A Project Report

on

Automated Question Paper Generator

Submitted in partial fulfillment of the

requirements for the award of the degree

of

BACHELOR OF TECHNOLOGY

in

Computer Science & Engineering

by

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(Affiliated to JNTUA, Approved by AICTE, New Delhi, Accredited by NAAC with 'A' Grade& Accredited by NBA (EEE, ECE & CSE))

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Certificate

This is to certify that the project report entitled Automated Question Paper Generator is the bonafide work carried out by **Vandana G** bearing Roll Number 174G1A05A6**, Shirisha K** bearing Roll Number 174G1A0582, **Sai Sandeep E** bearing Roll Number 174G1A0572 and **Gayathri R** bearing Roll Number 17FH1A0520 in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology** in **Computer Science & Engineering** during the academic year 2020-2021.

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Project Associates

Declaration

We Vandana G bearing reg no :174G1A05A6, Shirisha K bearing reg no: 174G1A0582, Sai Sandeep E bearing reg no: 174G1A0572, Gayathri R bearing reg no:17FH1A0520, students of SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY, Rotarypuram , hereby declare that the dissertation entitled "AUTOMATED QUESTION PAPER GENERATOR" embodies the report of our project work carried out by us during IV Year Bachelor of Technology under the guidance of Dr.M.Ranjit Reddy, M.Tech,Ph.D Department of CSE and this work has been submitted for the partial fulfillment of the requirements for the award of Bachelor of Technology degree.

The results embodied in this project report have not been submitted to any other Universities of Institute for the award of Degree.

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Contents

List of Figures

LIST OF ABBREVIATIONS

PHP   Hypertext Preprocessor

JSP   Java Server Page

HTML   Hyper text markup language

CSS   Cascading style sheets

JS   JavaScript

SRS   Software Requirement Specification

MYSQL   My structured query language

ABSTRACT

Examination process is an important activity for educational institutions to assess student performance. Thus the nature of the exam questions would determine the quality of the students produced by the institutions. Preparing the exam questions is very challenging, tedious and time consuming for instructors. Thus with the help of this paper we present the solution in form of Automated Question Paper Generator System(QGS) which makes use of randomization technique. This system includes several modules like user administration, Subject selection, difficulty level specification, Cognitive level question entry, question management, paper generation and paper management.The design process performs scrutiny and composes the examination paper using an efficient technique with a high rate of success. With this technique, the admin needs to specify the subject, the question type and the difficulty level, Cognitive level. From. the enter input, the examination paper, will be generated automatically. The editing of questions is performed using pdf format and the final paper will stored as ".pdf " files. Question Paper Generator is special and unique software, which used in school, institutions, colleges, test paper setters who want to have a huge database of questions for frequent generation of question. This software can be implemented in various medical, engineering and coaching institutes for theory paper. You can create random question paper with these software anytime within seconds. You can enter unlimited units and chapter depending upon the system storage, capacity and as per the requirement. For entering questions you have to first specify the subject and you can enter unlimited questions in a chapter.

Keywords: Automation**,** Question Paper Generation, Randomization.

CHAPTER 1

INTRODUTION

In advanced technical education, Question Paper Generator is special and unique software, which used in school, institutions, colleges, test paper setters who want to have a huge database of questions for frequent generation of question. This software can be implemented in various medical, engineering and coaching institutes for theory paper. You can create random question paper with these software anytime within seconds. You can enter unlimited units and chapter depending upon the system storage, capacity and as per the requirement. For entering questions you have to first specify the subject and you can enter unlimited questions in a chapter. Examination process is an important activity for educational institutions to assess student performance. Thus the nature of the exam questions would determine the quality of the students produced by the institutions. Preparing the exam questions is very challenging, tedious and time consuming for instructors. Thus with the help of this paper we present the solution in form of Automated Question Paper Generator System(QGS) which makes use of randomization technique. This system includes several modules like user administration, Subject selection, difficulty level specification, Cognitive level question entry, question management, paper generation and paper management. The design process performs scrutiny and composes the examination paper using an efficient technique with a high rate of success. With this technique, the admin needs to specify the subject, the question type and the difficulty level, Cognitive level. From the enter input, the examination paper, will be generated automatically. The editing of questions is performed using pdf format and the final paper will stored as ".pdf " files.

1.1 Importance of Automated Question Paper Generator

The purpose of developing Examination process is an important activity for educational institutions to assess student performance. Thus the nature of the exam questions would determine the quality of the students produced by the institutions. Preparing the exam questions is very challenging, tedious and time consuming for instructors. Thus with the help of this paper we present the solution in form of Automated Question Paper Generator System(QGS) which makes use of randomization technique. This system includes several modules like user administration, Subject selection, difficulty level specification, Cognitive level question entry, question management, paper generation and paper management.

1.2 Problem Definition

Presently, the in the existing system all the jobs of the question paper generation is done manually. This is very difficult to the lectures who want to generate different papers every time. The currents system is that an organization wants to keep the physical records of the Question paper details in their office and a separate record for the student details. In the current system there is no way to store the details of the question paper on systems. In this system all the jobs of the question paper generation is done manually. This is very difficult to the lectures who want to generate different papers every time. The currents system is that an organization wants to keep the physical records of the Question paper details in their office and also for the student details. In the current system there is no way to store the details of the question paper on systems.

1.3 Objective

The main objective in advanced technical education, The proposed system is very useful for the faculties and lectures. This avoids the exam question paper leakage and also faculties work can get minimize the stress of setting Question paper. This proposed system reduction in the cost of the office equipment and the transaction is done quickly. Thus with the help of this paper we present the solution in form of Automated Question Paper Generator System(QGS) which makes use of randomization technique. The question Paper Generator system automatically generates paper, prepares pdf file as per selected paper format. Question Paper Generator is special and unique software, which used in school, institutions, colleges, test paper setters who want to have a huge database of questions for frequent generation of question. This software can be implemented in various medical, engineering and coaching institutes for theory paper. You can create random question paper with these software anytime within seconds. You can enter unlimited units and chapter depending upon the system storage, capacity and as per the requirement. For entering questions you have to first specify the subject and you can enter unlimited questions in a chapter.

Chapter 2

Literature Survey

2.1 Reffered Languages
2.1.1 HTML, CSS, JAVASCRIPT

Html is at the core of every web page, regardless of the complexity of a site or number of technologies involved. It's an essential skill for any web professional. It's the starting point for anyone learning how to create content for the web. And, luckily for us, it's surprisingly easy to learn. HTML stands for HyperText Markup Language. "Markup language" means that, rather than using a programming language to perform functions, HTML uses tags to identify different types of content and the purposes they each serve to the webpage. Markup languages work in the same way as *you* just did when you labeled those content types, except they use code to do it -- specifically, they use HTML tags, also known as "elements." These tags have pretty intuitive names: Header tags, paragraph tags, image tags, and so on. Every web page is made up of a bunch of these HTML tags denoting each type of content on the page. Each type of content on the page is "wrapped" in, i.e. surrounded by, HTML tags. For example, the words you're reading right now are part of a paragraph. If I were coding this web page HTML outgrew these new design features, and CSS was invented and released in 1996: All formatting could be removed from HTML documents and stored in separate CSS (.css) files. So, what exactly does CSS stand for? It stands for Cascading Style Sheets -- and "style sheet" refers to the document itself. Ever web browser has a default style sheet, so every web page out there is affected by at least one style sheet -- the default style sheet of whatever browser the web page visitor is using -- regardless whether or not the web designer applies any styles. For example, my browser's default font style is Times New Roman, size 12, so if I visited a web page where the designer didn't apply a style sheet of their own, I would see the web page in Times New Roman, size 12.Obviously, the vast majority of web pages I visit don't use Times New Roman, size 12 -- that's because the web designers behind those

pages started out with a default style sheet that had a default font style, and then they overrode my

browser's defaults with custom CSS. That's where the word "cascading" comes into play. Think about a waterfall -- as water cascades down the fall, it hits all the rocks on the way down, but only the rocks at the bottom affect where it will end up flowing. In the same way, the last defined style sheet informs my browser which instructions have precedence. To learn the specifics of coding in CSS, I'll point you again to the free classes and resource on code academy but for now talk a bit about JavaScript. JavaScript is a more complicated language than HTML or CSS, and it wasn't released in beta form until 1995. Nowadays, JavaScript is supported by all modern web browsers and is used on almost every site on the web for more powerful and complex functionality. JavaScript is a logic-based programming language that can be used to modify website content and make it behave in different ways in response to a user's actions. Common uses for JavaScript include confirmation boxes, calls-to-action, and adding new identities to existing information. In short, JavaScript is a programming language that lets web developers design interactive sites. Most of the dynamic behavior you'll see on a web page is thanks to JavaScript, which augments a browser's default controls and behaviors.

2.1.2 PHP

PHP Stands for "Hypertext Preprocessor." (It is a recursive acronym, if you can understand what that means.) PHP is an HTML-embedded Web scripting language. This means PHP code can be inserted into the HTML of a Web page. When a PHP page is accessed, the PHP code is read or "parsed" by the server the page resides on. The output from the PHP functions on the page are typically returned as HTML code, which can be read by the browser. Because the PHP code is transformed into HTML before the page is loaded, users cannot view the PHP code on a page. This make PHP pages secure enough to access databases and other secure information. A lot of the syntax of PHP is borrowed from other languages such as C, Java and Perl. However, PHP has a number of unique features and specific functions as well. The goal of the language is to allow Web developers to write dynamically generated pages quickly and easily. PHP is also great for creating database-driven Web sites. If you would like to learn more about PHP, the official site is PHP.net. PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML

2.2 Existing System

Existing system In educational institutions, all the jobs of the question paper generation is done manually. This is very difficult to the lectures who want to generate different papers every time. The currents system is that an organization wants to keep the physical records of the Question paper details in their office and also for the student details. In the current system there is no way to store the details of the question paper on systems.

2.3 Proposed System

The proposed system is very useful for the faculties and lectures. This avoids the exam question paper leakage and also faculties work can get minimize the stress of setting Question paper. This proposed system reduction in the cost of the office equipment and the transaction is done quickly.Thus with the help of this paper we present the solution in form of Automation Question Paper Generator System(QGS) which makes use of randomization technique. The question Paper Generator system automatically generates paper, prepares pdf file as per selected paper format.

CHAPTER 3

ANALYSIS

3.1 Funtional Requirements:

A Functional requirement defines a function of a system or its component. A function is described as a set of inputs, the behaviour, and outputs. Functional requirements may be calculations, technical details, data manipulation and processing and other specific functionality that define what a system is supposed to accomplish. Behavioural requirements describing all cases where the system uses the functional requirements are captured in use cases. Functional requirements are supported by non-functional requirements (also known as quality requirements), which impose constraints on the design or implementation (such as performance requirements, security, or reliability).

As defined in requirements engineering, functional requirements specify particular results of a system. This should be contrasted with non-functional requirements which specify overall characteristics such as cost and reliability. Functional requirements drive the application architecture of a system, while non-functional requirements drive the technical architecture of a system.

Functional Requirements concerns with the specific functions delivered by the system.So, Functional requirements are statements of the services that the system must provide.
The functional requirements of the system should be both complete and consistent

Completeness means that all the services required by the user should be defined.

Consistency means that requirements should not have any contradictory definitions.

The requirements are usually described in a fairly abstract way. However, functional system requirements describe the system function in details, its inputs and outputs, exceptions and so on.

3.2 Non Functional Requirements

Non-functional Requirements refer to the constraints or restrictions on the system. They may relate to emergent system properties such as reliability, response time and store occupancy or the selection of language, platform, implementation techniques and tools. The non-functional requirements can be built on the basis of needs of the user, budget constraints, organization policies and etc.

- **Performance requirement:** All data entered shall be up to mark and no flaws shall be there for the performance to be 100%.
- **Platform constraints:** The main target is to generate an intelligent system to predict the adult height.
- **Accuracy and Precision**: Requirements are accuracy and precision of the data
- **Modifiability:** Requirements about the effort required to make changes in the software. Often, the measurement is personnel effort (person- months).
- **Portability:** Since mobile phone is handy so it is portable and can be carried and used whenever required.
- **Reliability**: Requirements about how often the software fails. The definition of a failure must be clear. Also, don't confuse reliability with availability which is quite a different kind of requirement. Be sure to specify the consequences of software failure, how to protect from failure, a strategy for error Prediction, and a strategy for correction.
- **Security**: One or more requirements about protection of your system and its data.
- **Usability:** Requirements about how difficult it will be to learn and operate the system. The requirements are often expressed in learning time or similar metrics.

ACCESSIBILITY:

Accessibility is a general term used to describe the degree to which a product, device, service, or environment is accessible by as many people as possible. In our project people who have registered with the cloud can access the cloud to store and retrieve their data with the help of a secret key sent to their email ids. User interface is simple and efficient and easy to use.

MAINTAINABILITY:

In software engineering, maintainability is the ease with which a software product can be modified in order to include new functionalities can be added in the project based on the user requirements just by adding the appropriate files to existing project using .net and programming languages. Since the programming is very simple, it is easier to find and correct the defects and to make the changes in the project.

SCALABILITY:

System is capable of handling increase total throughput under an increased load when resources (typically hardware) are added. System can work normally under situations such as low bandwidth and large number of users.

PORTABILITY:

Portability is one of the key concepts of high-level programming. Portability is the software code base feature to be able to reuse the existing code instead of creating new code when moving software from an environment to another. Project can be executed under different operation conditions provided it meet its minimum configurations. Only system files and dependant assemblies would have to be configured in such case.

Validity:

It is the process of checking that a software system meets specifications and that it fulfils its intended purpose. It may also be referred to as software quality control. It is normally the responsibility of software testers as part of the software development lifecycle. Software validation checks that the software product satisfies or fits the intended use (high-level checking), i.e., the software meets the user requirements, not as specification artefacts or as needs of those who will operate the software

3.3 Hardware Requirements

- System   : Pentium 4, Intel Core i3, i5, i7 and 2 GHz Minimum
- RAM   : 512Mb or above
- Hard Disk   : 10 GB or above
- Input Device   : Keyboard and Mouse
- Output Device : Monitor or PC

3.4 Software Requirements

HTML

HTML 5 includes a set of new semantic elements like < header >, < footer >, < article > and < section > which makes it easy to understand the various sections of the web page. Moreover, as the tags are indicative of the functionality they help to execute, it helps to simplify things.

1.Enhanced Uniformity. Cleaner markups, improved semantics and simplified tags help to bring about a sense of consistency to web pages built using HTML 5. Designers are also able to understand the page structure more easily by reading the codes.

2.Mutuality. The website content is getting richer each day. Designers are stretching the limits of their creativity in order to embed unique content in their design. Consequently, animations, video streaming, music, and social networking applications are being integrated in Websites in order to make them more interactive. The advent of HTML 5, with its built-in features and attributes helps to add to the fun.

3.Well-Designed Forms. Web Pages have always stressed on the importance of well- designed and functional forms to transport input data to the server. HTML 5 also provides several effective form elements.

4.Ensures Better Accessibility. The simplicity and easy comprehension of HTML 5 tags, ensures that multiple technologies can be used to embed websites with additional features and functionality. This has helped websites reach out to a wider audience owing to their ability to be displayed on multiple-platforms.

5.Better Offline Browsing. HTML 5 provides excellent facilities for offline browsing. Designers building pages with HTML 5 can now specify the files or pages which need to be cached. This ensures that while trying to reload the pages, with no Internet connection, the pages are displayed in minimum time.

6.Build Customized Web Applications. HTML 5 is geared to leverage the features made available by most browsers to develop web applications that are user friendly and interactive. Organizations today need web pages with interactive content and HTML 5 is sufficiently equipped to deliver the customizations that are required.

7.Inbuilt Geo-location support. HTML 5 comprises several geo-location APIs. These are equipped to make one's location information readily available to any web

application running on HTML 5 compatible browsers.

8. Client-side Database. HTML 5 provides two storage objects, namely Local

Storage, Session Storage that helps to act as a temporary database for applications.

This reduces the cookie size and helps to speed up response time.

CSS

CSS is used to control the style of a web document in a simple and easy way.

Spacing, alignment, and positioning:

CSS2 allows authors to control the visual placement of content on the page through text indentation,

margins, floats, and absolute and relative positioning. By using CSS properties to achieve visual

effects, authors can write simpler HTML and eliminate images and non-breaking spaces ( )

used for positioning.

The following properties give control over spacing, alignment, and positioning:

'text-indent', 'text-align', 'word-spacing', 'font-stretch'. Each of these properties allows users to

control spacing without adding additional spaces. For example instead of writing "H E L L O"

(which users generally recognize as the word "hello" but users of speech recognition tools would

hear as individual letters), authors may create the same visual effect with the 'word- spacing'

property applied to "HELLO".

'margin', 'margin-top', 'margin-right', 'margin-bottom', 'margin-left'. With these properties, authors

can create space on four sides of an element's content instead of adding non breaking

spaces ( ), which are non-standard mark-up, to create space around an element. 'float',

'position', 'top', 'right', 'bottom', 'left'. With these properties, the user can control the

visual position of almost any element in a manner independent of where the element appears in the

document. Authors should always design documents that make sense without style sheets (i.e., the

document should be written in a "logical" order) and then apply style sheets to achieve visual

effects.

The positioning properties may be used to create margin notes (which may be automatically numbered), side bars, frame-like effects, simple headers and footers, and more.

The 'empty-cells' property allows users to leave table cells empty and still give them proper borders on the screen or on paper. A data cell that is meant to be empty should not be filled with white space or a non-breaking space just to achieve a visual effects.

Java Script

JavaScript was initially created to "make web pages alive". The programs in this language are called *scripts*. They can be written right in a web page's HTML and run automatically as the page loads. Scripts are provided and executed as plain text. They don't need special preparation or compilation to run.In this aspect, JavaScript is very different from another language called Java.

1.Validating User's Input

JavaScript is very useful while using forms. It has the capability to validate user input for errors and also saves time. If the user leaves a required field empty or the information is incorrect, JavaScript checks for them before sending the data over to the server.

2.Simple Client-side Calculations

Since JavaScript is a client-side technology, it can perform basic calculations on the browser. The browser does not need to ask server time for every task. This is especially helpful when a user needs to perform these calculations repeatedly. In these cases, connecting to the server would take a lot more time than performing the actual calculations.

3.Greater Control

JavaScript provides greater control tothe browser rather than being completely dependent on the web servers. JavaScript provides various browsers with additional functionalities that help reduce server load and network traffic.

4. Platform Independent

Since browsers interpret JavaScript, it solves the problem of compilation and compatibility. Thus it can run on Windows, Macintosh, and other Netscape-supported systems. Also, it is possible to embed them in any other script like HTML that keeps JavaScript into use.

5. Handling Dates and Time

Unlike other programming languages, JavaScript has built-in functions to determine the date and time. Thus it is very easy to code only by using methods like **.getDate().**

6. Generating HTML Content

JavaScript has very handy features to dynamically generate HTML content for the web. It allows us to add text, links, images, tables, etc after an event occurrence **(eg – mouse click).**

7. Detecting the User's Browser and OS

JavaScript is very capable in the detection of the user's browser and OS information.

Though JavaScript runs on every platform, there may occur a situation where we need the user's browser before processing. This can be helpful for writing code that results in different outputs are in different browser.

XAMPP

XAMPP is an abbreviation where *X stands for Cross-Platform, A stands for Apache, M stands for MYSQL, and the Ps stand for PHP* , 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, Mysql DB, PHP.

XAMPP 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, , MySQL database, and PHP through the

system of the host itself. Among these technologies,

PHP is a backend scripting language, and Mysql DB is the most vidly used database.

Steps to install XAMPP on Windows

Step 1: In the web browser, You can easily download XAMPP from

http://www.apachefriends.org/

Fig 3.4.4.1 XAMPP Installation

Step 2:

The XAMPP file is downloaded. The exe file has to be executed. Now click on the downloaded file.
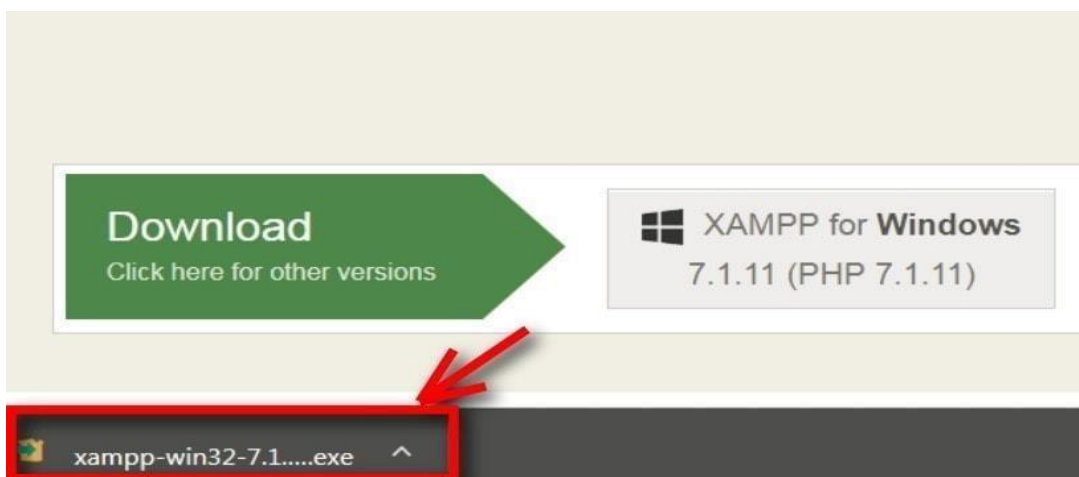
Fig 3.4.4.2 Xampp.exe file

Step 3:

Once the file is executed, a setup window appears. In the setup file to select the required components needed. For eg (if you want to install WordPress on XAMPP, the required components are MySQL, Apache, PHPMyAdmin).

Fig 3.4.4.3 Xampp SetUp

Step 4: Next step is to choose the folder where the file is to be located. It is recommended to choose the default C drive and then click next button.
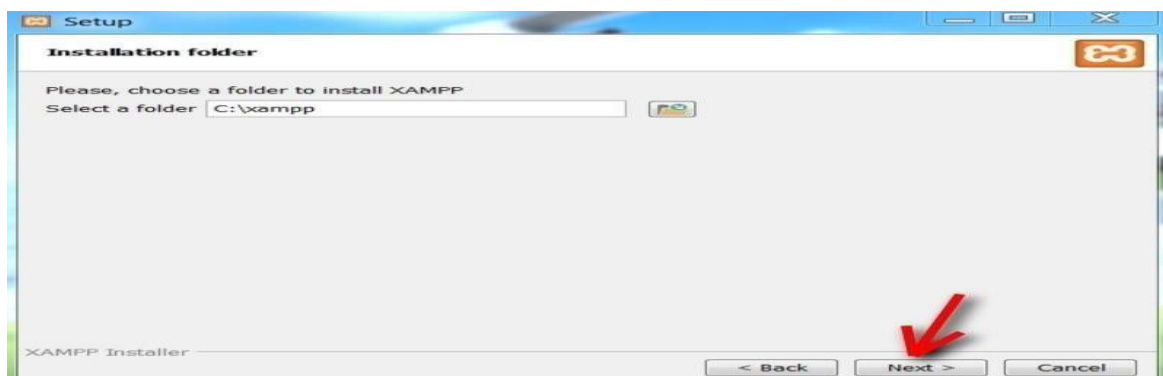
Fig 3.4.4.4 Xampp installation folder setup

Step 5:

Once the next button is clicked, the installation process is been shown

Fig 3.4.4.5 Installing Xampp files

Step 6 The installation process is been completed, click on finish button

Fig 3.4.4.6 Xampp Installation Finished

Step 7

Now your XAMPP icon appears on start menu or desktop. By clicking on the XAMPP icon you

can run the XAMPP software.

Fig.3.4.4,7.Icon to start the Xampp

Step 8

Once the XAMPP software opens, you have to select the required components. For WordPress to run on XAMPP the required components might me apache and MySQL. You have to click on the start button.
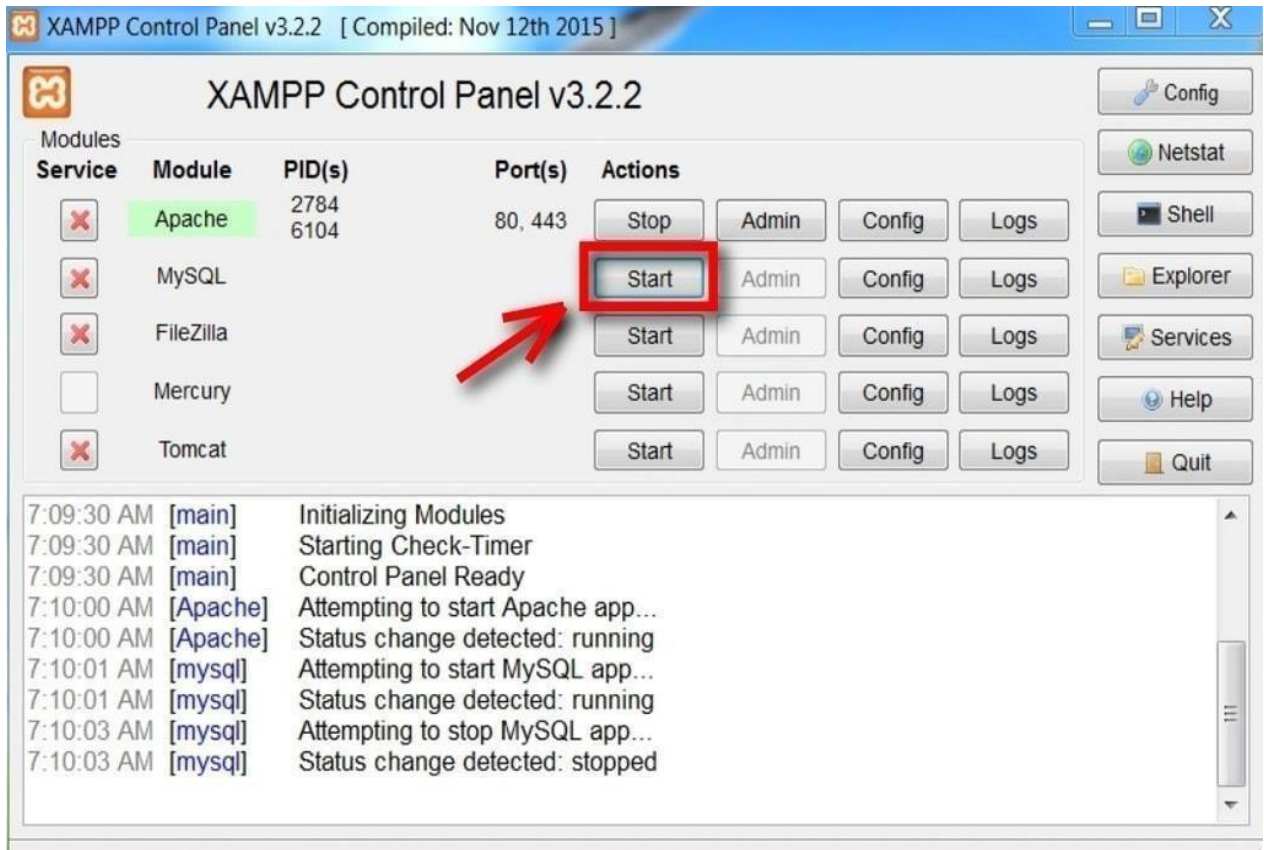
Fig 3.4.4.8 Xampp Control Panel

Step 9

By clicking the apache or any admin button in the control panel, you can configure each module

settings separately.
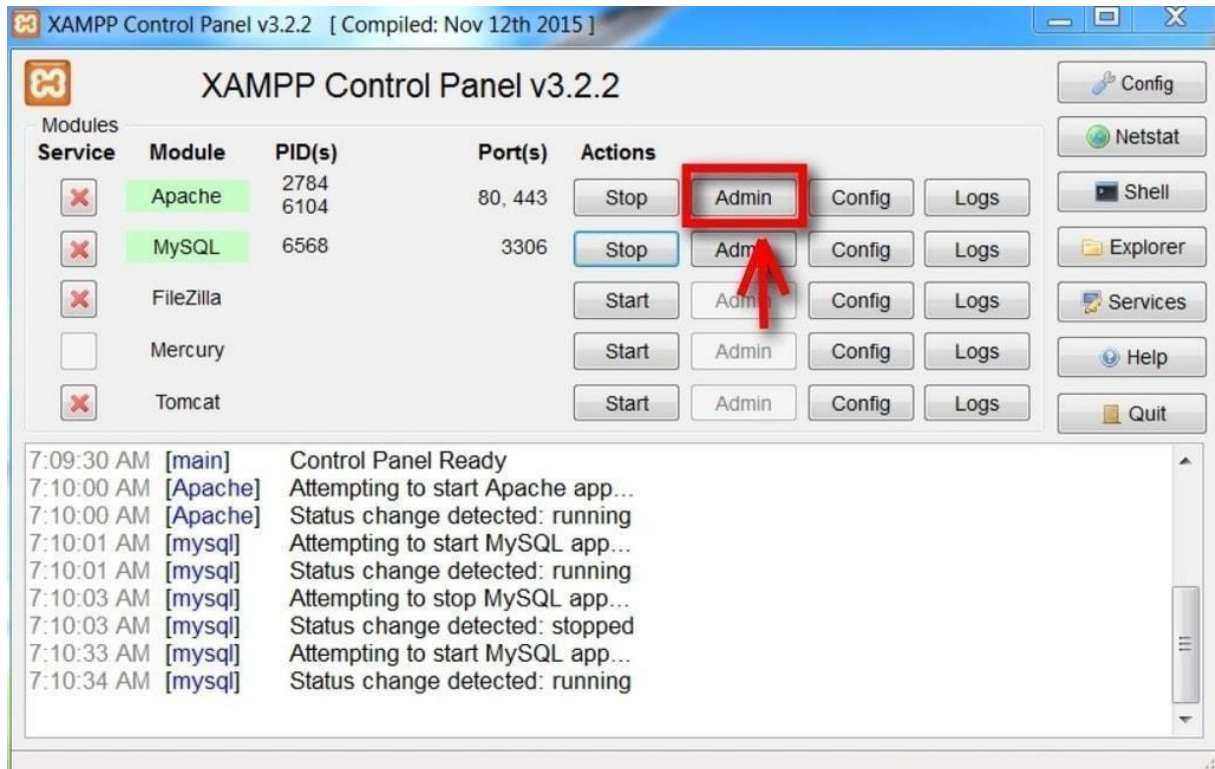
Fig 3.4.4.9 Xampp Admin Section

CHAPTER 4

DESIGN

The UML diagrams are the way of visualizing a software program using a collection of diagrams. The notation has evolved from the work of Grady Booch,James Rumbaing, Ivar Jacobson, and the Rational Software Corporation to be used for object-oriented design, but it has since been extended to cover a wider variety of software engineering projects.

4.1 Purpose of UML Diagrams

With the use of UML, an appropriate UML development tool, and an application process or methodology, the design and refining of the application is shifted from the development phase to an analysis and design phase. This reduces risk and provides a vehicle for testing the architecture of the system before coding begins. The analysis and design overhead will eventually pay dividends as the system has been userdriven, documented and when it's time to start developing, many UML tools will generate skeleton code that will be efficient, object oriented and promote re-use.

Furthermore, the use of UML will help:

- The communication of the desired structure and behaviour of a system between analysts, architects, developers, stakeholders and users.

- The visualization and control of system architecture

- Promote a deeper understanding of the system, exposing opportunities for simplification and re-use

- Manage risk

4.2 Diagrams

There are eight most widely used UML diagrams. They are:

- Class Diagram
- Use Case Diagram
- Sequence Diagram
- Activity Diagram
- Collaboration Diagram
- Deployment Diagram
- State Chart Diagram
- Component Diagram

1. Class Diagram

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of object-oriented systems because they are the only UML diagrams,which can be mapped directly with object-oriented languages.

2. Use Case Diagram

Use case diagrams consist of actors, use cases and their relationships. The diagram is used to model the system/subsystem of an application. A single use case diagram captures a particular functionality of a system.

It is defined and created from use case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals (represented as use cases), and any

dependencies between those use cases. The main purpose of a use case diagram is to show what system functions are performed for which actor. Hence to model the entire system, a number of use case diagrams are used.

3. Sequence Diagram

A sequence diagram simply depicts interaction between objects in a sequentialorder i.e. the order in which these interactions take place. We can also use the terms event diagrams or event scenarios to refer to a sequence diagram. Sequence diagrams describe how and in what order the objects in a system function. These diagrams are widely used by businessmen and software developers to document and understand requirements for new and existing systems.

4. Activity Diagram

Activity Diagrams are generally used to illustrate the flow of control in a system. We can also use an activity diagram to refer to the steps involved in the execution of a use case. We model sequential and concurrent activities using activity diagrams. So, we basically depict workflows visually using an activity diagram. It focuses on condition of flow and the sequence in which it happens. We describe .

5. Collaboration Diagram

Collaboration diagrams which are also known as Communication Diagrams are used to show how objects interact to perform the behaviour of a particular use case, or a part of a use case. Along with sequence diagrams, collaboration are used by designers to define and clarify the roles of the objects that perform a particular flow of events of a use case. They are the primary source of information used to determining class responsibilities and interfaces.

6. Deployment Diagram

A deployment diagram is a UML diagram type that shows the execution architecture of a

system, including nodes such as hardware or software execution environments, and the middleware connecting them.

Deployment diagrams can be used to model the hardware topology of a system, model the embedded system, model the hardware details for a client/server system, model the hardware details of a distributed application and even in forward, reverse engineering.

7. State Chart Diagram

A State Chart diagram describes a state machine. State machine can be defined as a machine which defines different states of an object and these states are controlled by external or internal events.

State Chart diagrams are useful to model the reactive systems. Reactive systems can be defined as a system that responds to external or internal events.

8. Component Diagram

In the Unified Modelling Language, a component diagram depicts how components are wired together to form larger components and or software systems. They are used to illustrate the structure of arbitrarily complex systems. It does not describe the functionality of the system but it describes the components used to make those functionalities.

Component diagrams are very important from implementation perspective. It can be mostly used in modeling the components of a system, modeling the database schema, executables of an application and even system's source code.

Activity Diagram

- In this activity diagram, first the Examination section login into the web-portal.

- If the login is successful, then it displays the home page.

- In the home page the examination section can select the question paper and aslo can search in the search box

- Then the examination section can Download the question paper.
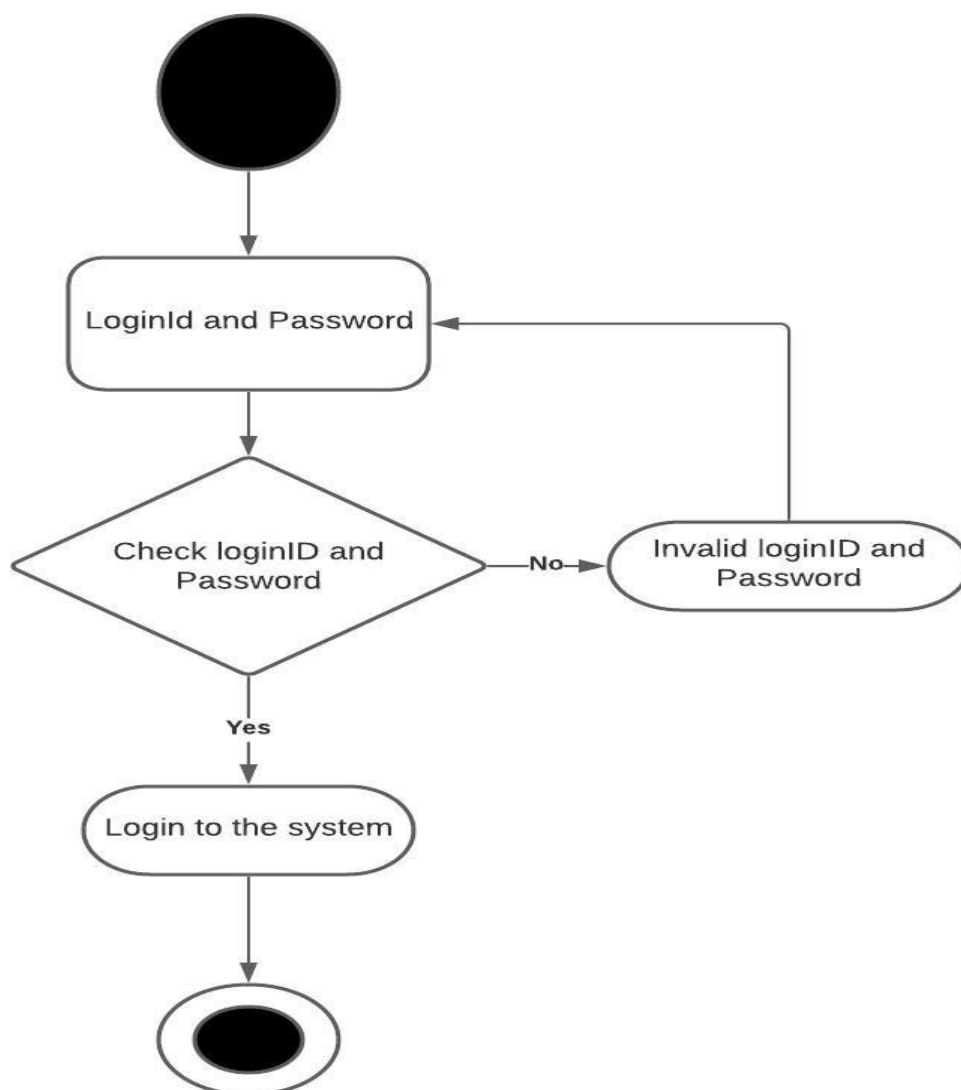
Fig 4.2.1 Login Activity diagram
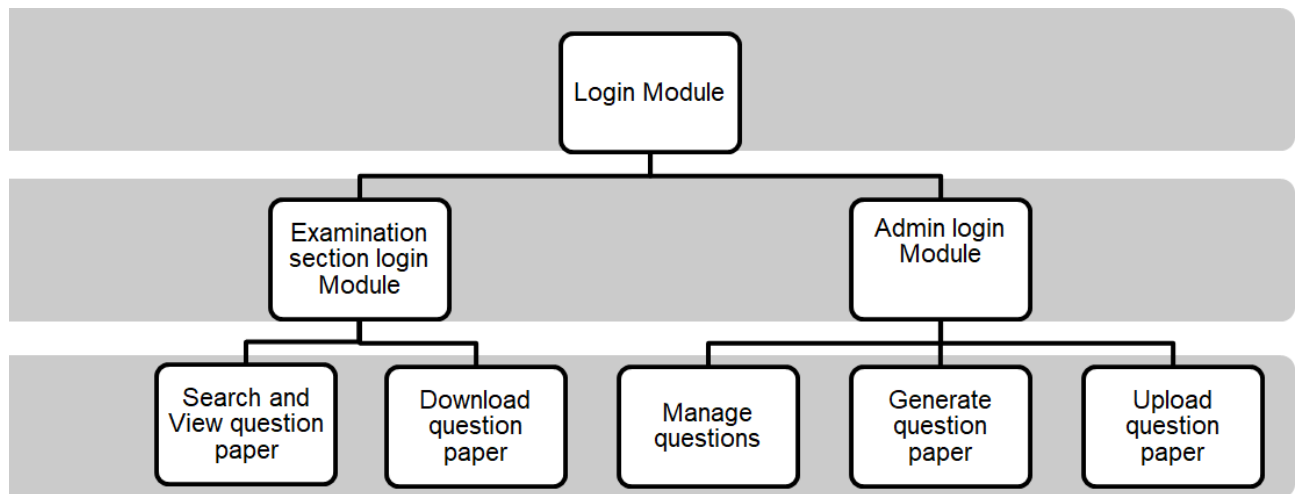
Fig 4.2.2 Activity Diagram

CHAPTER 5

IMPLEMENTATION

The project proposes a exam seating arrangement system using php.

This section describes the proposed web-portal for exam seating arrangement system using php, which is developed using *PHP, MYSQL.*

The main components of the application are:

- Server

- Database

- Result (Display)

1.Server

The back-end of the application which maintains the connection with the front-end interface, model, database and display screen. Finally, the most important duty of the server is maintaining the database regarding information of allocation of rooms as well as students details, faculty details as period wise.

2.Database

A database is created which maintains the details regarding details of students, faculty, and rooms. It becomes handy for the server to update, select values whenever and wherever necessary.

3.End-result

The end-result is a web page which includes Question papers that are uploaded by the faculty. And it is in the format of pdf file.

Working of the application

Bootstrap framework is really flexible and handy to develop complete end-to-end web applications for any typeof project. **Bootstrap** is a potent front-end **framework used** to create modern websites and web apps. It's open-source and free to **use**, yet features numerous HTML and CSS templates for UI interface elements such as buttons and forms. **Bootstrap** also supports JavaScript extensions.

Xampp is used to store the data. Once we start the xampp then it will open in browser, then here the exam section can access the entire web-portal once the login details are valid. The admin can Xampp is used to store the data.

STEPS
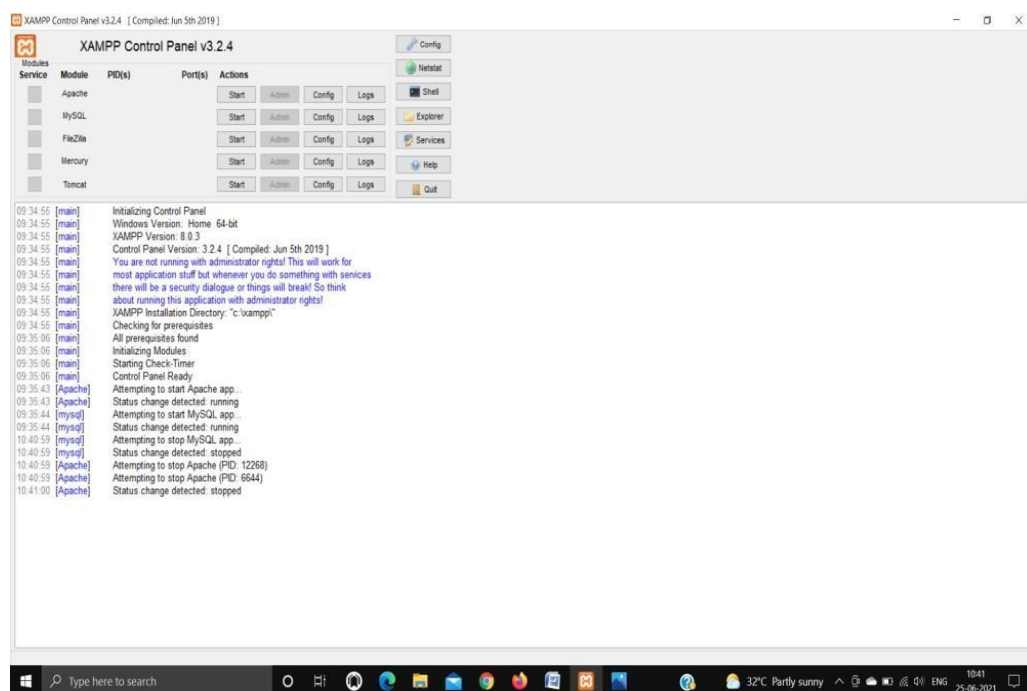
Fig.5.1. Xampp Control Panel
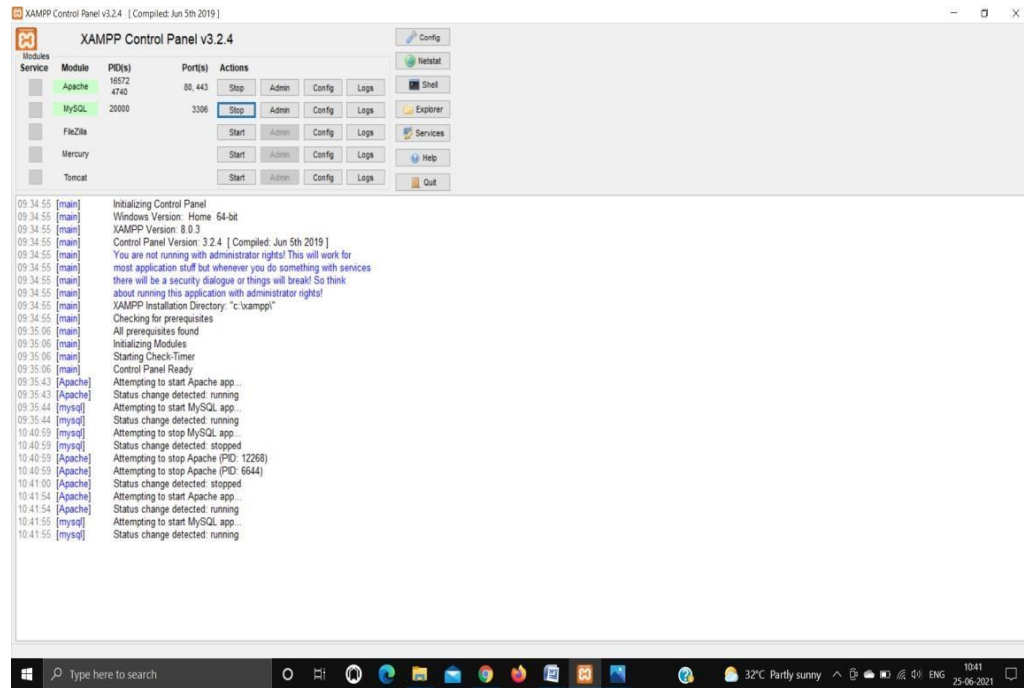
Fig.5.2. Running the Xampp

College Examination Section Login:
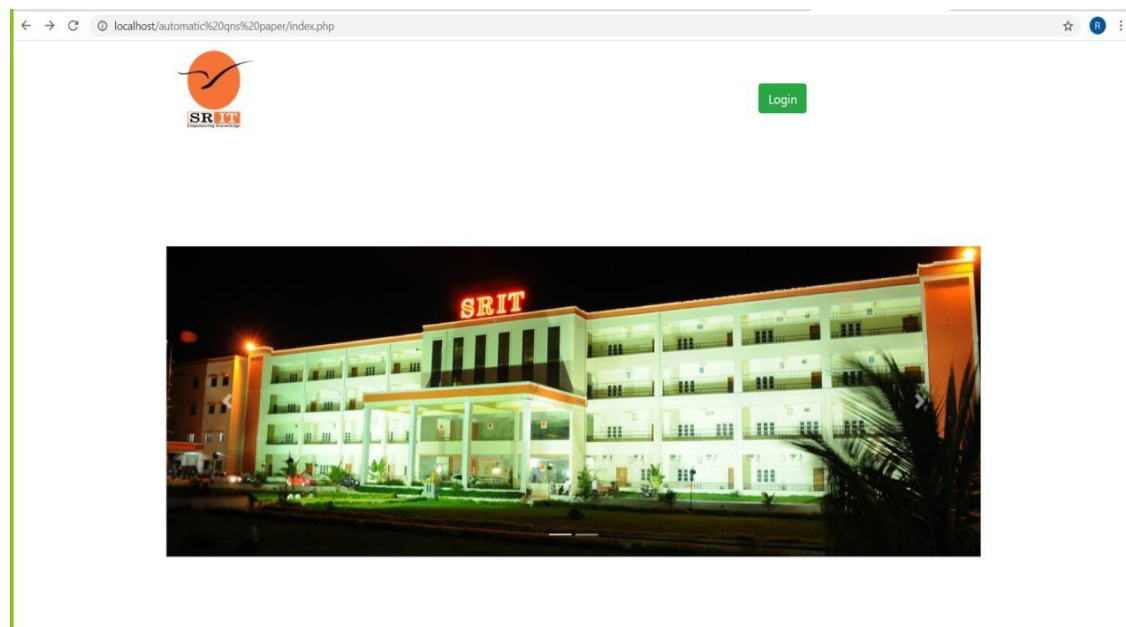
Fig.5.3. Home page

The above image is the homepage here there is a lot of menus are available here we can choose the login
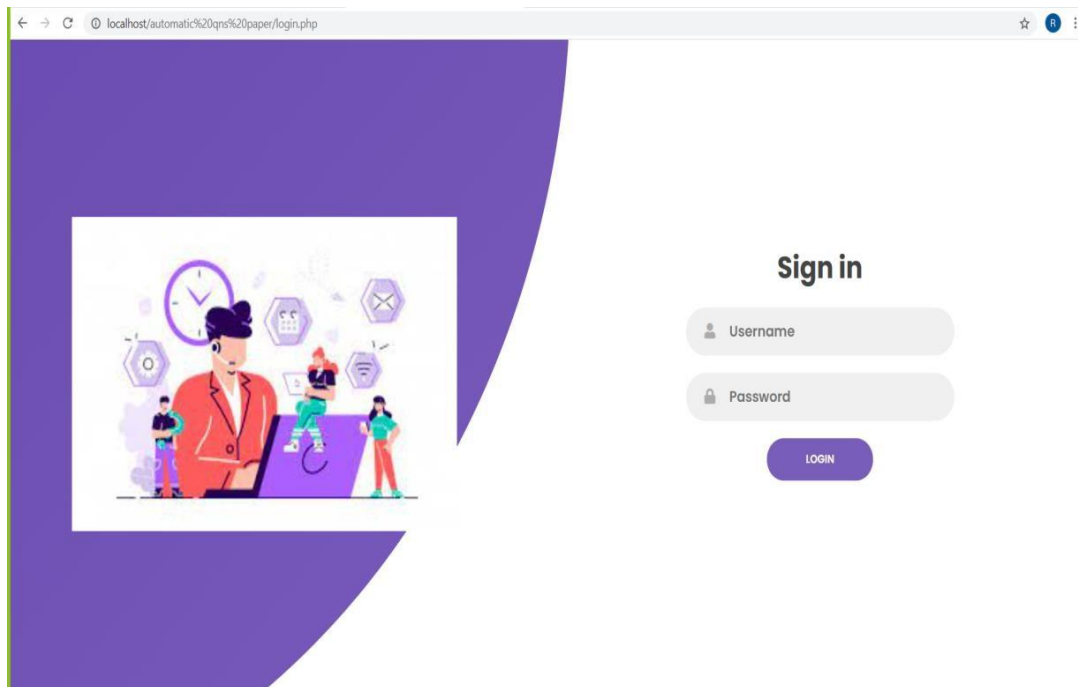
Fig 5.4.Login Page

In the above image is a login page that exam section use to login with given credentials.
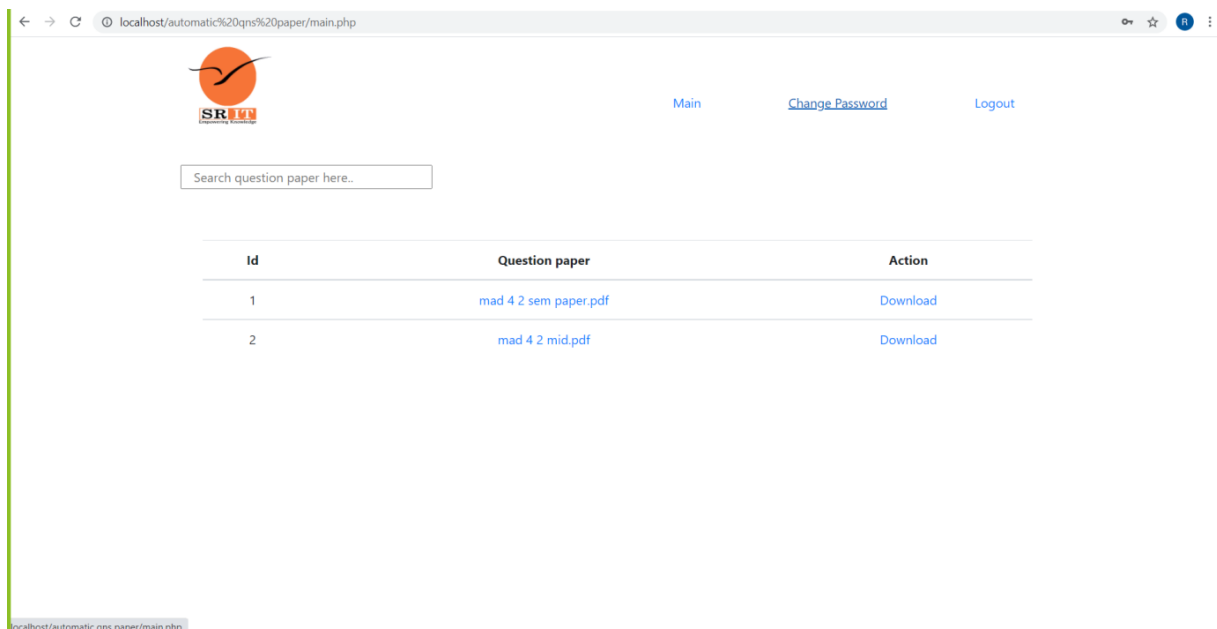
Fig 5.5. Main page

In the above image is a main page were exam section can view the question papers
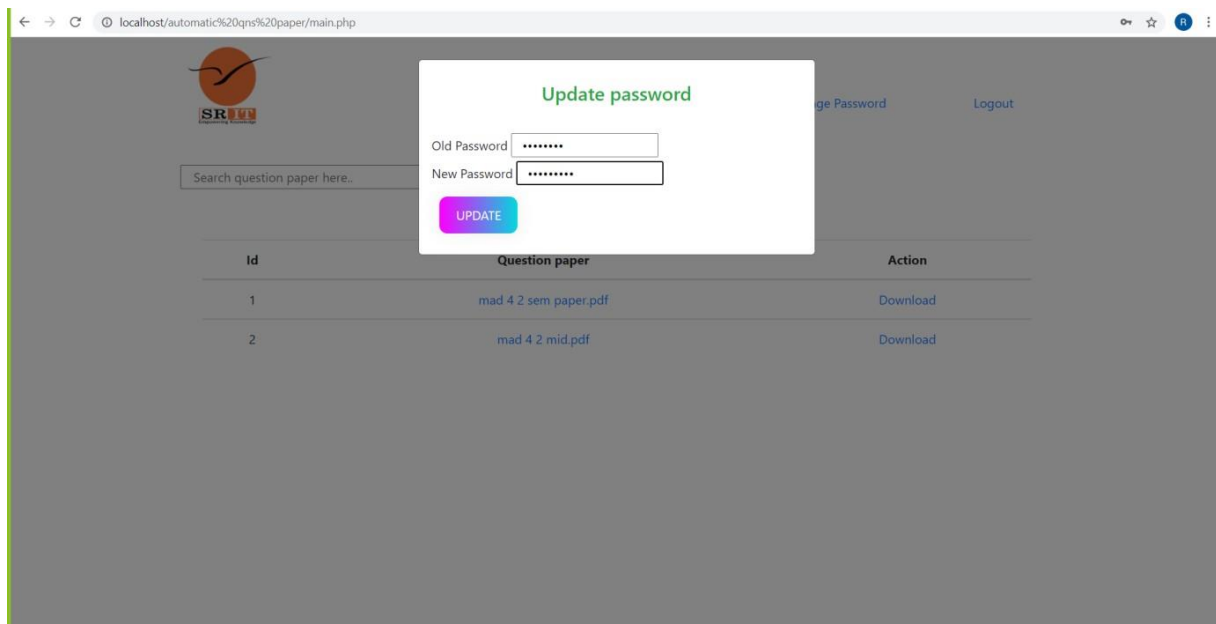
Fig 5.6 Update password

- ❖ In the above image is a Update Password page by the examination section.
- ❖ Examination Section can choose the question paper.
- ❖ They can also search the question paper on the top-left corner in the search box

Fig 5.7.1 mid question paper

SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY

(Affiliated to JNTUA & approved by AICTE)(Accredited by NAAC with 'A'Grade & Accredited by NBA[EEE, ECE & CSE])

ML

Time: 3 hours   Max Marks: 70

PART - A

(Compulsory Questions)

I. Answer the following (10 x 2 = 20)

1 Define Bayes theorem.

2 What is class learning.

3 What is ml.

4 What is geodesic distance.

5 Write function for logistic discrimination using Bayes rule.

6 What is denoted as noise in machine learning.

7 Define Sample error of a hypothesis.

8 What is direct acyclic graph.

9 Show the perceptron that calculates NOT of its input.

10   what is ml and its uses

PART - B

(Answer all five units, 5 x 10 = 50)

UNIT - 1

1 a. What is Reinforcement learning.

   b. what is purpose of ml

OR

2 a. What is Unsupervised learning.

   b. What is Reinforcement learning.

UNIT - 2

3   Describe about Bayesian belief network representation and learning.

OR

4   Write a procedure for comparing two learning algorithms for a given fixed set of data.

UNIT - 3

5 a. What k-means clustering algorithm.

   b. Write a short note on Hierarchical clustering.

OR

6   Explain about histogram estimator and kernel estimator of non-parametric density estimation method.

UNIT - 4

7   Explain how Multi-layer perceptrons acts as universal approximator.

OR

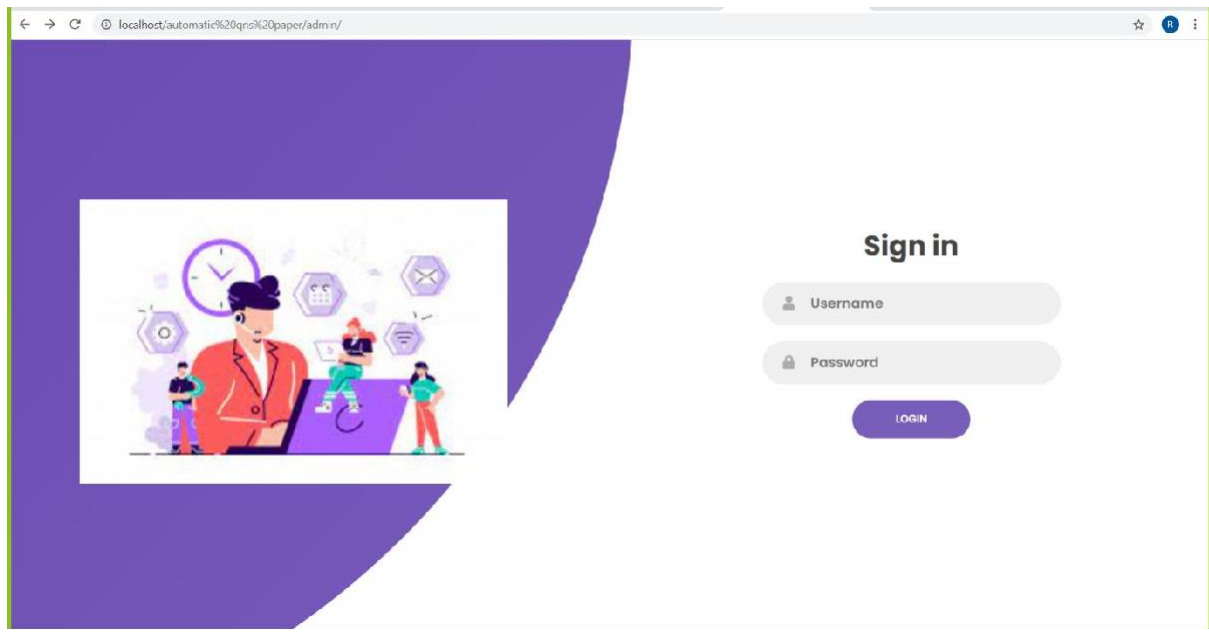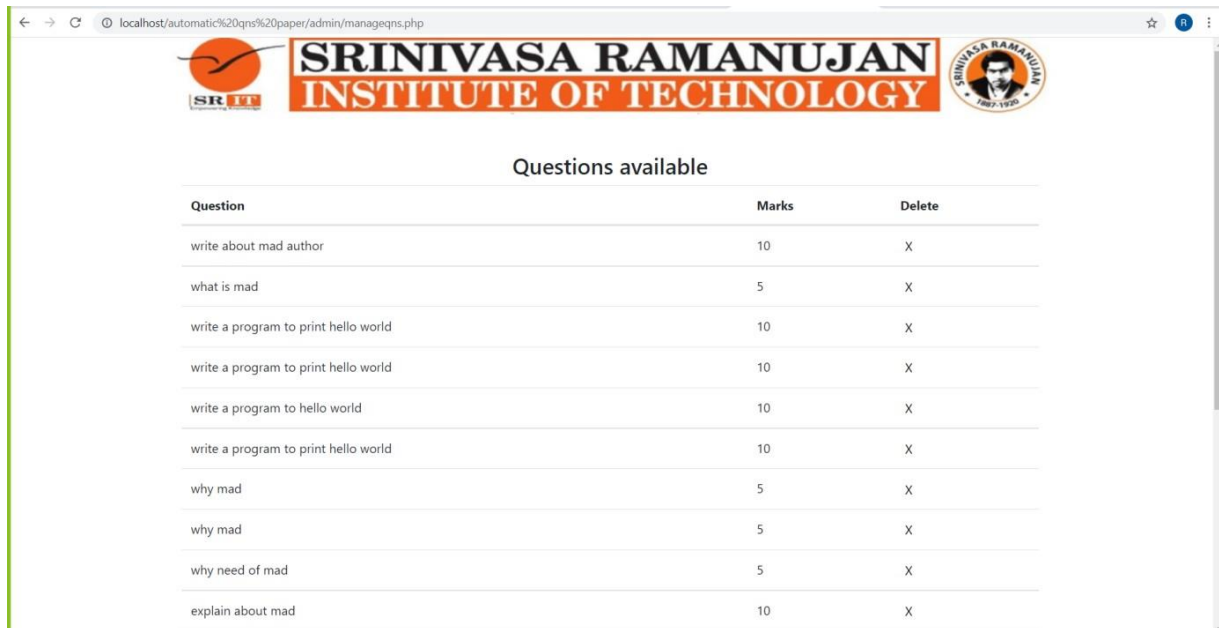Fig 5.7.2 question paper

Admin Login steps:

Fig.5.8. Admin login

In the above images is a Admin login page here admin can login with the given credencials

Fig.5.9. Admin main page

In the above image is a Admin main page here admin can Enter Subject, Enter Unit number, Enter question, Enter Marks, Level of Question and Cognitive level Then submit the question.

Fig 5.10.Manage Questions

In the above image is a Manage Questions that we can the submitted question and also we can delete the questions by clicking on Delete which was enable as Cross mark (x)

Fig.5.11.Generate Question Paper

In the above image specifies the Question paper Generation that was done by choose type and select subject then click on " Get Paper".

Fig.5.12.Upload Question Paper

In the above image specifies that Uploading the Question Paper by Select Subject and Choose file the click on "Upload Question Paper".

CHAPTER 6

TESTING

TYPES OF TESTS

UNIT TESTING

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application. It is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration.

INTEGRATION TESTING

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

VALIDATION TESTING

An engineering validation test (EVT) is performed on first engineering prototypes, to ensure that the basic unit performs to design goals and specifications. It is important in identifying design problems, and solving them as early in the design cycle as possible, is the key to keeping projects on time and within budget. Verification is a Quality control process that is used to evaluate whether or not a product, service, or system complies with regulations, specifications, or conditions imposed at the start of a development phase. Verification can be in development, scale-up, or production. This is often an internal process.

Validation is a Quality assurance process of establishing evidence that provides a high degree of assurance that a product, service, or system accomplishes its intended requirements. This often involves acceptance of fitness for purpose with end users and other product stakeholders.
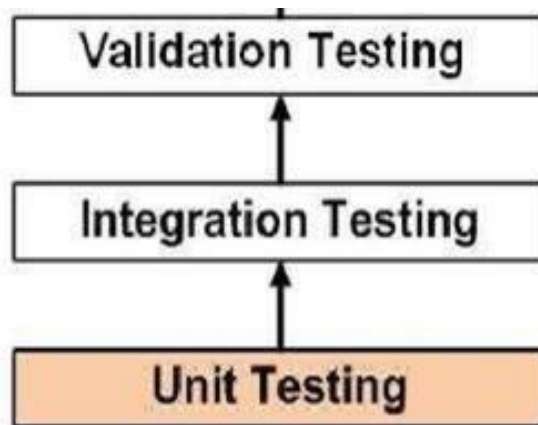
The testing process overview is as follows:

Fig 6.1 The Testing Process

SYSTEM TESTING

System testing of software or hardware is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. System testing falls within the scope of black box testing, and as such, should require no knowledge of the inner design of the code or logic.

As a rule, system testing takes, as its input, all of the "integrated" software components that have successfully passed integration testing and also the software system itself integrated with any applicable hardware system. System testing is a more limited type of testing; it seeks to detect defects both within the "inter-assemblages" and also within the system as a whole. System testing is performed on the entire system in the context of a Functional Requirement Specification (FRS) or System Requirement Specification(SRS)

CONCLUSION

✓   This system avoids the manual work and the problems concern with it. The

system was designed in such a way that future modifications can be done easily.

✓   The following conclusions can be deduced from the development of the project.

➢   It provides a friendly user interface.

➢   The system has scope for modification in future if it is necessary.

➢   Updating of information becomes easier.

➢   It gives appropriate access to the authorized users depending on their permissions.

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