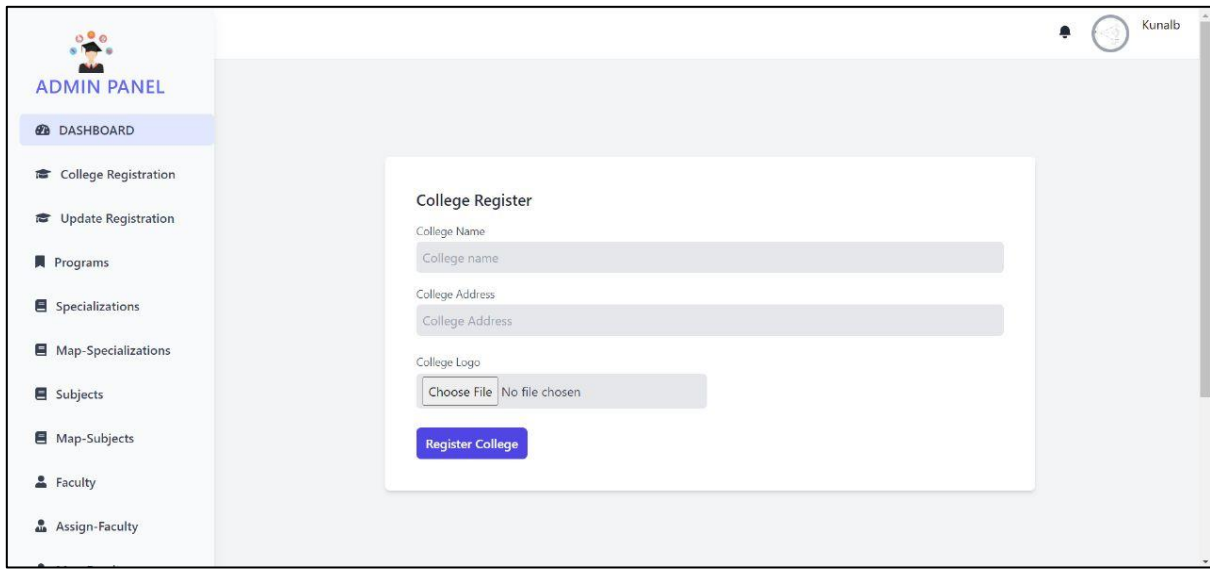
Figure 55: Admin Panel College Register Page
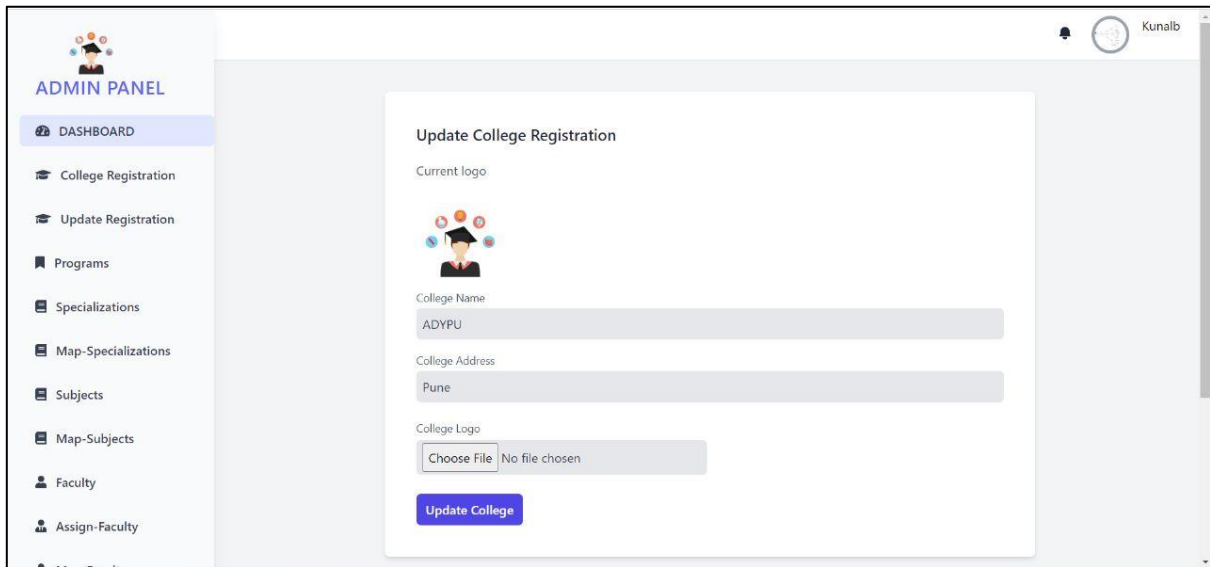
Figure 56: Admin Panel Update College Registration Page
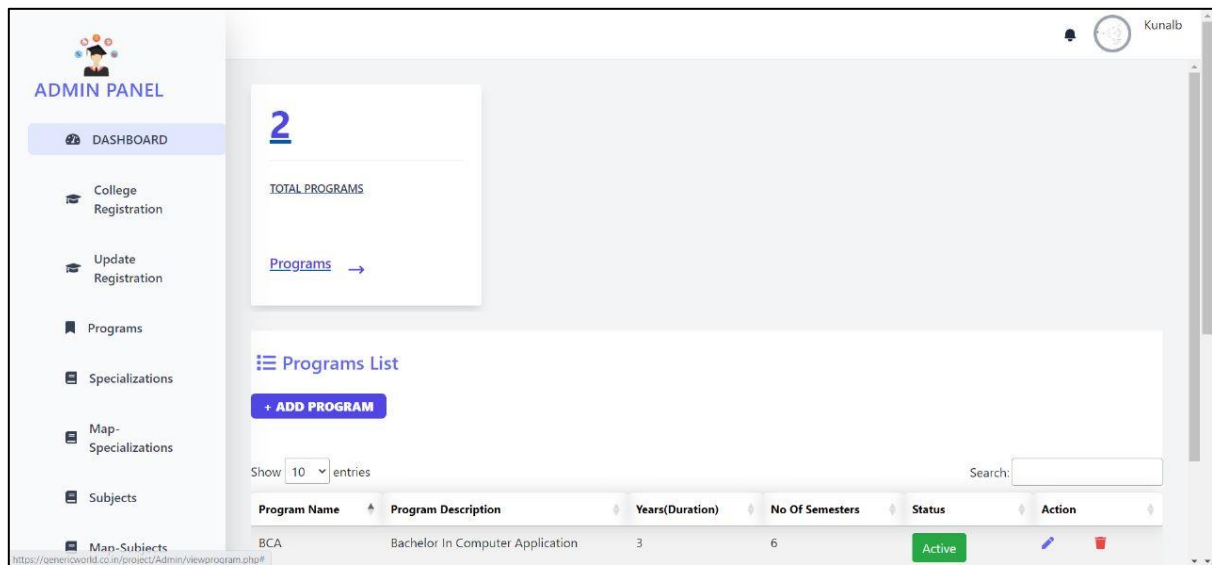
Figure 57: Admin Panel Add Program Page
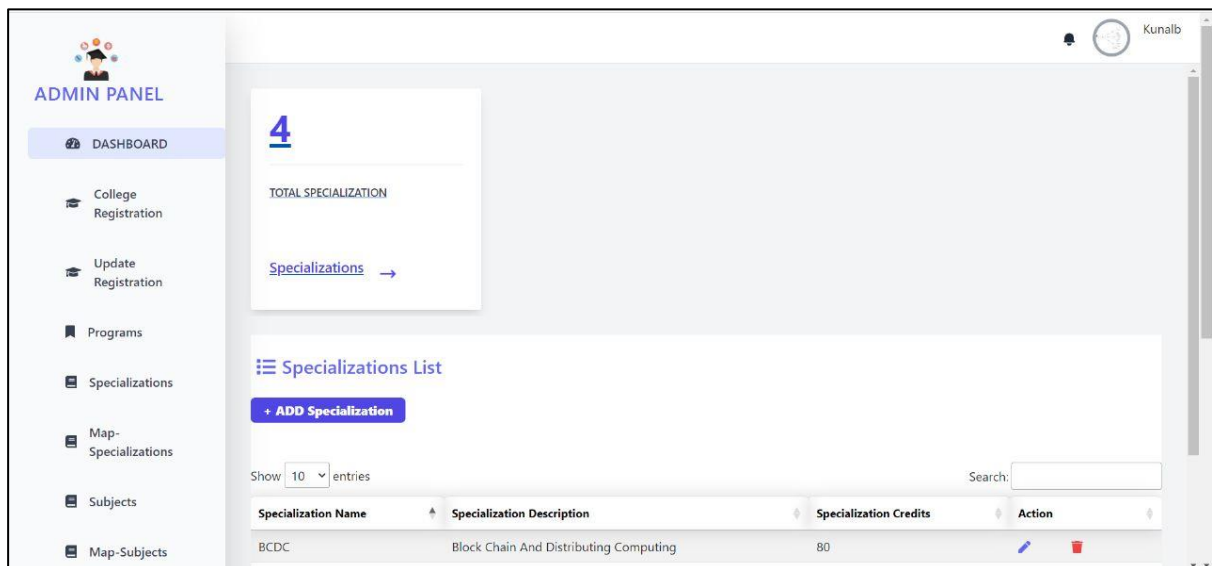
Figure 58: Admin Panel Specialization List Page
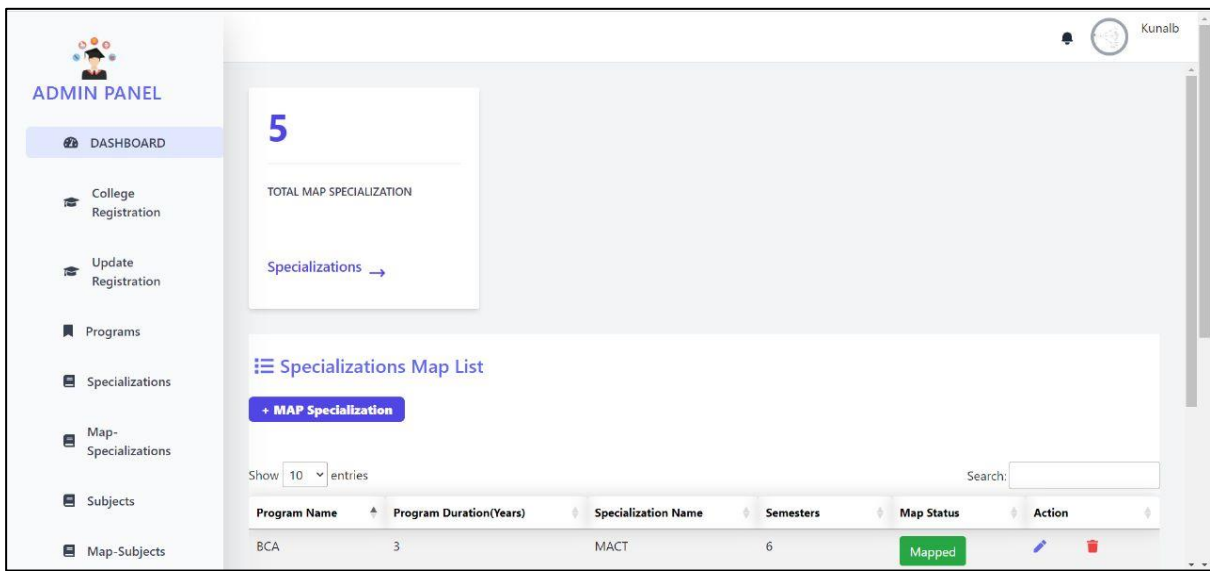
Figure 59: Admin Panel Map Specialization Page
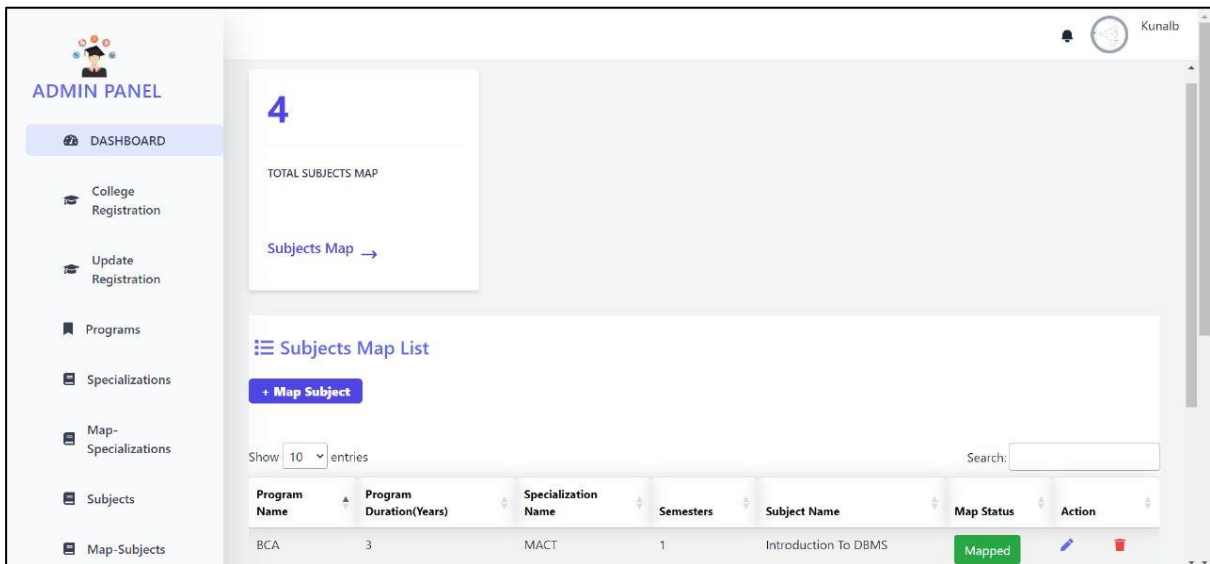
Figure 60: Admin Panel Map Subject Page
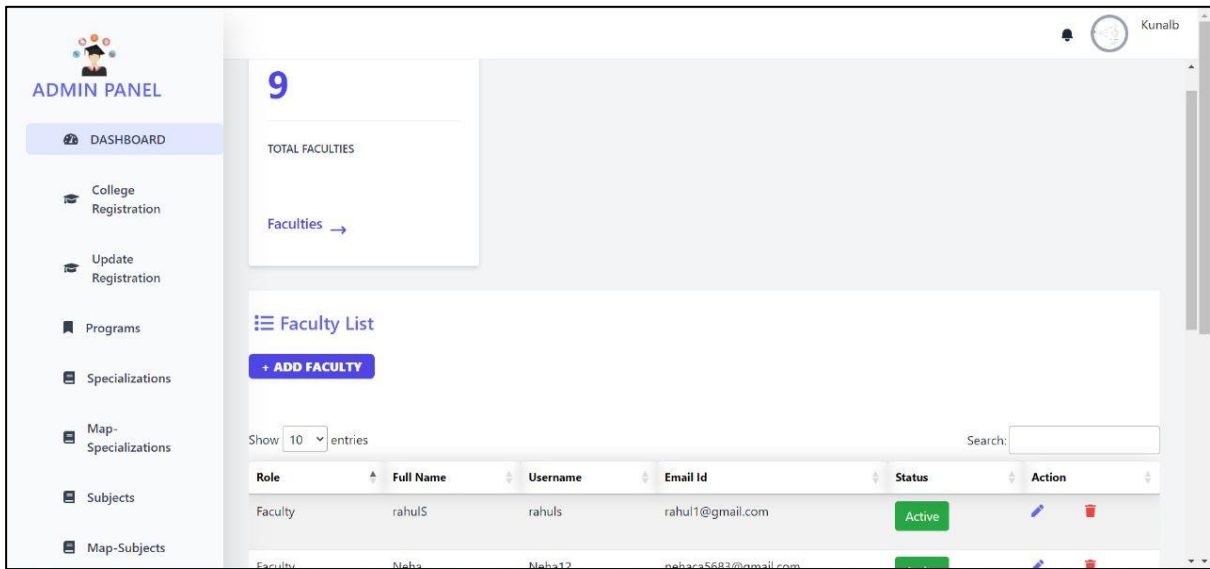
Figure 61: Admin Panel Faculty List Page
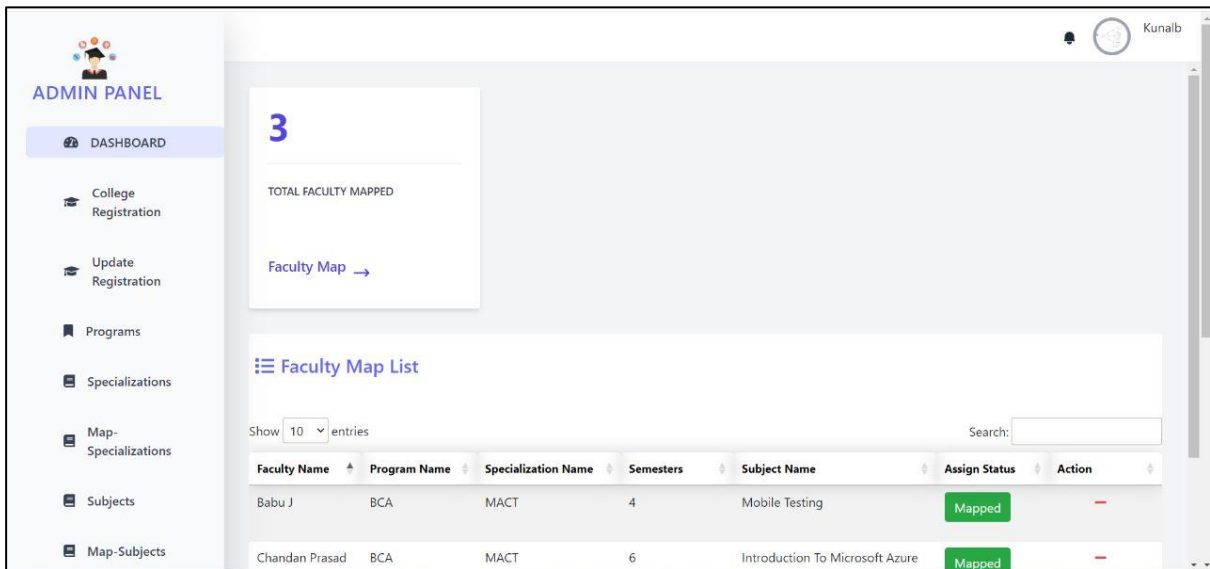
Figure 62: Admin Panel Map Faculty Page
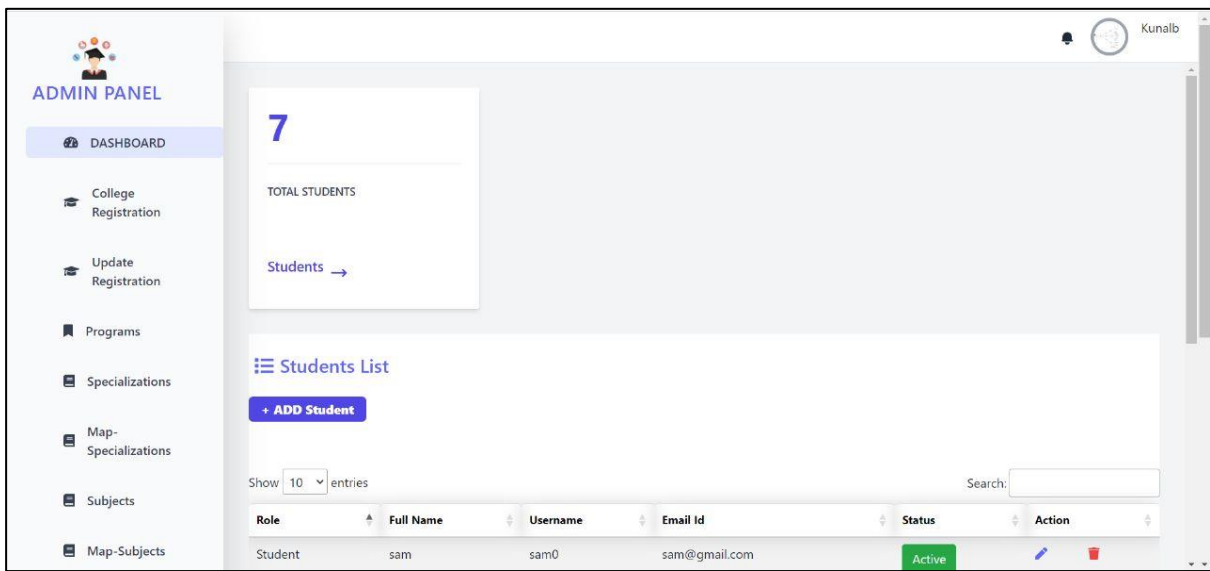
Figure 63: Admin Panel Student List Page
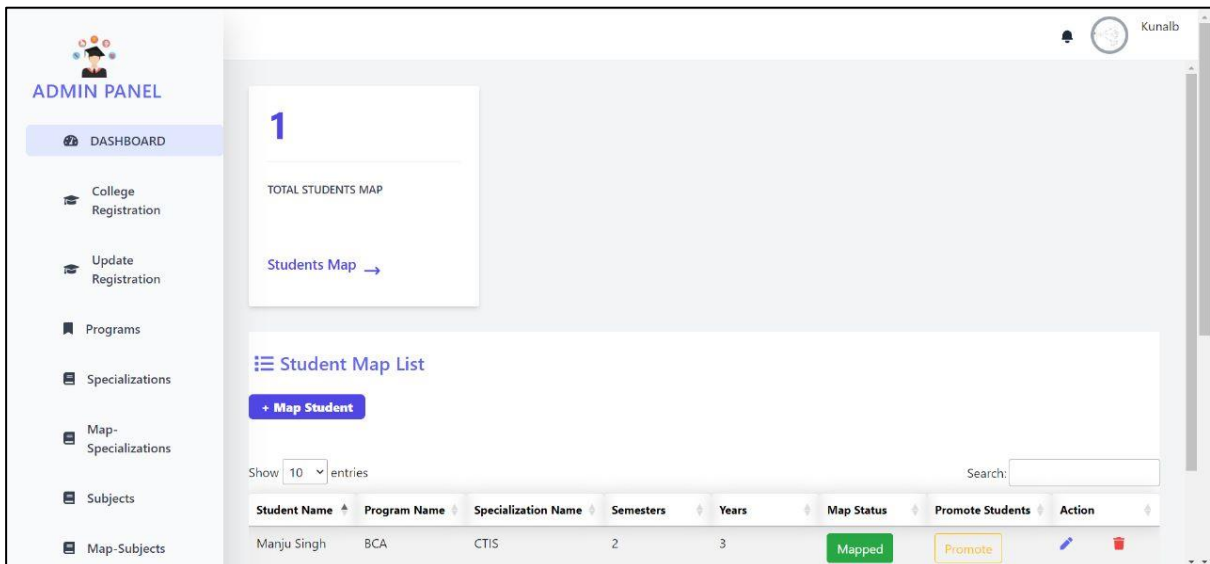
Figure 64: Admin Panel Map Student Page
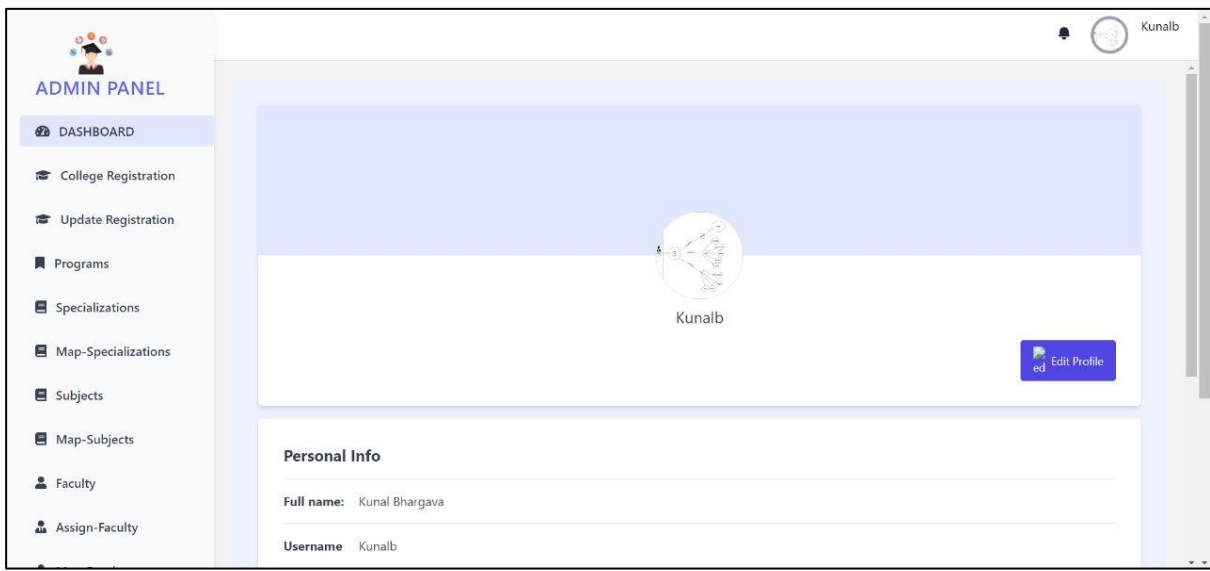
Figure 65: Admin Panel My Profile Page

3) Faculty Panel
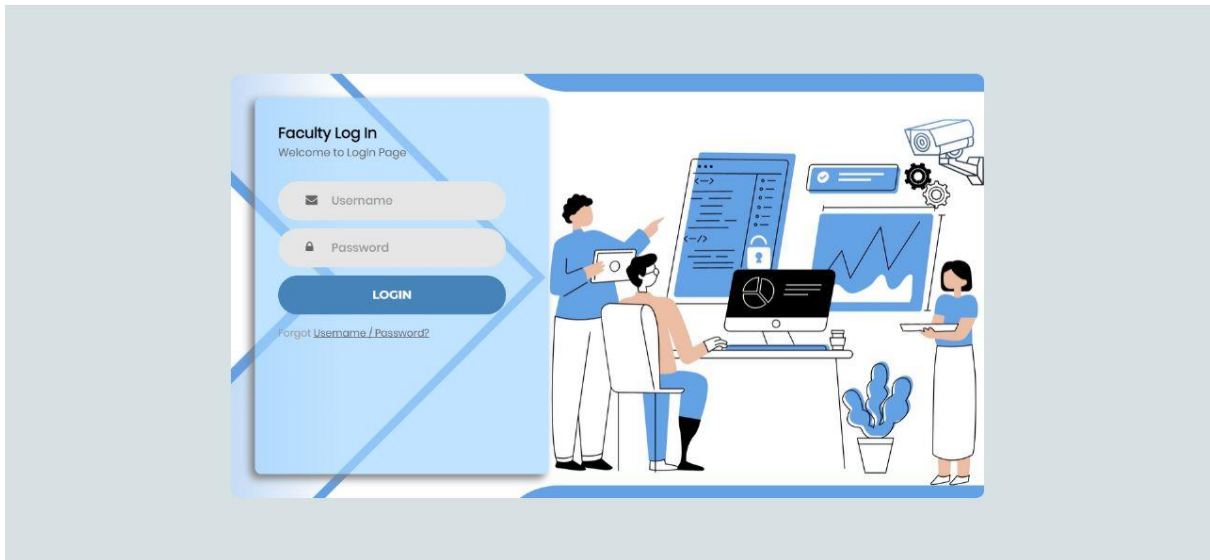
Figure 66: Faculty Panel Login Page
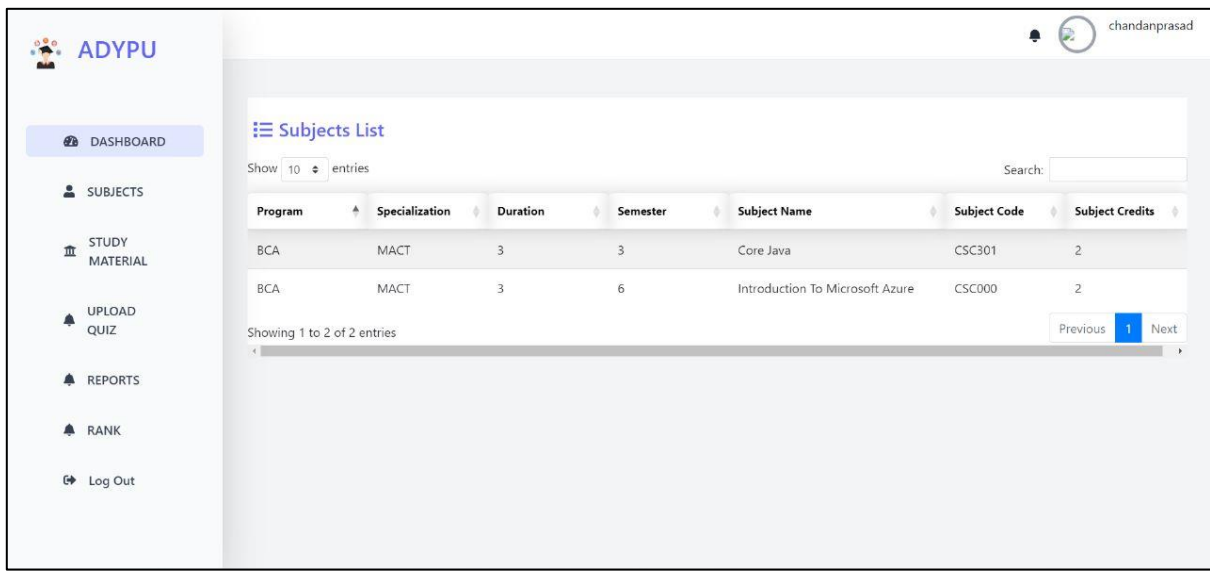
Figure 67: Faculty Panel Subject Allocated List Page
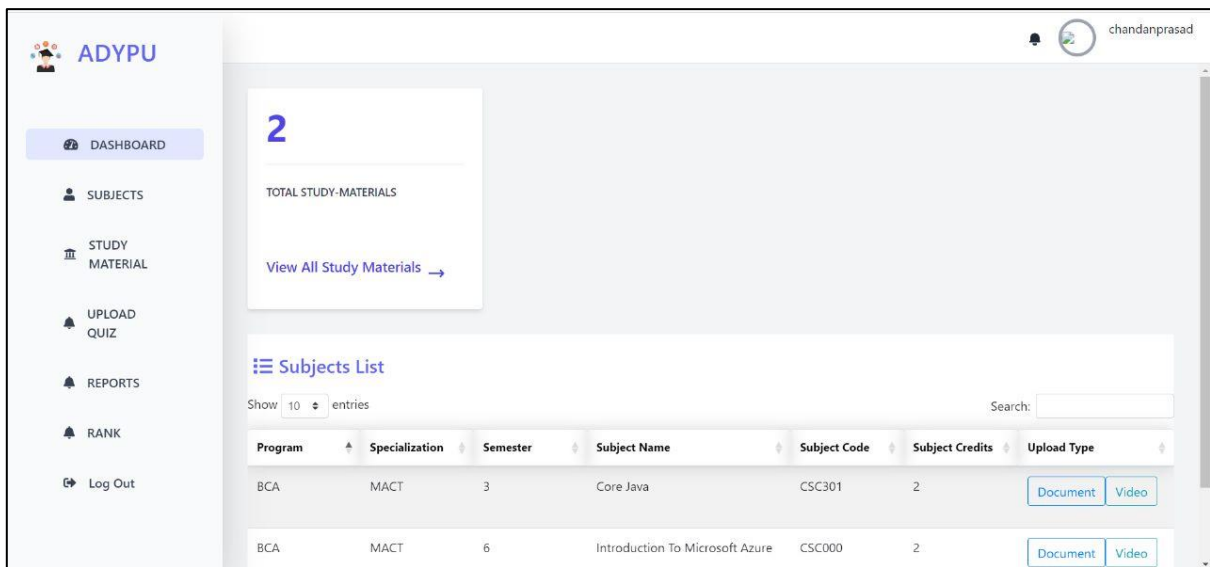
Figure 68: Faculty Panel Upload Study-Material Page
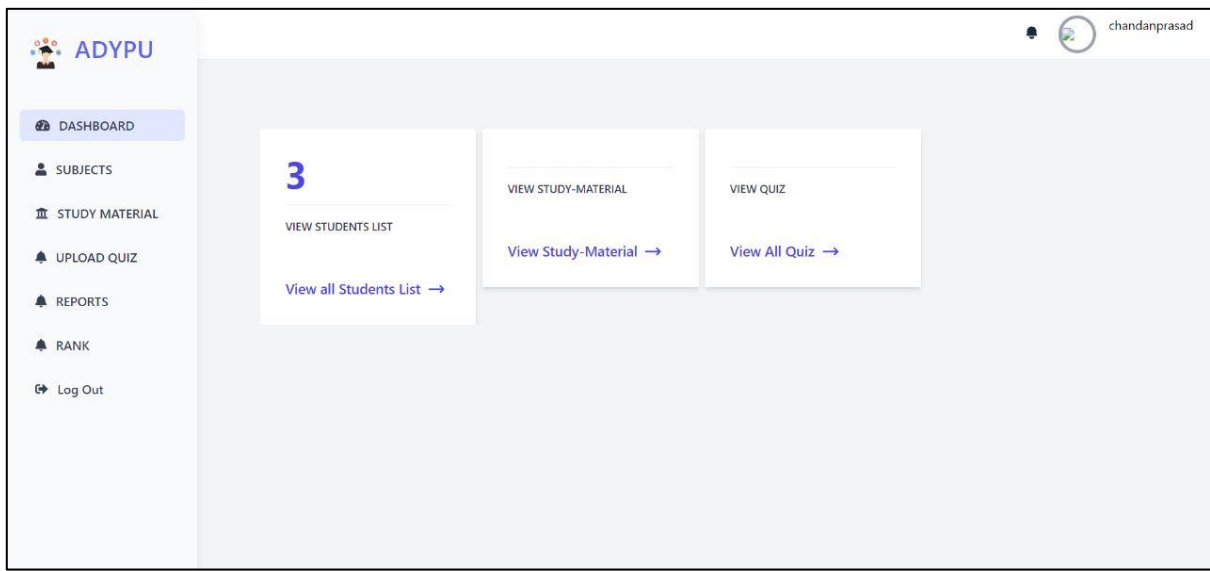
Figure 69: Faculty Panel View Report Page

4) Student Panel: -
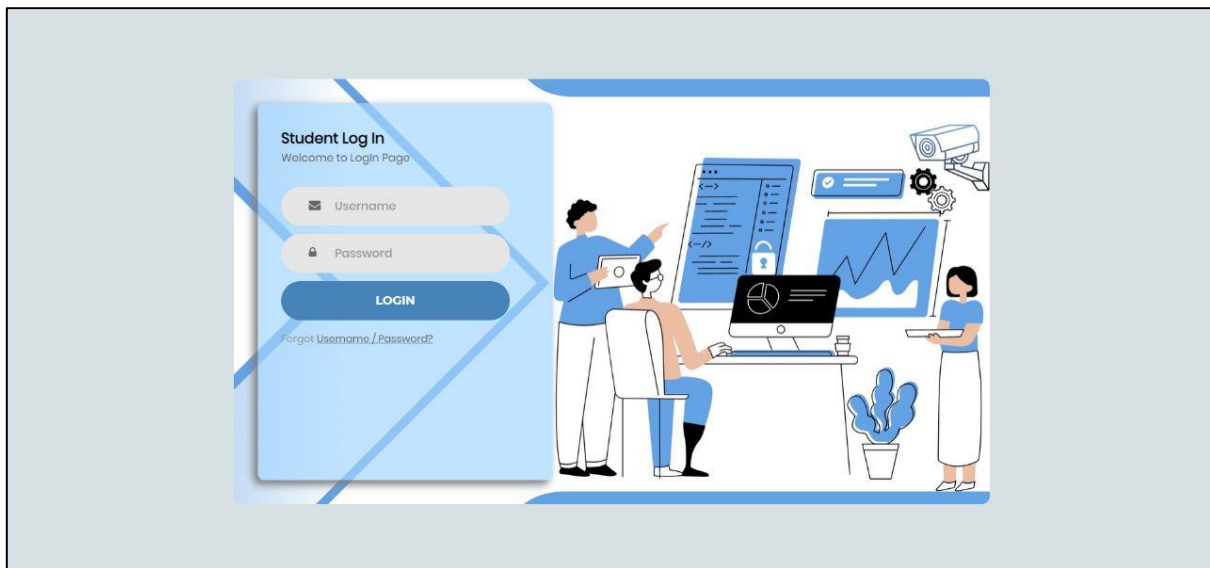
Figure 70: Student Panel Login Page
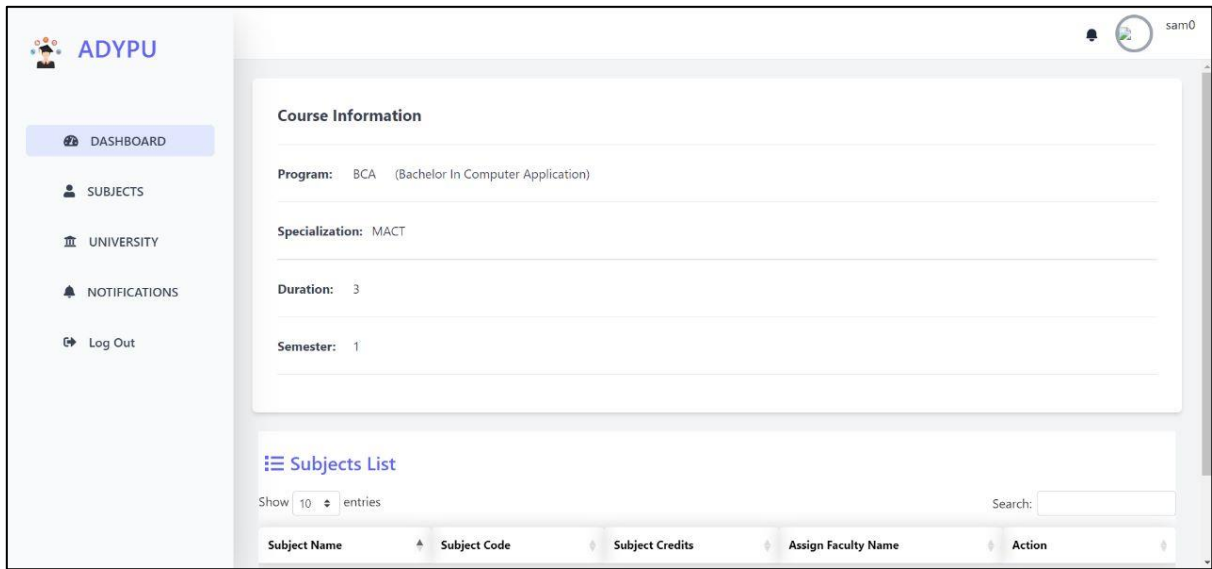
Figure 71: Student Panel Subject List Page

CHAPTER 7

SUMMARY AND CONCLUSION

Developers in the practise of software evolution and development must respond to numerous inquiries for proper development. The way applications are developed or designed now must be revolutionised. Today, everyone is eager to work in GUI environments since they make it simple to have collaborative sessions.

Acknowledge the direction of growth. This method enhances the readability, maintainability, inventiveness, conversion, and refactoring of the code.

In conclusion, the Generic Job Readiness System is an innovative approach to preparing job-seekers for the challenges of the modern workplace. Through a combination of training modules and assessments, individuals can acquire the skills necessary to succeed in a variety of industries. This research paper has explored the various components of the system, including its effectiveness, limitations, and potential for future development.

One of the key findings of this research is that the Generic Job Readiness System has the potential to be highly effective in improving job-seekers' skillsets. By providing a comprehensive suite of training modules, the system can address a wide range of job-related competencies, from communication and problem-solving to technical knowledge and industry-specific expertise. Furthermore, the system's assessments can help individuals identify areas for improvement and track their progress over time.

Despite its many strengths, the Generic Job Readiness System also has several limitations that must be addressed. For example, the system may not be suitable for all job-seekers, particularly those with unique skillsets or specialized career goals. Additionally, the cost of implementing the system may be prohibitive for some organizations.

Looking ahead, further research is needed to refine the Generic Job Readiness System and ensure its continued effectiveness. By continuing to invest in innovative training solutions like this, we can help individuals acquire the skills they need to succeed in a rapidly changing job market.

CHAPTER 8

FUTURE ENHANCEMENT SCOPE

This project will be carried out in such a way as to make it easier for many students to prepare for upcoming interviews. We conclude that a student can learn more effectively using the VAK (Visual, Auditory, Kinaesthetic) Learning Module based on the existing system and proposed system, which may lead to logic building, analytical intelligence, thinking & technical skills enhancement, and interview readiness.

Currently, this project is based on interview preparation, and we offer subjective exam preparations with a variety of functionalities. However, in the future, we can expand this project where we may offer live learning courses in this application, such as Zoom Meet and Microsoft Teams. One more thing we can do is work with programming platforms like CodeShef and many others to analyse platform results.

CHAPTER 9

ANNEXURE

ANNEXURE A: - PROJECT TEST PLAN

Super-Admin Panel

Testcase Id	Test Case Name	Test Case Description	Actual Output	Expected Output	Remark
TC_01	Login Link- https://sanjyotmankar03.000webhostapp.com/super-admin/index.php	Testing of login	successful	successful	Pass
TC_02	Dashboard Link- https://sanjyotmankar03.000webhostapp.com/super-admin/dashboard.php	Testing of Dashboard	successful	successful	pass
TC_03	My profile Link- https://sanjyotmankar03.000webhostapp.com/super-admin/updateprofile.php	Testing of My profile	successful	successful	pass
TC_04	Add admin Link- https://sanjyotmankar03.000webhostapp.com/super-admin/addadmin.php	Testing of Add Admin	successful	successful	pass
TC_05	edit admin Link- https://sanjyotmankar03.000webhostapp.com/super-admin/editadmin.php?users_id=1	Testing of edit admin	successful	successful	pass
TC_06	Edit college Link- https://sanjyotmankar03.000webhostapp.com/super-admin/allcollegesinfo.php	Testing of college	successful	successful	pass

Admin Panel

Testcase Id	Test Case Name	Test Case Description	Actual Output	Expected Output	Remark
TC_01	Login Link- https://sanjyotmankar03.000webhostapp.com/admin/index.php	Testing of login	successful	successful	Pass
TC_02	Dashboard Link- https://sanjyotmankar03.000webhostapp.com/admin/dashboard.php	Testing of Dashboard	successful	successful	pass
TC_03	My profile Link- https://sanjyotmankar03.000webhostapp.com/admin/updateprofile.php	Testing of My profile	successful	successful	pass
TC_04	Add admin Link- https://sanjyotmankar03.000webhostapp.com/admin/addadmin.php	Testing of Add Admin	successful	successful	pass
TC_05	edit admin Link- https://sanjyotmankar03.000webhostapp.com/admin/editadmin.php?users_id=1	Testing of edit admin	successful	successful	pass
TC_06	Edit college Link- https://sanjyotmankar03.000webhostapp.com/admin/allcollegesinfo.php	Testing of college	successful	successful	pass

Faculty Panel

Testcase Id	Test Case Name	Test Case Description	Actual Output	Expected Output	Remark
TC_01	Login Link- https://sanjyotmankar03.000webh ostapp.com/student/index.php	Testing of login	successful	successful	Pass
TC_02	Dashboard Link- https://sanjyotmankar03.000webh ostapp.com/student/studentdashbo ard.php	Testing of Dashboard	successful	successful	pass
TC_03	viewsubjects Link- https://sanjyotmankar03.000webh ostapp.com/student/viewsubjects. php	Testing of My viewsubjects	successful	successful	pass
TC_04	viewstudymaterial Link- https://sanjyotmankar03.000webh ostapp.com/student/viewstudymat erial.php	Testing of viewstudymaterial	successful	successful	pass
TC_05	viewquiz Link- https://sanjyotmankar03.000webh ostapp.com/student/viewquiz.php	Testing of viewquiz	successful	successful	pass
TC_06	myprofile.php Link- https://sanjyotmankar03.000webh ostapp.com/student/myprofile.php	Testing of myprofile.php	successful	successful	pass
TC_07	editprofile Link- https://sanjyotmankar03.000webh ostapp.com/student/editprofile.ph p	Testing of editprofile	successful	successful	pass
TC_07	viewstudymaterial0 Link- https://sanjyotmankar03.000webh ostapp.com/student/viewstudymat erial0.php	Testing of viewstudymaterial0	successful	successful	pass
TC_08	viewstudymaterial1 Link- https://sanjyotmankar03.000webh ostapp.com/student/viewstudymat erial1.php	Testing of viewstudymaterial1	successful	successful	pass

TC_09	viewleaderboard Link-https://sanjyotmankar03.000webhostapp.com/student/viewleaderboard.php	Testing of viewleaderboard	successful	successful	pass
TC_09	logout. Link-https://sanjyotmankar03.000webhostapp.com/student/logout.php	Testing of logout.	successful	successful	pass

Student Panel

Testcase Id	Test Case Name	Test Case Description	Actual Output	Expected Output	Remark
TC_01	Login Link-https://sanjyotmankar03.000webhostapp.com/faculty/index.php	Testing of login	successful	successful	Pass
TC_02	Dashboard Link-https://sanjyotmankar03.000webhostapp.com/faculty/facultydashboard.php	Testing of faculty Dashboard	successful	successful	pass
TC_03	viewsubjects Link-https://sanjyotmankar03.000webhostapp.com/faculty/viewsubjects.php	Testing of viewsubjects	successful	successful	pass
TC_04	viewuploadedstudymaterial Link-https://sanjyotmankar03.000webhostapp.com/faculty/viewuploadedstudymaterial.php	Testing of viewuploadedstudymaterial	successful	successful	pass
TC_05	/uploadstudymaterialDocument Link-https://sanjyotmankar03.000webhostapp.com/faculty/uploadstudymaterialDocument.php	Testing of uploadstudymaterialDocument	successful	successful	pass

TC_06	viewuploadedstudymaterialvideo Link- https://sanjyotmankar03.000webhostap p.com/faculty/viewuploadedstudymate rialviideo.php	Testing of viewuploadedstudymaterialvi deo	successf ul	successful	pass
TC_07	uploadquiz Link- https://sanjyotmankar03.000webhostap p.com/faculty/uploadquiz.php	Testing of uploadquiz	successf ul	successful	pass
TC_08	viewquiz Link- https://sanjyotmankar03.000webhostap p.com/faculty/viewquiz.php	Testing of viewquiz	successf ul	successful	pass
TC_09	viewleaderboard Link- https://sanjyotmankar03.000webhostap p.com/faculty/viewleaderboard.php	Testing of viewleaderboard	successf ul	successful	pass
TC_10	viewleaderboard Link- https://sanjyotmankar03.000webhostap p.com/student/viewleaderboard.php	Testing of viewleaderboard	successf ul	successful	pass
TC_11	logout. Link- https://sanjyotmankar03.000webhostap p.com/faculty/logout.php	Testing of logout.	successf ul	successful	pass

ANNEXURE B: - DISSERTATION PLANNER-GANTT CHART

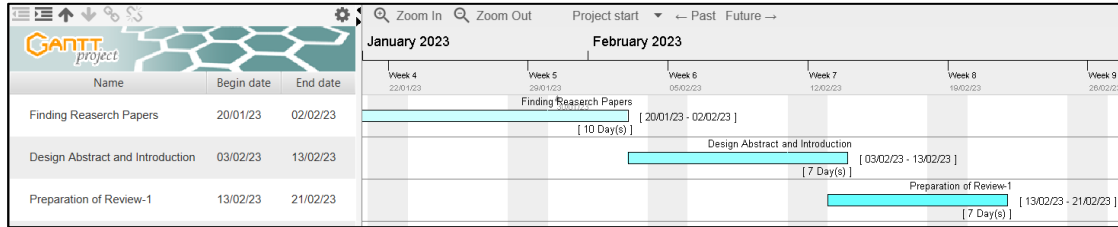## B: 1 Gantt chart of Project Development Phase 1

Figure 72: Gantt chart Phase-1

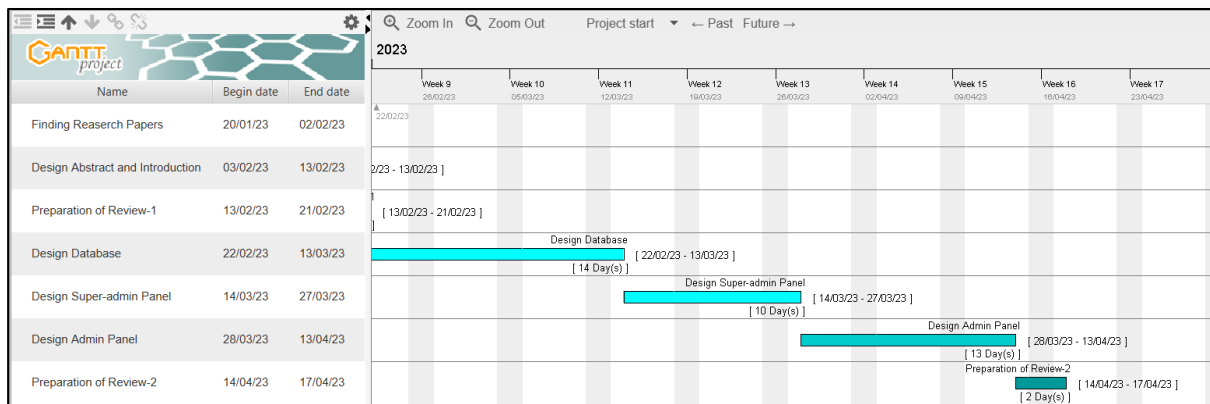## B: 2 Gantt chart of Project Development Phase 2

Figure 73: Gantt chart Phase-2

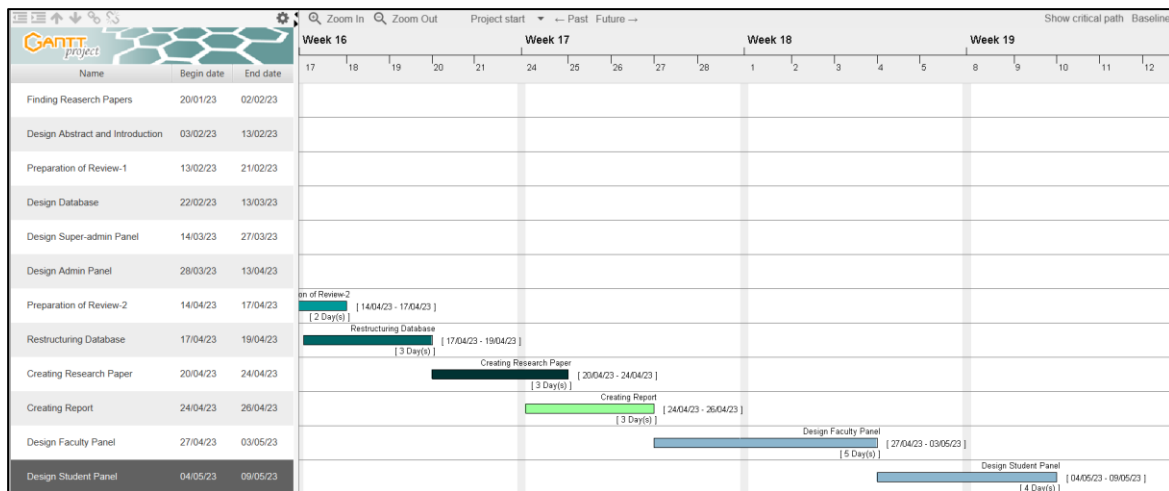## B: 3 Gantt chart of Project Development Phase 3

Figure 74: Gantt chart Phase-3

ANNEXURE C: BLACK BOX TESTING FOR GJRS

Design

Design is a critical stage in the development of any product, and it involves a range of activities aimed at creating a product that meets customer needs and expectations. In this job interview application, you have been asked to review design, black box testing, and corrective action in design. Here is a brief overview of these topics:

Design: Design is the process of creating a plan or blueprint for a product or system. It involves identifying customer needs and requirements, defining the product's specifications, and creating a detailed design that can be used to manufacture the product.

Black Box Test Case

1.   Login ()
2.   Dashboard ()
3.   My profile ()
4.   Add admin ()
5.   Collage info ()
6.   Add program ()
7.   Add specialization ()
8.   Add student ()
9.   Add faculty ()
10. Assign faculty ()
11. Map specialization ()
12. Map subjects ()
13. Map faculty ()
14. Map students ()
15.

Create new user profile: This test case checks the ability to create a new user profile and save the information entered by the user.

- Login with valid credentials: This test case verifies that the login functionality works correctly when valid credentials are provided.
- Track job applications: This test case checks that the system allows users to track the status of their job applications and receive notifications when there is a change in status.
- Take practice interview: This test case tests the ability to take a practice interview, which may include questions related to the user's industry or experience level.

- Receive interview feedback: This test case verifies that the system provides feedback on the user's performance in the practice interview and suggests areas for improvement.

Advantage of Black Box testing
1. Comprehensive Testing: With a white-box approach, developers can perform comprehensive testing of the application, including unit testing, integration testing, and system testing. They can examine each part of the application individually, identify any flaws or vulnerabilities, and address them before deployment.
2. Debugging: In the event of an issue or bug in the application, having access to the source code can make it much easier to diagnose and resolve the issue. Developers can examine the code and identify the exact location of the problem, speeding up the debugging process and reducing downtime.
3. Optimization: With a white-box approach, developers can identify areas of the application that can be optimized for performance, efficiency, and user experience. They can identify any bottlenecks or areas where resources are being underutilized, and make the necessary changes to improve the overall performance of the application.

ANNEXURE D: PROJECT WORKSTATION AND INSTALLATION REPORT

1. **Android Studio**
   a) Go to https//developer.android.com/studio?gclid
   b) select the download option on the" Download Android Studio"
   c) Double click on the downloaded file/setup "AndroidStudio-ide.exe".
   d) "Android Studio Setup" will appear on the screen and then after that click" Coming" to do.
   e) elect the factors that you want to install and click on the" Next" button.
   f) Now, select the position where you want to install the Android Studio setup.
   g) Dounle click on the icon " Android Studio" click the" Install" button to do.
   h) After installing we can open Android studio to build application

2. **Visual Studio Code**

   a) Go to https//code.visualstudio.com/download
   b) Download the Visual Studio Code set for Windows from the browser. Once it's downloaded, run the installer (VSCodeUserSetup-{interpretation}. exe). Also, run the train – it'll only take a nanosecond.
   c) Accept the given agreement and click "coming."
   d) After accepting all the requests press finish button. By dereliction, VS Code installs under" C druggies {username} AppData Local Programs Microsoft VS Code."
   e) Now Your Installation is done Now you can use VS law

ANNEXURE E: - MODULE DEVELOPMENT PLAN AND MODULE DESCRIPTION

Sr. No.	Modules	Period required project	Description of Module
1	Finding Research Papers	10 Days	Study the existing systems and related information related to the Interview Preparation System and ERP Designing as well as LMS Systems.
2	Design Abstract, Problem Statement, and Introduction	1 Week	After Reading all the research papers and collecting information create an abstract, problem statement and the introduction of the system.
3	Design Database	2 Weeks	Design backend (Database) For the project.
4	Design Super-admin Panel	10 Days	Design the 1st Panel of the project.
5	Design Admin Panel	13 Days	Design the 2nd Panel of the project.
6	Restructuring Database	3 Days	Restructuring the database according to the needful and restructure some new features in both admin and super-admin Panel.
7	Creating Research Paper	2 Days	Create a Research paper to publish it on online journal.
8	Creating Report	3 Days	Creating a report on the project.
9	Unit Testing	3 Week	Execution of unit test case of Workspace, Project Type, Language, Database with DND, ASCG and GBL
10	Integration Testing	3 Week	Execute Test Case of Integration part.
11	Performance Testing	3 Week	Analysis and measure of performance of system.
12	Result Analysis	3 Week	Analysis of system result

ANNEXURE F: - WHITE-BOX TEST PLAN

White-Box Test Plan

- Full Name
- Email
- Username
- Phone
- Password
- Edit
- Delete
- Full name
- College Name
- College Address
- College Logo
- Update College Logo
- Program Name
- Program Description
- Program Duration
- No Of Semesters
- Specialization Name
- Specialization Description
- Specialization Description
- Subject Credits
- Subject Description
- Subject Code
- Users ID
- Full name
- Email ID
- Phone No
- Status
- Status

- Select Program
- Select Specialization

1. Identify the key components of the application, such as the user interface, database, and backend logic.
2. Review the source code to gain an understanding of how each component works.
3. Determine the critical paths through the application, such as the login process or the submission of a job application.
4. Create a set of test cases that exercise each component and critical path.
5. Define the criteria for passing each test case, such as expected outputs or error messages.
6. Document any assumptions made during the testing process, such as the use of specific hardware or software configurations.
7. Identify any potential risks or issues that could arise during testing.

Advantage of white of box testing

1. Comprehensive testing: With access to the application's source code and internal structure, developers can perform comprehensive testing of the application, including unit testing, integration testing, and system testing. This ensures that all aspects of the application are thoroughly tested and any bugs or issues are identified and addressed before deployment.

2. Improved debugging: The ability to examine the source code and internal workings of the application can make it easier to diagnose and resolve any issues or bugs that arise during testing or use. This can speed up the debugging process and reduce the amount of time needed to get the application back up and running.

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