

MINI PROJECT REPORT

ON

SPPU SOLUTION REPOSITORY SYSTEM

BY

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Course: MCA Sem.: I



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ABSTRACT

As the students in today's world are been the stars of education so the drivers of them are the teachers and institutions. The education are now-a-days been provided by school, college and universities. There are different boards who conduct the examination like state, central and international. So, there are many people who support the whole cycle.

So, education plays a major role in every person's life. So, students are evaluated by examination on what they studied. So, the examination is a major challenge for students and teachers. So the proper if resources have been provided the students and teachers will not face challenge like for providing proper solution , answering paper and checking paper.

So if a proper question paper is been generated and questions are there no problems will be faced by students, teachers as well as other supporters.

Keywords: Examination, Paper Generation and Management

ACKNOWLEDGEMENT

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CHAPTER 1 : INTRODUCTION

In today's world, technology is been used everywhere, people are also growing and adapting to technology. So, technology needs to be inculcated in the Education System. Now, the question arises does the inculcation of technology will solve the issues in the current education system?

The answer to this is YES but not fully or completely, but to a certain extent this will definitely solve the issue. The teachers, students, and all other stakeholders will be beneficial from using technology in education.

So, our system is also helping students as well as teachers by providing solutions to the university's asked questions. Students will get the university's question sets with solutions on one platform through this system.

1.1 Company Profile

IICMR stands amongst the **top MCA Institutes in Pune** that offer an intake of 120 students in MCA. Ours is NAAC Accredited programme. The Director of the MCA department is Dr. Deepali Sawai, who possesses 25 years of experience in the industry and academic field. The department professors have experience of at least 15 years. Their MCA programme is a skill-based programme that focuses on providing research-based knowledge by restructuring the academic ambiance.

Their MCA Programme involves evolving areas of Information Technology. We aim to develop competent professionals for the corporate and the software industry sector. Our curriculum is world-class that involves both a theoretical and practical approach from computer software development to mathematical computing, software technology, communication and networking applications. We have ICT enabled classrooms, GD Hall, seminar rooms, ERP and MOODLE Learning Management System for the courses.

Their MCA programme academic calendar includes schedule for psychometric tests, teaching learning activities (bridge course, capsule program, remedial classes), exams and result publication, mentoring, projects, co-curricular events, EEP & Pre-Placement activities, Extra-curricular activities. We train students for various international

certifications like AWS, Java, Microsoft, ISTQB, Data Science, Oracle, and Digital Marketing. They are trained in modern technologies like IoT, Data Science, and other related

IT industry technologies. IICMR has made its reputation as one of the **best colleges for MCA in Pune** with its innovative teaching and learning approach.

1.2 Existing System and Need for System

Existing system is a manual base system.

- For offline - reference manual are available.
- For online - No such system is available, except at college level.

Searching for the right answer in current system is time consuming.

Need of system:

- This system is designed to efficiently give the solution/answers.
- It is convenient for user to get solution/guidance.
- Reduces time to find proper solution.
- It is more accessible mode for extra study.
- The solutions provided will be from designated people/industry experts.

1.3 Scope of Work

- To have accessibility of questions and answers at one source.
- To get specific details about how to write solution for a specific question for given marks.

1.4 Operating Environment - Hardware and Software

- Hardware: -
 - Windows 7
 - 4Gb RAM
 - i3 7th Gen
- Software: -
 - VS Code
 - Eclipse
 - XAMPP

1.5 Detail Description of Technology Used

JDK

The Java Development Kit (JDK) is a cross-platformed software development environment that offers a collection of tools and libraries necessary for developing Java-based software applications and applets. It is a core package used in Java, along with the [JVM \(Java Virtual Machine\)](#) and the JRE (Java Runtime Environment).

Beginners often get confused with JRE and JDK, if you are only interested in running Java programs on your machine then you can easily do it using Java Runtime Environment. However, if you would like to develop a Java-based software application then along with JRE you may need some additional necessary tools, which is called JDK.

XAMPP

XAMPP is one of the widely used cross-platform web servers, which helps developers to create and test their programs on a local webserver. It was developed by the **Apache Friends**, and its native source code can be revised or modified by the audience. It consists of **Apache HTTP Server**,

MariaDB, and interpreter for the different programming languages like PHP and Perl. It is available in 11 languages and supported by different platforms such as the IA-32 package of Windows & x64 package of macOS and Linux.

XAMPP is an abbreviation where *X stands for Cross-Platform, A stands for Apache, M stands for [MYSQL](#), and the Ps stand for PHP and Perl*, respectively. It is an open-source package of web solutions that includes Apache distribution for many servers and command-line executables along with modules such as Apache server, [MariaDB](#), PHP, and Perl.

AMPP helps a local host or server to test its website and clients via computers and laptops before releasing it to the main server. It is a platform that furnishes a suitable environment to test and verify the working of projects based on Apache, Perl, MySQL database, and PHP through the system of the host itself. Among these technologies, [Perl](#) is a programming language used for web development, [PHP](#) is a backend scripting language, and MariaDB is the most vividly used database developed by MySQL. The detailed description of these components is given below.

Eclipse

The Eclipse is defined as platform for developing the computer-based applications using various programming language like JAVA, Python, C/C++, Ruby and many more. The Eclipse is IDE (Integrated development kit) and mainly JAVA based programming is done in this platform. There are several plug-ins and other additional plug-ins can be installed in the platform. The advanced client applications can be developed. The JDT is used for doing the programming in Eclipse IDE

It provides the workspace in which user can bundle all the projects in single workspace. In that single workspace the source files, artifacts, images all can be stored in the workspace. The user has the complete functionality to select the name of workspace and manage the projects in single workspace.

Servlet

Servlet technology is used to create a web application (resides at server side and generates a dynamic web page).

Servlet technology is robust and scalable because of java language. Before Servlet, CGI (Common Gateway Interface) scripting language was common as a server-side programming language.

There are many interfaces and classes in the Servlet API such as Servlet, GenericServlet, HttpServlet, ServletRequest, ServletResponse, etc.

CHAPTER 2 : PROPOSED SYSTEM

2.1 Proposed System

- Proposed of a system is used to provide solution of previous university papers.
- In this modern world e-book has become a basic requirement for the candidates to appear and prepare for their universities exams.
- In this project we are proposing a model system for smart solution provider of universities previous papers by faculty/teachers.
- The system is easy to understand, easy to view solutions of questions. Student can also download solutions given by teachers/experts.
- The mechanism behind this system is that to provide solutions of universities previous papers as per the weightage of particular question.
- It provides Data security by providing authentication for the user of the system.
- All records can be accessed exclusively by the administrator.
- The administrator has the rights to modify any record.
- Increased end user productivity because of flexible data access
- Graphically oriented, highly interactive user interface.
- Improved access to information because of networking.
- Easier maintenance of application & data.
- It reduces the burden of staff.

SPPU SOLUTION REPOSITORY SYSTEM

- It is helpful to save time.
- This user friendly interacts.
- The proposed system, besides the regular management system, has various additional facilities to increase the functionality of the system.

2.2 Objectives of System

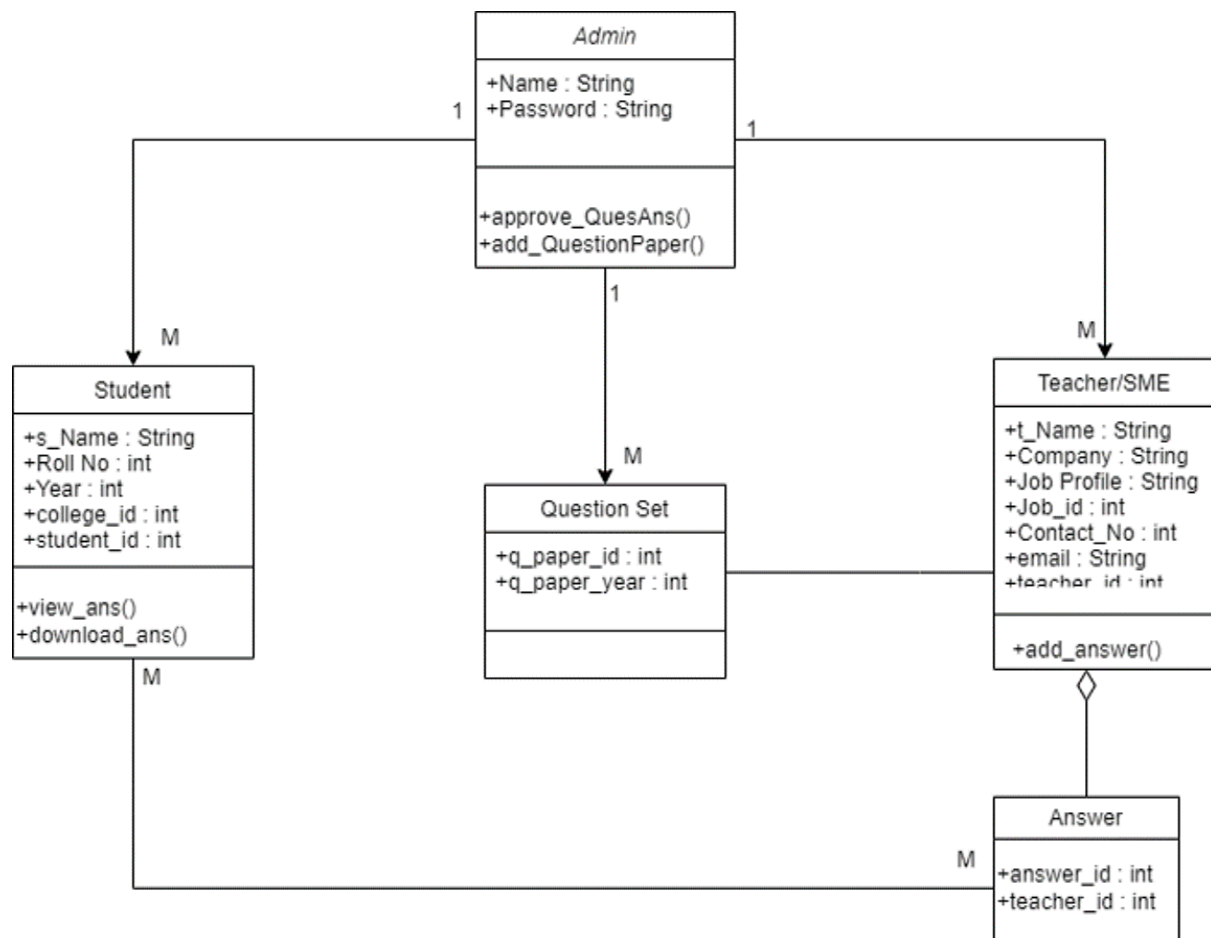
- To create a single platform for MCA students to get all the previous years' papers and their solutions.
- To help students get trustworthy solution directly from various professor belonging to different colleges.
- To help students get the idea of how exactly to answer a particular question and what exactly are professors are looking for as an answer .
- To help professor to reach all their students as well as students from other colleges, which will help professors to create an influence over students.

2.3 User Requirements

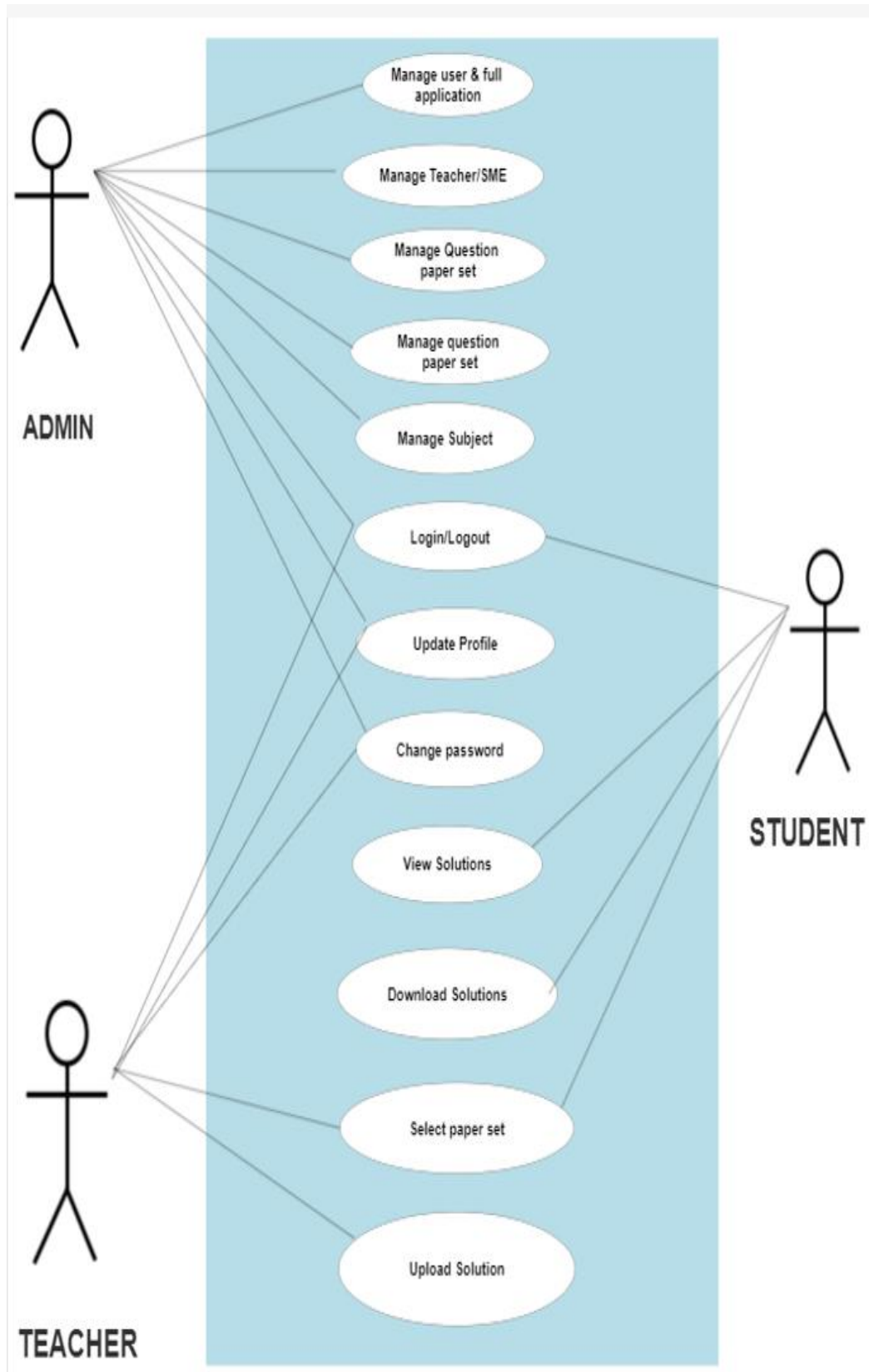
- The web application also helps to check/search the previous universities question papers.
- Students/faculty should be able to login to the system through the first page of system.
- Student and Faculty member can also view question paper.
- Student can view and download solutions.
- Different access level for different users for security point of view.
- There will be a separate page for subjects along with respective subject c

CHAPTER 3 : ANALYSIS & DESIGN

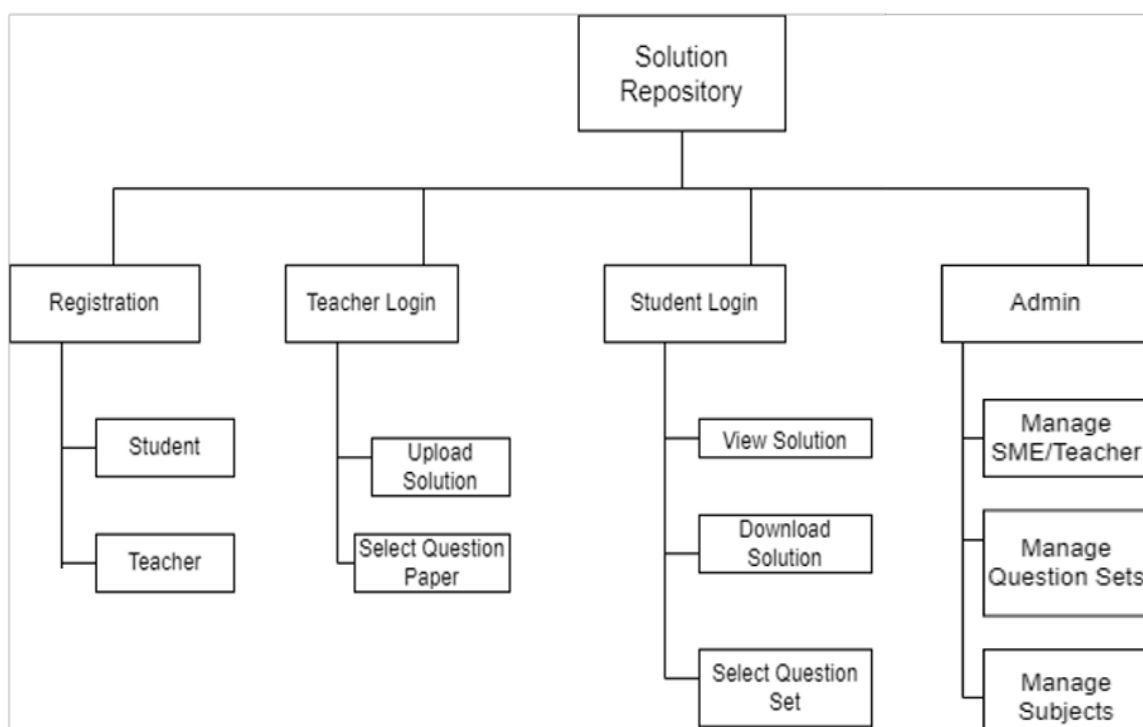
3.1 Class Diagram



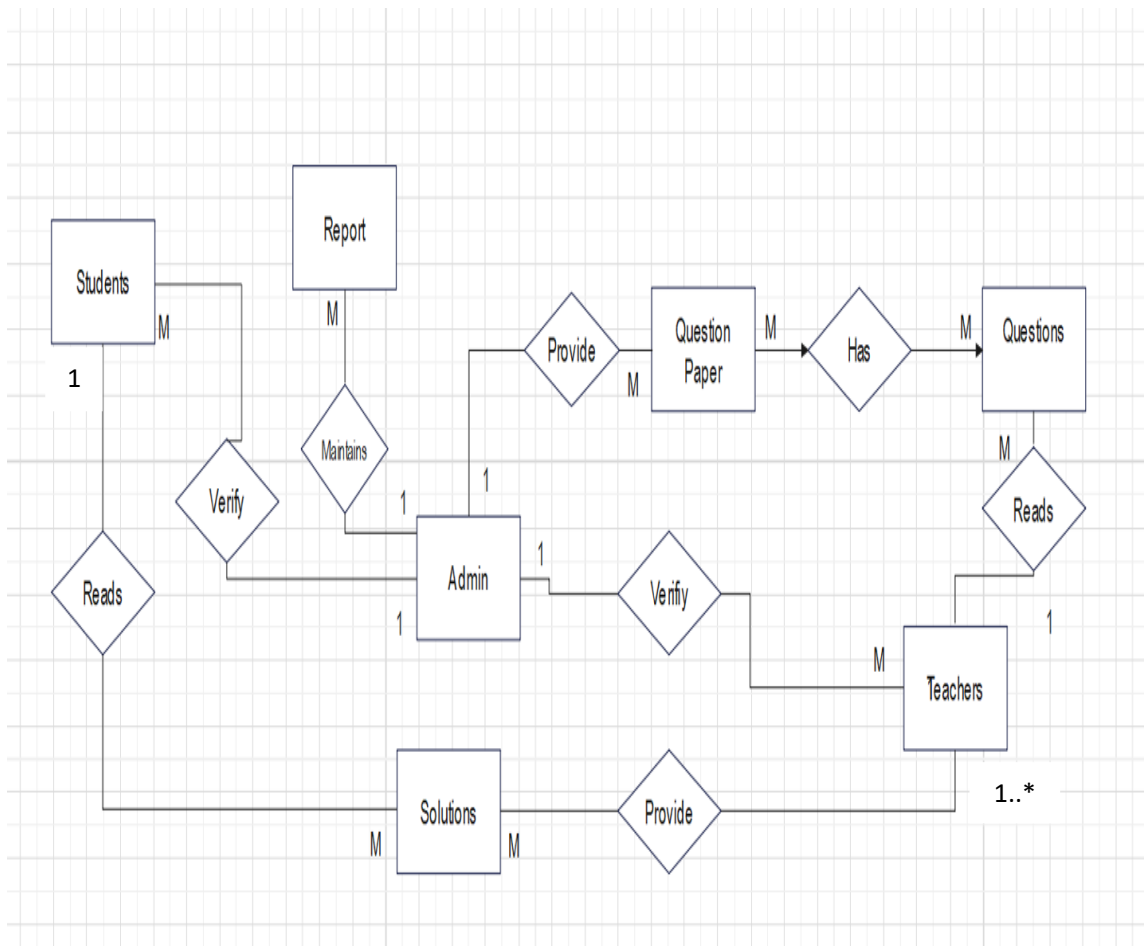
3.2 Use Case Diagrams



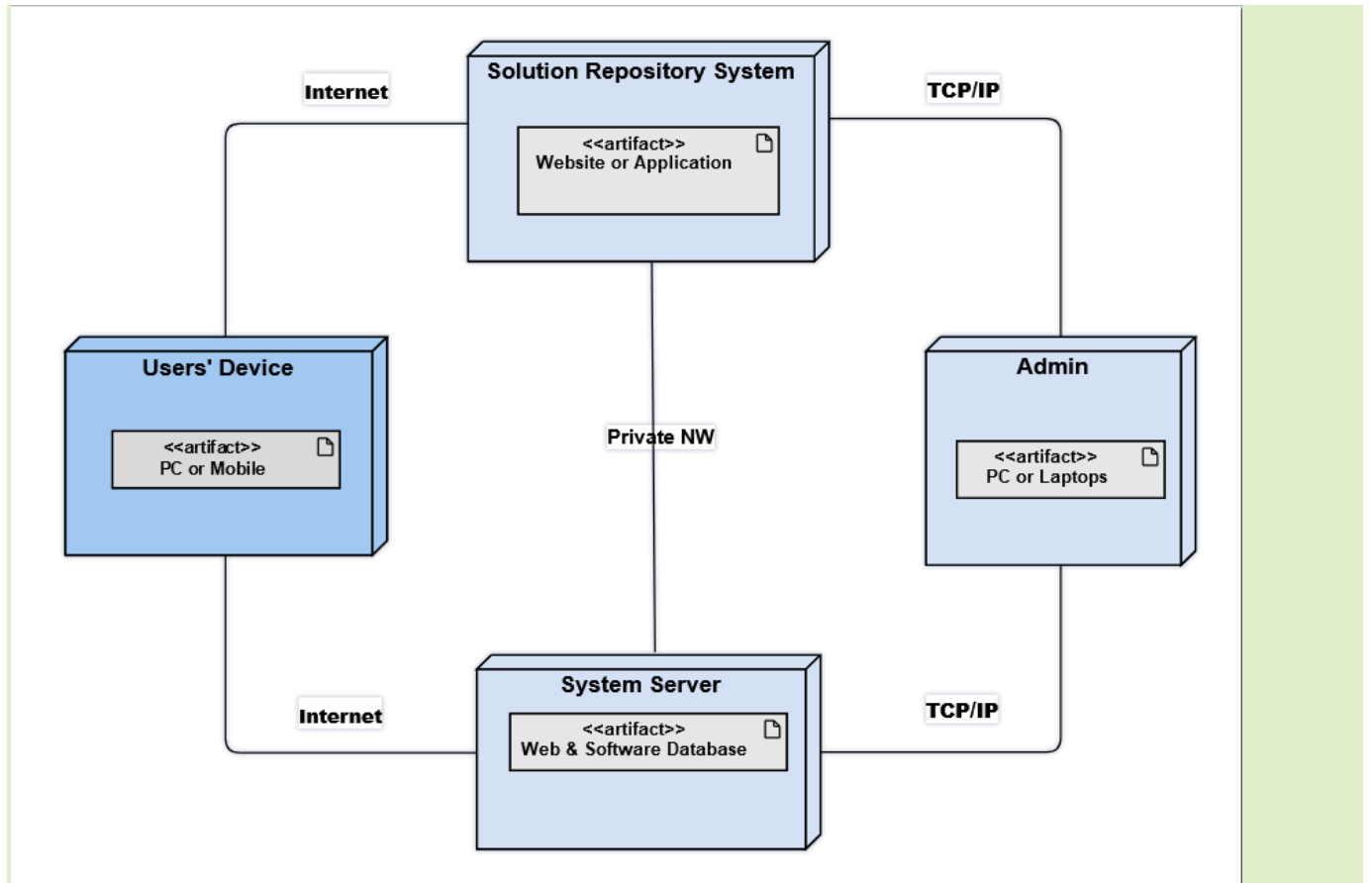
3.3 Module Hierarchy Diagram



3.4 Entity Relationship Diagram



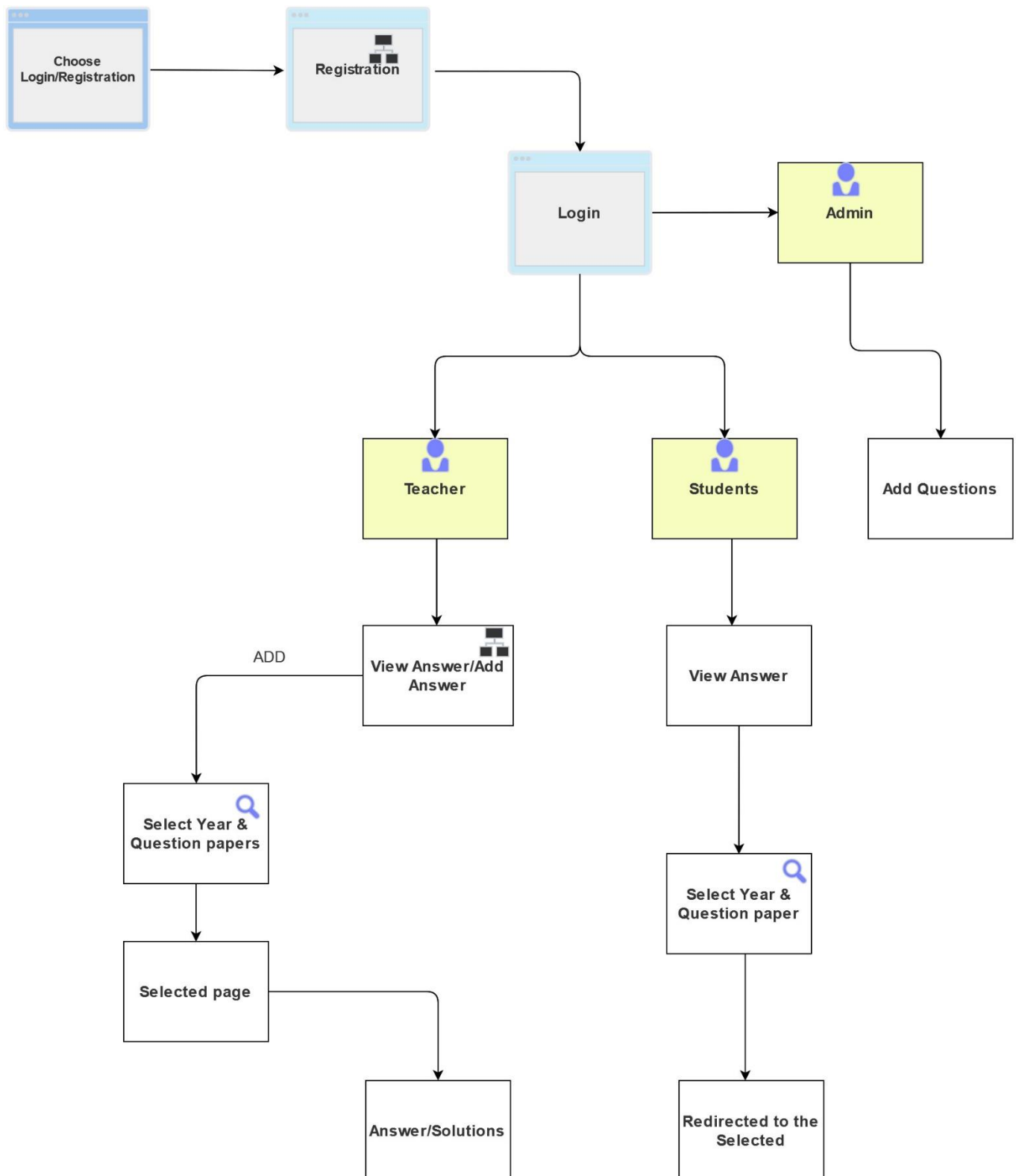
3.5 Deployment Diagram



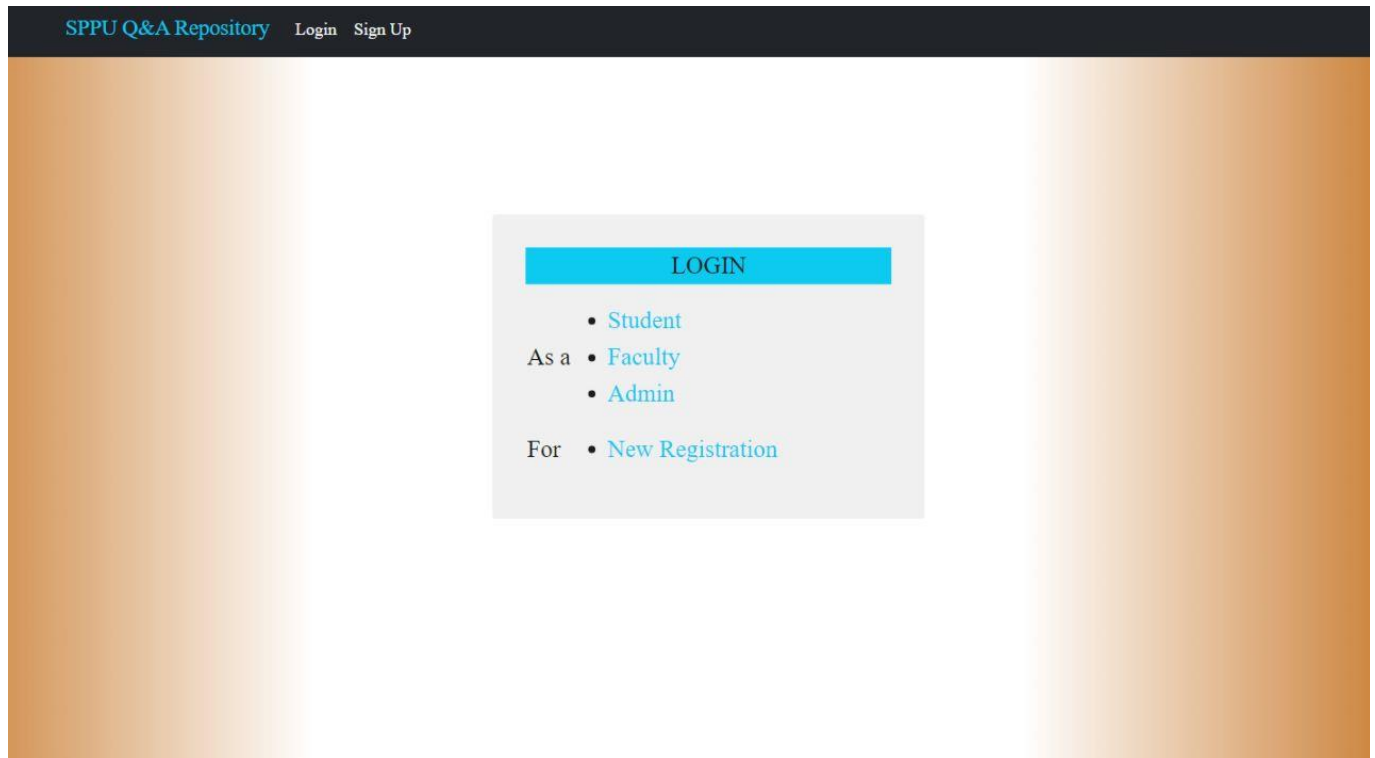
3.6. Module Specification

- **REGISTRATION:** Student and Faculty Member can register to system this module. After registration student/teacher can login to system by entering login id and password.
- **STUDENT:** The student should register with the system and will view question paper as well as solutions of it.
- **TEACHER :**The teacher should register with the system and will view and add solutions
- **ADMIN:** Admin will look after the system maintenance, managing the data and verify details.
- **SOLUTION:**This module will contain solutions of previous universities paper by teacher which student can view and refer for their preparation.
- **QUESTION PAPER:**This module will contain previous question papers of universities.

3.7 Web Site Map Diagram



3.8 User Interface Design



The image shows a web page for the SPPU Q&A Repository. The header is dark blue with the text "SPPU Q&A Repository" in white, and "Login" and "Sign Up" in light blue. The main content area has a light blue background. In the center, there is a white box with a blue "LOGIN" button. Below the button, there are two sections: "As a" and "For". The "As a" section has three radio buttons: "Student" (selected), "Faculty", and "Admin". The "For" section has one radio button: "New Registration".

SPPU Q&A Repository Login Sign Up

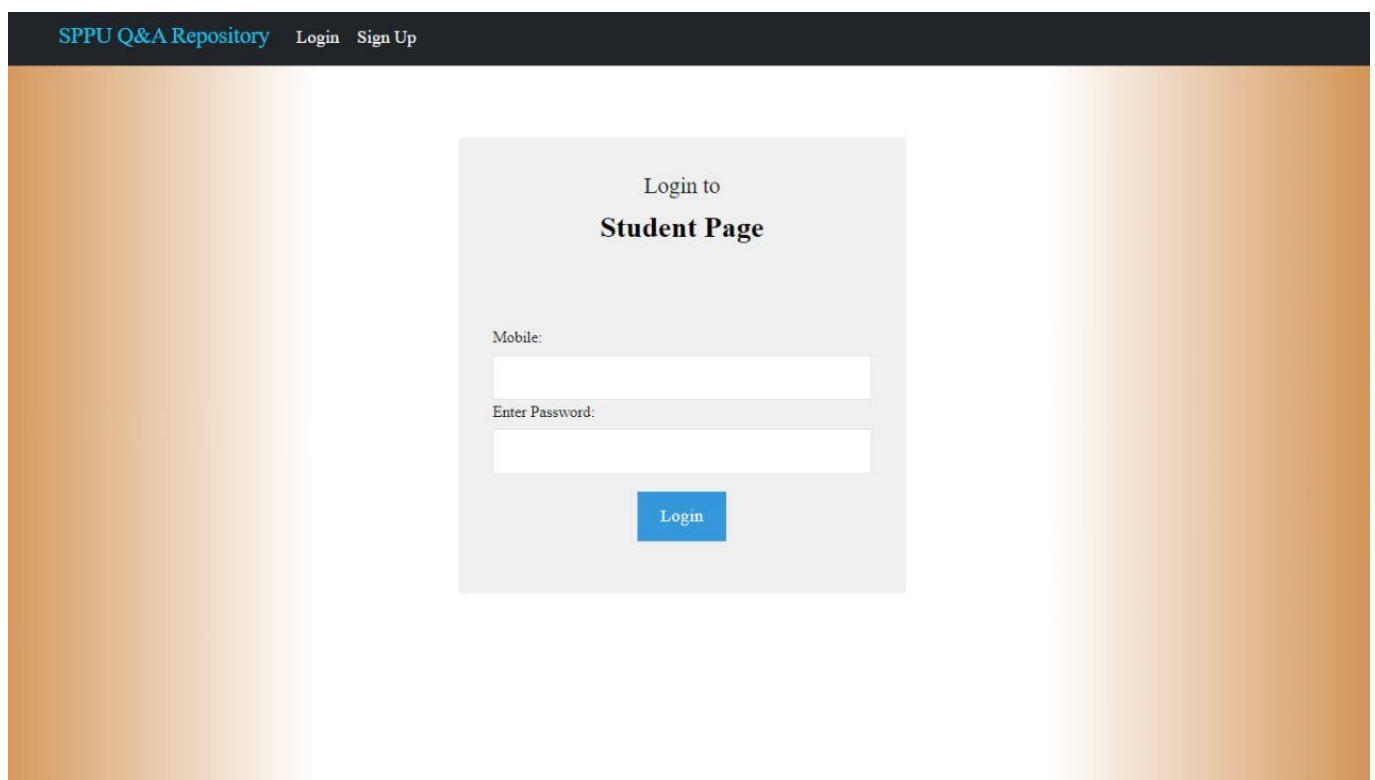
LOGIN

As a

- Student
- Faculty
- Admin

For

- New Registration



The image shows a web page for the SPPU Q&A Repository, specifically the "Student Page" login form. The header is dark blue with the text "SPPU Q&A Repository" in white, and "Login" and "Sign Up" in light blue. The main content area has a light blue background. In the center, there is a white box with the title "Login to Student Page". Below the title, there are two input fields: "Mobile:" and "Enter Password:". Below the input fields, there is a blue "Login" button.

SPPU Q&A Repository Login Sign Up

Login to
Student Page

Mobile:

Enter Password:

Login



Register to
Q&A Repository

First Name

Last Name

Mobile No.

E-mail

Choose user type:

Select 



Password

Confirm Password


Register

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3.9 Table specifications


	#	Name	Type
<input type="checkbox"/>	1	Stu_Id 	int(5)
<input type="checkbox"/>	2	First_name	varchar(10)
<input type="checkbox"/>	3	Last_name	varchar(10)
<input type="checkbox"/>	4	mobile 	varchar(10)
<input type="checkbox"/>	5	email	varchar(50)
<input type="checkbox"/>	6	password	varchar(10)

STUDENT TABLE


	#	Name	Type
<input type="checkbox"/>	1	A_ID 	int(5)
<input type="checkbox"/>	2	Name	varchar(20)
<input type="checkbox"/>	3	mobile	varchar(10)
<input type="checkbox"/>	4	Password	varchar(10)

ADMIN TABLE

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	#	Name	Type
<input type="checkbox"/>	1	Q_Id 	int(5)
<input type="checkbox"/>	2	Question	varchar(1000)
<input type="checkbox"/>	3	Subject	varchar(15)
<input type="checkbox"/>	4	Year	int(4)
<input type="checkbox"/>	5	Winter/Summer	tinyint(1)

QUESTION TABLE

	#	Name	Type
<input type="checkbox"/>	1	F_id 	int(5)
<input type="checkbox"/>	2	First_name	varchar(10)
<input type="checkbox"/>	3	Last_name	varchar(10)
<input type="checkbox"/>	4	mobile	varchar(10)
<input type="checkbox"/>	5	email	varchar(50)
<input type="checkbox"/>	6	password	varchar(10)

FACULTY MEMBER TABLE

	#	Name	Type
<input type="checkbox"/>	1	Q_Id	int(5)
<input type="checkbox"/>	2	F_Id	int(5)
<input type="checkbox"/>	3	Answer	varchar(3000)

ANSWER TABLE

3.10 Test Procedures and Implementation

The steps involved during Unit testing are as follows:

- a) Preparation of the test cases.
- b) Preparation of the possible test data with all the validation checks.
- c) Complete code review of the module.
- d) Actual testing done manually.
- e) Modifications done for the errors found during testing.
- f) Prepared the test result scripts.

The unit testing done included the testing of the following items:

- 1. Functionality of the entire module/forms.
- 2. Validations for user input.
- 3. Checking of the Coding standards to be maintained during coding.
- 4. Testing the module with all the possible test data.
- 5. Testing of the functionality involving all type of calculations etc.
- 6. Commenting standard in the source files

Drawbacks and Limitations

- Challenges in Technology Adoption
- Infrastructural Barriers.
- Difficulty in uploading long-answer type.
- Solutions might varies teacher by teachers.
- Solutions might have printing/writing mistakes.

Proposed Enhancements

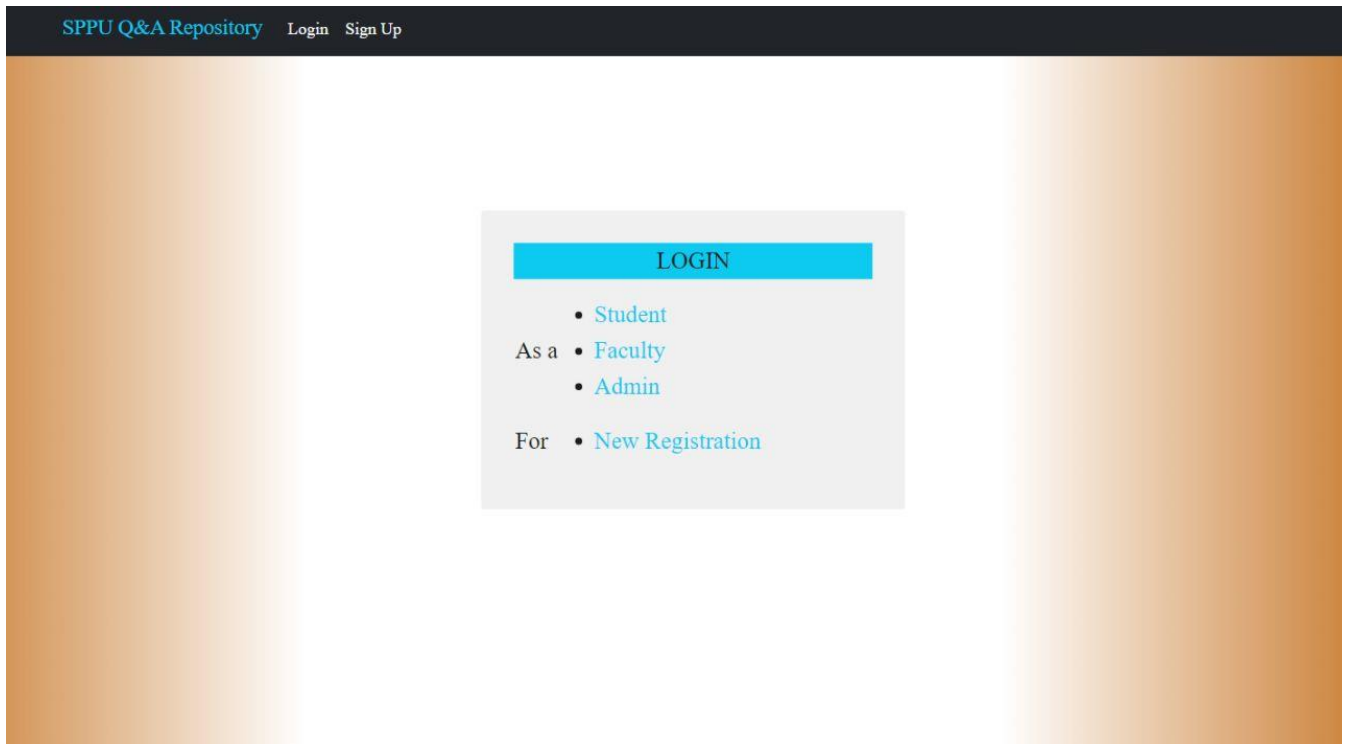
- Marketing and hosting the App on the large platform.
- We will like to add a notes section also so that student can easily get the notes to prepare for their universities as well as college exams.
- We will like to add mock test papers to check the preparation of a students.
- We will also like to add video sessions from experts for better understanding.

Bibliography

- <https://www.youtube.com>
- www.google.com
- www.w3school.com
- <https://dev.mysql.com>

ANNEXURES:

USER INTERFACE SCREENS



SPPU SOLUTION REPOSITORY SYSTEM

[SPPU Q&A Repository](#) [Login](#) [Sign Up](#)

Login to Student Page

Mobile:

Enter Password:

Login



Register to
Q&A Repository

First Name

Last Name

Mobile No.

E-mail

Choose user type:

Select 

Password

Confirm Password

Register

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OUTPUT REPORTS WITH DATA

The screenshot displays the phpMyAdmin web interface. The left sidebar shows a database structure with 'qanda' selected. The main panel shows the 'answers' table with 10 rows. The query 'SELECT * FROM `answers`' is executed, showing rows 0-9. The table has columns 'Q_Id', 'F_Id', and 'Answer'. The data is as follows:

Q_Id	F_Id	Answer
6	5	The RequestDispatcher interface provides the facil...
2	5	The wrapper class in Java provides the mechanism t...
17	4	Thread synchronization in java is a way of program...
15	1	The File class is Java's representation of a fil...
12	4	The this keyword refers to the current object in a...
4	5	Action listeners are probably the easiest to use and ...
10	5	What is the difference between a constructor and a...
14	4	A thread goes through various stages in its life cycle...
8	1	The servlet life cycle is made up of four stages: ...
14	1	A thread goes through various stages in its life cycle...

The interface also includes a 'Query results operations' section with a 'Console' tab and a 'Show all' button at the bottom right.

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SAMPLE PROGRAM CODE

```
<!doctype html>

<html lang="en">

  <head lang="en">

    <meta charset="utf-8">

    <meta name="viewport" content="width=device-width, initial-scale=1">

    <link      href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/css/bootstrap.min.css"
rel="stylesheet"                                     integrity="sha384-
rbsA2VBKQhggwzxH7pPCaAqO46MgnOM80zW1RWuH61DGLwZJEdK2Kadq2F9CUG65"
crossorigin="anonymous">

    <title>Login | Q&A Repository</title>

    <link rel="icon" type="image/x-icon" href="/Documentations/SPPU_PNG.webp">

    <link href="Rcss1.css" rel="stylesheet">

    <script>

    </script>

  </head>

  <body>

    <nav class="navbar navbar-expand-lg fixed-top navbar-dark bg-dark">

      <div class="container">

        <a class="navbar-brand text-info" href="home.html" target="_blank">SPPU Q&A
Repository</a>

        <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarNav" aria-controls="navbarNav"  aria-expanded="false" aria-label="Toggle
navigation"><span class="navbar-toggler-icon"></span>

        </button>

        <div class="collapse navbar-collapse" id="navbarNav">

          <ul class="navbar-nav">

            <li class="px-2"><a href="Login.html" class="text-white fs-6 fw-
light">Login</a></li>

            <li class="px-2"><a href="Regi.html" class="text-white fs-6">Sign Up</a></li>
```

SPPU SOLUTION REPOSITORY SYSTEM

</div>

</div>

</nav>

<section class="login first grey">

<div class="container">

<div class="row mt-5">

<div class="col-4"></div>

<div class="col-4">

<div class="container">

<div class="box-wrapper">

<div class="box box-border">

<div class="box-body">

<p class="text-center bg-info">LOGIN</p>

<table>

<tr>

<td><p>As a </p></td>

<td>

Student

Faculty

Admin

</td>

</tr>

<tr>

<td><p>For</p></td>

SPPU SOLUTION REPOSITORY SYSTEM

<td>

New Registration

</td>

</tr>

</table>

</div></div></div>

</div>

</div>

<div class="col-4"></div>

</div>

</div></section>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-kenU1KFdBIe4zVF0s0G1M5b4hcpyxD9F7jL+jjXkk+Q2h455rYXK/7HAuoJl+0I4" crossorigin="anonymous"></script>

</body>

</html>