ON JOB TRAINING (CSE441) REPORT

LOVELY PROFESSIONAL UNIVERSITY

A Training Report

Submitted in partial fulfillment of the requirements for the award of degree of

Bachelor's in technology
(Computer Science)

Submitted to

LOVELY PROFESSIONAL UNIVERSITY

PHAGWARA, PUNJAB

From 01/10/2022 to 06/10/2022

SUBMITTED BY

Name of student: Tariquz Zaman Laskar

Registration Number: 11809029

Signature of the student:

Submitted to:

Mr. Gursharan Singh

Assistant Professor

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Student Declaration

To whom so ever it may concern

I, **Tariquz Zaman Laskar, 11809029** hereby declare that the work by me on **"iPREP"** from **January, 2022** to **June 2022**, under the supervision of **Mr.Pritpal Singh Saini**, **Team Lead**, **Infotech**, **Mr. Sumit Gupata**, **Deputy Director**, **Lovely Professional Univerristy**, and **Mr. Gurusharan Singh**, **Assistant Professor**, **Lovely Professional University, Phagwara, Punjab**, is a record of original work for the partial fulfillment of the requirements for the award of the degree, **Bachelor of Technology (Computer Science & Engineering)**

Tariquz Zaman Laskar(11809029)

Signature of the student

Tariquz Zaman Laskar

To whom so ever it may concern

This is to certify that **Tariquz Zamana Laskar**, **11809029** from Lovely Professional University, Phagwara, Punjab, has worked as a trainee in **Lovely Infotech** on "**iPREP**" under my supervision from **January 2022** to **June, 2022**. It is further stated that the work carried out by the student is a record of original work to the best of my knowledge for the partial fulfillment of the requirements for the award of the degree.

Name of External Supervisor

Mr. Sumit Gupta

Mr. Pritpal Singh Saini

Designation

Deputy Director

Team Lead

Dated: 13 May 2022

Signature:

Signature:

Name of Internal Supervisor

Mr. Gursharan Singh

Designation

Assistant Professor

Dated:

Signature:

Undertaking Form

Undertaking by the student for submitting Final Certificate of Six Months Internship/OJT

Reg No: 11809029   **Student Name:** Tariquz Zaman Laskar

Program Name: CSE   **Batch Year:** 2018-2022

Course Code: CSE441   **Mobile Number:** 7093660745

I understand that I have been provisionally allowed to appear for the ETP viva and I hereby declare that since I am on 1 year or six months OJT, thus I shall submit my final certificate of Full-Term Internship/OJT to university after completion of my Internship/OJT but not later than July,2022.

I am aware that in case, I am unable to submit the same till the above-mentioned date, my final evaluation of Internship/OJT shall be discarded by the university and I grade shall be awarded in the result.

Tariquz Zaman Laskar   ------------------------   -----------------------

Signature of Student   **Signature of TPC-School**   **Signature of HOS**

CONTINUOUS ASSESSMENT (CA) for INTERNSHIP/OJT

(By external Supervisor from organization)

Name of the student : **Tariquz Zaman Laskar**   Registration No :   11809029 (27369)

Internship Project Title (if/any): <u>iPREP</u>

Name of Organization &Address: **Lovely Professional University**, Jalandhar-Delhi, G.T. Road, Phagwara, Punjab (INDIA) -144411

Name of External Internship in-charge (with mobile number):

<u>Pritpal Singh Saini</u>   Contact No: <u>8146569035</u>

S.No.	Criteria	Marks Obtained	Maximum Marks
1	Student conduct during internship	10	10
2	Punctuality and Enthusiasm	8	20
3	Technical Skill & Knowledge	10	20
4	Performance	29	50
	Total	57	100

Date <u>13/05/2022</u>   Authorized Signatory _Pritpal Sah_

Name _PRITPAL SINGH_   Designation _TEAM LEAD_

Company Seal

Head
Division of Infotech
Lovely Professional University
Phagwara (Punjab)

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Non-Disclosure Agreement

This Non-disclosure Agreement (the "Agreement") is entered into by and between LOVELY PROFESSIONAL UNIVERSITY ("Disclosing Party") and the Receiving Party for the purpose of preventing the unauthorized disclosure of Confidential Information as defined below. The parties agree to enter into a confidential relationship with respect to the disclosure of certain proprietary and confidential information.

1. For purposes of this Agreement, "Confidential Information" shall include all information or material that has or could have commercial value or other utility in the business in which Disclosing Party is engaged. This includes but is not limited to the "Script" and "Budget" and "any other content transferred" and any ancillary documents or ideas created in the fulfillment of this voluntary review.

2. Receiving Party shall hold and maintain the Confidential Information in strictest confidence for the sole and exclusive benefit of the Disclosing Party. Receiving Party shall not use for Receiving Party's own benefit, publish, copy, or otherwise disclose to others, or permit the use by others for their benefit or to the detriment of Disclosing Party, any Confidential Information.

3. Nothing contained in this Agreement shall be deemed to constitute either party a partner, joint venture or employee of the other party for any purpose. Any ideas arising out of the process are the sole property of the Disclosing Party and not the reviewers.

This Agreement and each party's obligations shall be binding on the representatives, assigns and successors of such party.

This Agreement shall be entered into by signing below.

_____

(Signature of Receiving Party)

Tariquz Zaman Laskar_____   Date: _13 May 2022_____
(Printed Name)

_____

(Signature of Lovely Professional University representative)

___Mr. Sumit Gupta_____   Date: _____13 May 2022_____
(Printed Name)

DISCLAIMER

ACKNOWLEDGEMENT

The internship opportunity I had with Lovely Infotech was a great chance for learning and professional development. Therefore, I consider myself as a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me though this internship period.

Bearing in mind previous I am using this opportunity to express my deepest gratitude and special thanks to the **Mr**. **Pritpal Singh Saini** ,**Team Lead** and **Mr. Sumit Gupta**, **Deputy Director** who in spite of being extraordinarily busy with her/his duties, took time out to hear, guide and keep me on the correct path and allowing me to carry out my project at their esteemed organization and extending during the training.

I express my deepest thanks to **Mr. Gursharan Singh**, **Assistant Professor** for taking part in useful decision & giving necessary advice and guidance and arranged all facilities to make life easier. I choose this moment to acknowledge his/her contribution gratefully.

Tariquz Zaman Laskar
11809029

14 May 2022

List of Abbreviations

Terms	Abbreviations
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
MVC	Model View Controller
SDLC	System Development Life
SQL	Structured Query Language
CSS	Cascading Style Sheets
DFD	Data Flow Diagram
ERD	Entity Relation Diagram
GUI	Graphical User Interface
UI	User Interface
WWW	World Wide Web

Chapter-1
INTRODUCTION OF THE ORGANIZATION

Lovely Infotech

ORGANIZATION OVERVIEW

LPU is one of the few Indian universities, which can boast of its state-of-the-art computing resources and network across the campus. LPU believes in utilizing technology to the fullest, and to retain its position as one of the best IT-enabled universities.

IT ENABLED CAMPUS

- Complete Wi-Fi Campus supported on the technology from RUCKUS and CISCO.
- Robust Networking solution implemented and maintained by the networking Giant "Nortel".
- All blocks and buildings are connected through state-of-the-art ultra-high speed fibre optic backbone from MOLEX.
- Most powerful servers from HP/IBM for 100% redundancy and efficient data management.
- Most sophisticated surveillance and access control system for complete security
- High end Biometric systems for attendance of faculty
- 40+ servers and 150+ workstations.
- 5000+ clients that are a mix of latest Core 2 Duo, Dual Core and Quad Core computers.
- Dedicated and secured Data centre with powerful Blade and Rack Servers.
- Cisco catalyst 6509E core switch to provide the needed scalability and traffic control.
- Internet facility with 300 Mbps dedicated leased line.
- Secured network using high end firewall security feature etc.

LOVELY INFOTECH

Lovely InfoTech is the software arm of the university that is providing the much needed IT support to make the entire system of LPU efficient and reliable. Lovely InfoTech is involved in the development and implementation of IT projects for LPU. These projects also provide hands on experience to the students in handling technology. A special wing of Lovely InfoTech employs promising LPU Computer Science students, for software development work.

Lovely InfoTech Division has four Departments

1. Department of Software Development (using technology ASP.NET, C#, VB.NET etc.)
2. Department of Website Development (ASP.NET, PHP, CSS Design, etc.)
3. Department of IT Data Center
4. Department of Training Center

Chapter-2
INTRODUCTION OF THE PROJECT UNDERTAKEN

PROJECT OVERVIEW

Our project Placement Residence Examination preparation (iPREP) is based Solve student placement issues. Lots of student are facing issue regarding get placement in world top company. No able to find right content for prepare for placement exam. In this iPREP we are providing top based content, quiz, vide lecture, Special notes in PDF files. Also, we are providing Chapter based test. Pre exam sets. In this iPREP, all content is provided by LPU University and also top Mentors, Teachers. Every company has different technique for Interview. We are focusing on all these points.

PROBLEMS/NEED

The following steps show the problems and needs of the system:

• **ONLINE CONTNET:** Don't need to go for Any coaching centre you can prepare from anywhere.

• **DON'T NEED TO PAY:** Lots of students are not able to purchase professional course for preparations. We are providing 100% free and life time Access.

• **CONGESTION:** Students and faculties take long time to go from one place to another because of congestion on the roads.

• **DIFFICULTY IN SEARCHING:** Lots of students facing issues to find right content. We are providing all content in one place. Some time students think which course is better for preparation and they are expanding lots of time to get right course. Sometime they expand time on YouTube, google, Udemy and lots of platform. In PREP everything is Available with best content.

• **FREE TEST PAPER:** It is very difficult to analyse which types of questions company ask in exam & Interview. So, we have providing free Pre-Taste paper.

• **GROWTH REPORTS:** You can analysis how many marks you're getting in subjects. Which one is strong and week?

SOLUTIONS/APPROACH

These steps will be considered to solve above mentioned problems.

• **PERSONAL USER ACCOUNT:** We providing personal user access account. They can login and get all videos, lecture, and Reports and Notes.

• **LEVEL BASED LECTURE:** No Restriction, everything is free you can watch Ds, C++, Java anything you want to prepare. We providing Locked based feature. You have to complete C then you can watch C++ but here is that's help to complete the goal.
• **MENTOR GUIDE:** For Any Reason if you're struggling to understood any topic then you can get mentor support. They guide to understand the topic and you can clear doubt.

• **DIFFICULTY IN SEARCHING:** You don't need to take special subscription from lots of platforms. Everything available under one roof.

• **DIFFICULT TO ANALYSE THE BEST ROUTES TO FOLLOW:** We can create Level Based structure, so you don't need to think, from where I have to start.

• **PROBLEM IN PREPARING THE REPORTS:** The system will provide the facility to generate the Growth reports how many courses you have completed. Quiz marks pre-test result. That help you to improve your preparation.

Existing System

In google there are lots of platform who providing content to prepare for examination. But all are paid. Some students can't afford the pricing of existing course. And they are not providing life time Access. They are providing Paid Support. Some Platform like demy they Providing lots of course not focusing on only for Interview. In this iPREP we are solving all problems. And our main focus to solve students' problem to get placed in Worlds top company.

BUSINESS RULES AND REQUIREMENTS:

Serial No.	Module	Importance	Description
1	Online Registration	1	
2	Administrator	1	Assign privileges to the user (Student/Faculty) Create, Update or delete user Add user roles Add menu items/update Access rights Assign roles
3	Course and Test module	1	Provide details for the following a) Section wise Course b) Student wise test c) Faculty Course Management
4	Database management	1	Store all the records in the relevant Tables Easy maintenance of the database

FEASIBILITY

Feasibility is the second phase of SDLC. The feasibility study is basically the test of the proposed system in the light of its workability, meeting user's requirements, effective use of resources and. of course, the cost effectiveness. The main goal of feasibility study is not to solve the problem but to achieve the scope. In the process of feasibility study, the cost and benefits are estimated with greater accuracy. The various aspects of the Feasibility analysis are:

- **Operational Feasibility:** The system is used if it is developed and implemented, as there is sufficient support for the project in management because it increases optimization of resources.

- **Technical Feasibility**: Yes, the website is technically feasible as it uses top newly developed technologies in ASP.NET. MVC 5,Bootstrap (for responsive).

- **Economic Feasibility**: The system is cost acceptable as it cleared by the organization and there is no extra economic burden on the organization to implement the system as live.

- **Cultural Feasibility**: Students feel great about the solution as it Providing all content in One Platform.

- **Scheduled Feasibility**: It is feasible in concern of schedule feasibility because a lot of work will do only single clicks, thus saving a lot of time.

- **Legal Feasibility**: Yes, the system to be developed is legally valid.

FOUNDATIONS AND IMPACT /PROBLEM ANALYSIS

ASSUMPTIONS

- It is assumed that system will provide a user-friendly interface which is easy to understand and manage.

- User (student/faculties) need to have basic knowledge of computers and internet.

- Administrator has the complete right of accessing database and profiles of Administrator students and faculties.

ISSUES AND CONSTRAINTS

- Only administrator can make change to the database.
- Scope of the project is limited to the university level only.
- Frequent changes in time table will affect the whole system database.
- Easily Course upload and management
- Database is fully accessible to administrator.

RISK ASSESSMENTS

- Hardware/Network failure can interrupt the whole system.
- Unable to change the frequently made paths.

Solution Offered

These steps will be considered to solve above mentioned problems.

- **PERSONAL USER ACCOUNT**: We providing personal user access account. They can login and get all videos, lecture, and Reports and Notes.
- **LEVEL BASED LECTURE** No Restriction, everything is free you can watch Ds, C++, Php anything you want to prepare. We providing Locked based feature. You have to complete each chapter before going into next but here is that's help to complete the goal.
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- **PROBLEM IN PREPARING THE REPORTS**: The system will provide the facility to generate the Growth reports how many courses you have completed. Quiz marks pre taste result. That help you to improve your preparation.

SRS (SOFTWARE REQUIREMENTS AND ANALYSIS)

Concept of the iPREP

A E-Learning platform is a large collection of topics of every field from Bachelor of Technology to Bachelor of Arts and Science. Database for separating entities and topics. The administration is responsible for registering valid users based on their role and to give access on certain areas. Mentor/Teacher has right to add courses and set questions. The Admin confirms the courses and it's content and then approves it. And the student has only right to watch and read the content of courses and then they can attempt some questions.

System Actors

Actors are basically the engine of all systems. Control is Being an actor and playing an important role in assigning role and control subdivisions About the support actor. The proposed system is played by three types of actors. The role of system operation. Which are listed below-
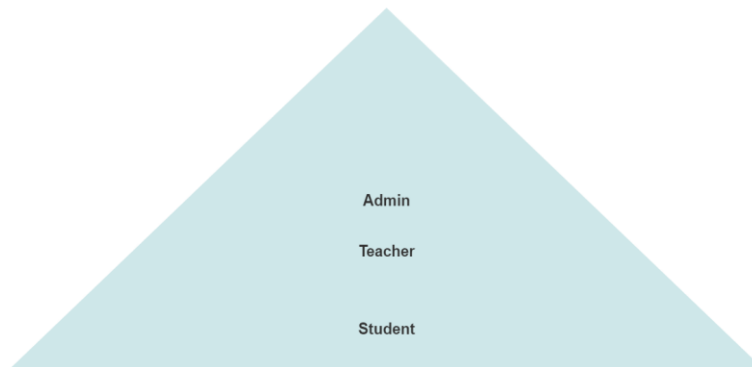
Figure 2.1: Actor hierarchy of iPREP

Functioning:

- It Consist of Three modules
    1. Admin Module
    2. Faculty Module
    3. Student Module

User classes and characteristics:

There are three kinds of users for the proposed system.

Administrators:

a) Administrator would hold the rights for the grant and revoke of the privileges to the users
b) Administrator can modify the interface according to the requirement.
c) Administrator must take care of the security issues involved in the system.
d) Administrator must maintain the website and update the same making

necessary changes at times.

e) Any failures in the system have to be detected and repaired.
f) Maintain the database consistency.

Student:

Student can check their timetable and update the profile. They can also check the routes and find the best path for better convenience. Student can search the class room and the block number based on the day and the time of the lecture, course code, course name information etc. Moreover, the system will be capable of providing the information about the lecturer (like lecturer's name etc.).

Faculty:

This sub module is for faculty only; they can search the lecture room and associated classes with the course name, based on the input given as day and time. They can also search the vacant rooms available on particular day and time for adjustment/makeup lectures/lab.

Required Technologies and Tools:

This section describes the necessary software programs and technologies and generally used to develop such application. All programs discussed here were the most recent versions at the time of working the project.

Asp.net MVC

ASP.NET MVC is a web application framework developed by Microsoft that implements the model-view-controller(MVC)pattern. It is open-source software. It is a lightweight,highly testable presentation framework that is integrated with existing ASP.NET features. The MVC model defines web applications with 3 logic layers:

- Model (business layer)
- View (display layer)
- Controller (input control)

A model represents the state of a particular aspect of the application. And a controller handles interactions and updates the model to reflect a change in state of the application, and then passes information to the view. And lastly a view accepts necessary information from the controller and renders a user interface to display the information.

Its codes can be written in any of the following languages:

- C#
- Visual Basic.Net
- Jscript
- J#

MSSQL

MSSQL is a freely available open source Relational Database Management System (RDBMS) developed by Microsoft.It is platform dependent. It is a software product with the primary function of storing and retrieving data as requested by the software applications, which may run either on the same computer or on another computer across a network. It is used to create and maintain databases.

Java Script

JavaScript is a scripting or programming language for web. It is widely used as part of web browsers, which allow client-side scripts to interact with the user and control the browser. It communicates asynchronously and alters the content of the document that is displayed. It is embedded to the HTML page by the following tag:

```
<script type="text/javascript"> Code </script>
```

HTML5

HTML5 is a Hypertext markup language used for structuring and presenting content on the World Wide Web. It is the fifth and current major version of the HTML standard . HTML is written in the form of HTML elements consisting of tags, enclosed in angle brackets (like <html>), within the web page content. HTML tags most commonly come in pairs like <h1> and </h1>, although some tags, known as empty elements, are unpaired, for example <img>. The first tag in a pair is the start tag, the second tag is the end tag (they are also called opening tags and closing tags).

HTML5 includes detailed processing models to encourage more interoperable implementations; it extends, improves and rationalizes the markup available for documents, and introduces markup and application programming interfaces (APIs) for complex web applications. The nested nature of HTML can be seen in its document object model (DOM) (Figure 2.2)[17].
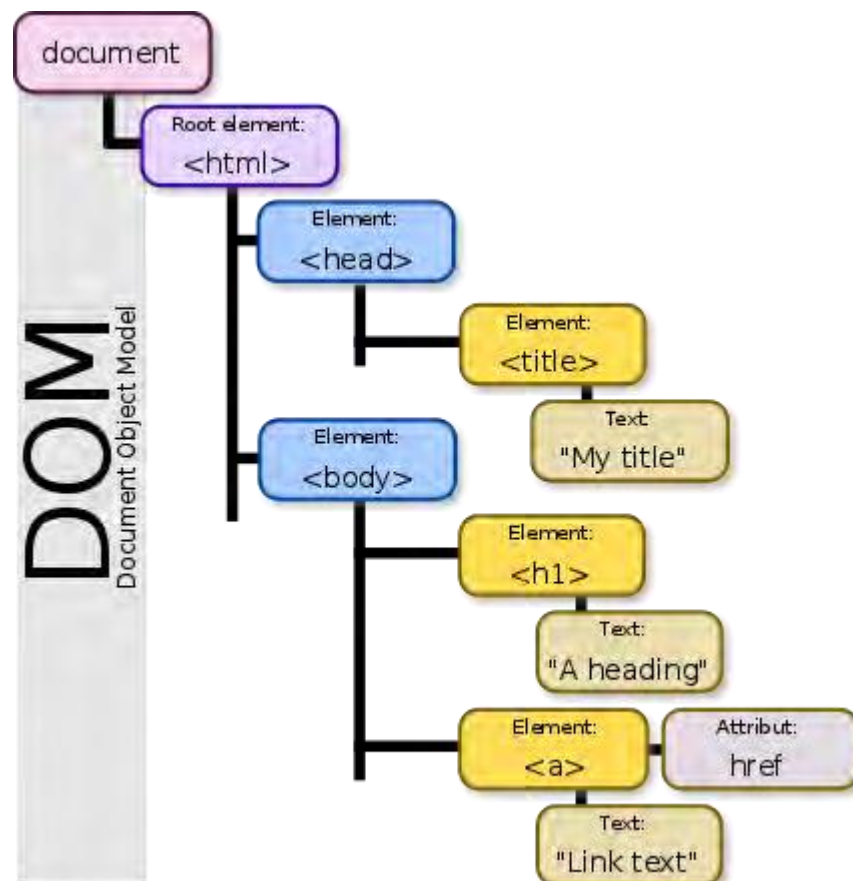
Figure 2.2: Example of DOM hierarchy in an HTML document

Bootstrap 5

Bootstrap 5 is a powerful front-end framework for faster and easier web development. It includes HTML and CSS based design templates for creating common user interface components like forms,buttons,navigation,drop-downs,alerts,modal,tabs,accordions,carousels,tool-tips and so on. It gives ability to create flexible and responsive web layouts with much less efforts.

There are some advantages of using bootstrap-

- It saves lots of time.

- Responsive features.

- Consistent design.

- Easy to use.

- Compatible with browsers.

- Open source.

Visual Studio 2019

Microsoft Visual Studio is an integrated development environment (IDE). It's used to make websites, web apps, web services, and mobile apps, among other things. Windows API, Windows Forms, Windows Presentation Foundation, Windows Store, and Microsoft Silverlight are among the Microsoft software development platforms used by Visual Studio. It can generate native as well as managed code.

Visual Studio comes with a code editor that supports IntelliSense (code completion) and code refactoring. The integrated debugger can be used as both a source-level and machine-level debugger. A code profiler, a designer for creating GUI applications, a web designer, a class designer, and a database schema designer are among the other built-in tools. It accepts plug-ins that extend functionality on practically every level, including source control support.

Design and Development

Introduction

The traditional system development life cycle (SDLC) was used to develop the system. SDLC system is an approach of generating a static structure, imitation and mechanism which be used by ordinary users to explore a system. It helps to demonstrate the overall view of different phase of development procedure.
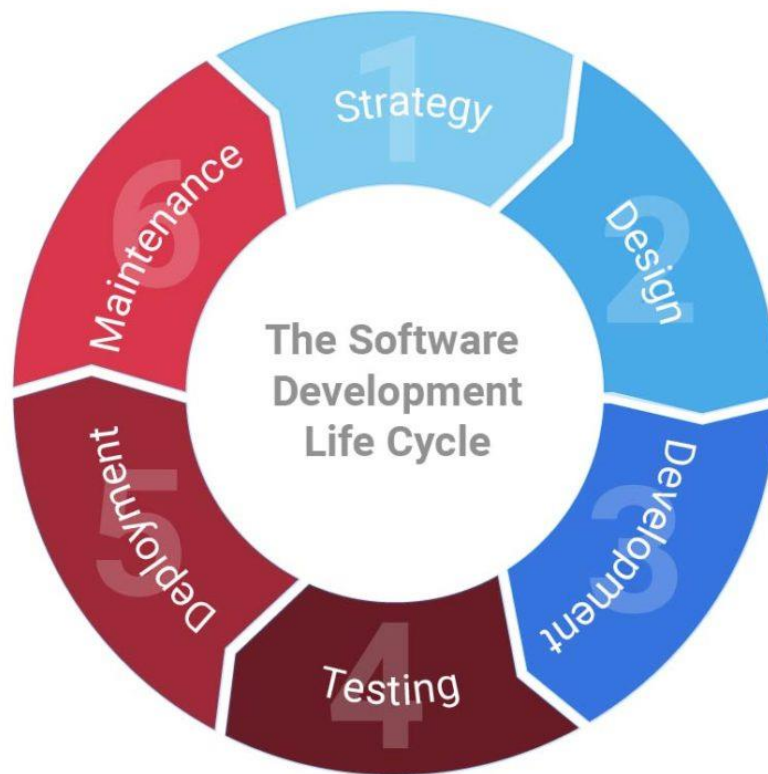
System Development Life Cycle (SDLC)

Modeling System Requirement

After performing system study and requirement modeling, a tentative framework of Question Bank Management System was developed. A use-case diagram, entity- relationship diagram, and context diagram were developed for further processing.The design of a data flow diagram with suitable input, process, storage, and output was developed at this stage.

Use Case Diagram

A use case diagram in the Unified Modeling Language (UML) is a type of behavioraldiagram defined by and created from a Use-case analysis. It is a set of scenarios that describes an interaction between a user and a system. The two main components of a use case diagram are use cases and actors.
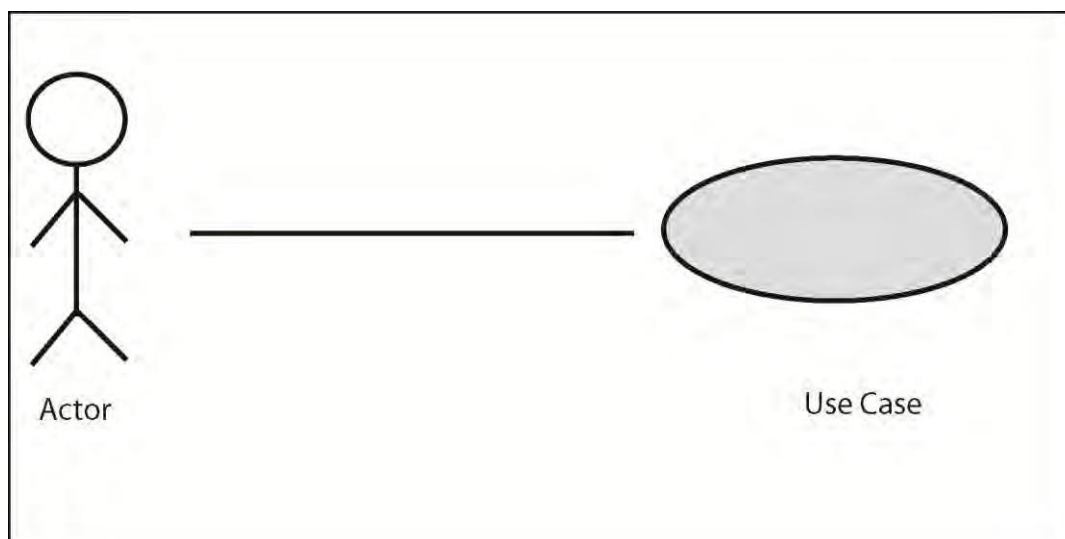
Actor and Use Case.

An actor represents a person, organization, or external system that will interact with this system. The symbols of actors are drawn as stick figures. A use case is an external view of the system that represents some actions the user might perform in order to complete a task and is drawn as a horizontal ellipse. Lines are used to representing the relationships between these elements.
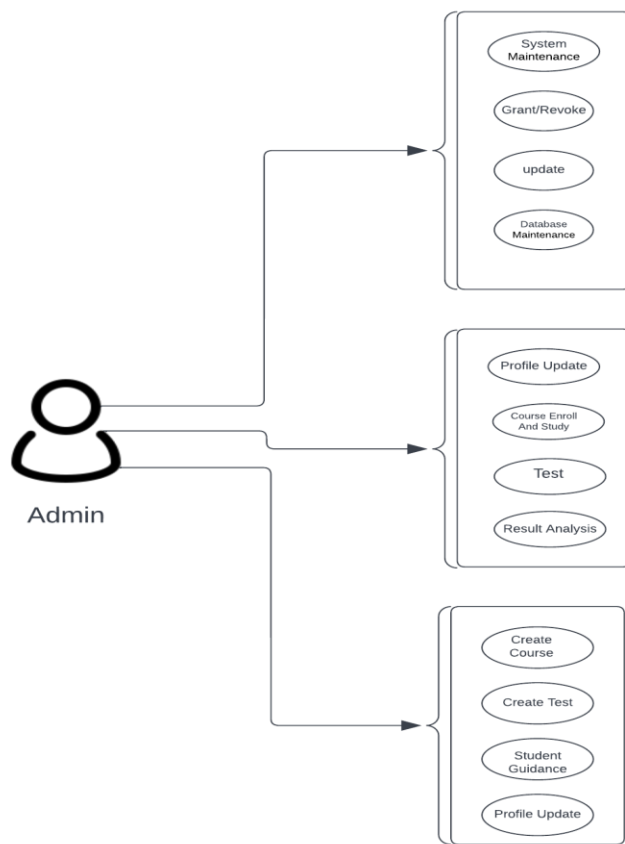
Use Case Diagram For Admin
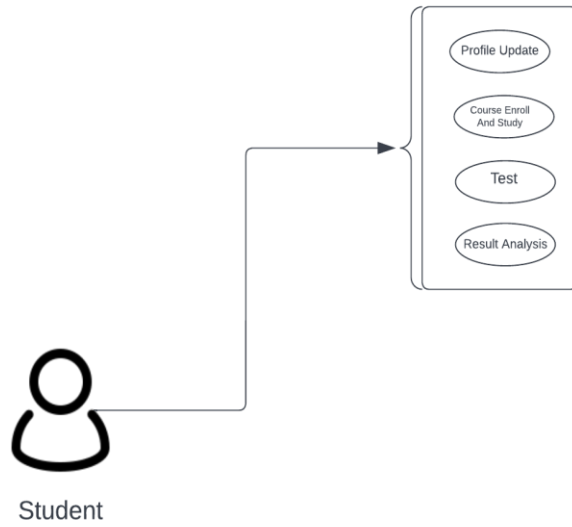
Use Case Diagram For Student
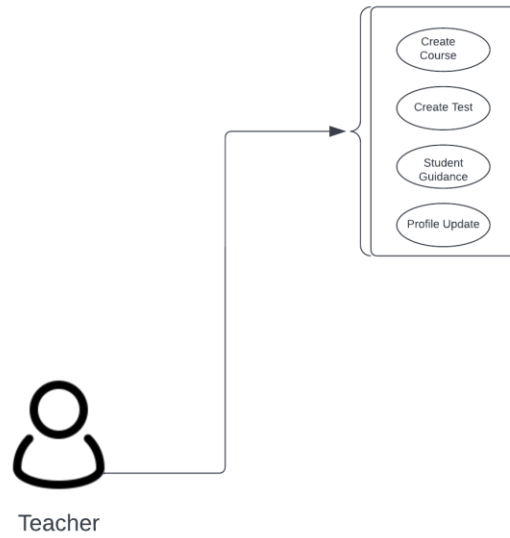
Use Case Diagram For Teacher

DFD (DATA FLOW DIAGRAM)

The DFD's represents the flow of the data among the different processes, entities and records. Here are 0-level (context diagram) and 1-level DFD's and 2-level DFD's. The 0-level DFD represents the overall entities participating in the system excluding the detailed functionality of the system. Whereas 1- Level DFD represents the module wise detailed functionality of the system.

Level 0 DFD:
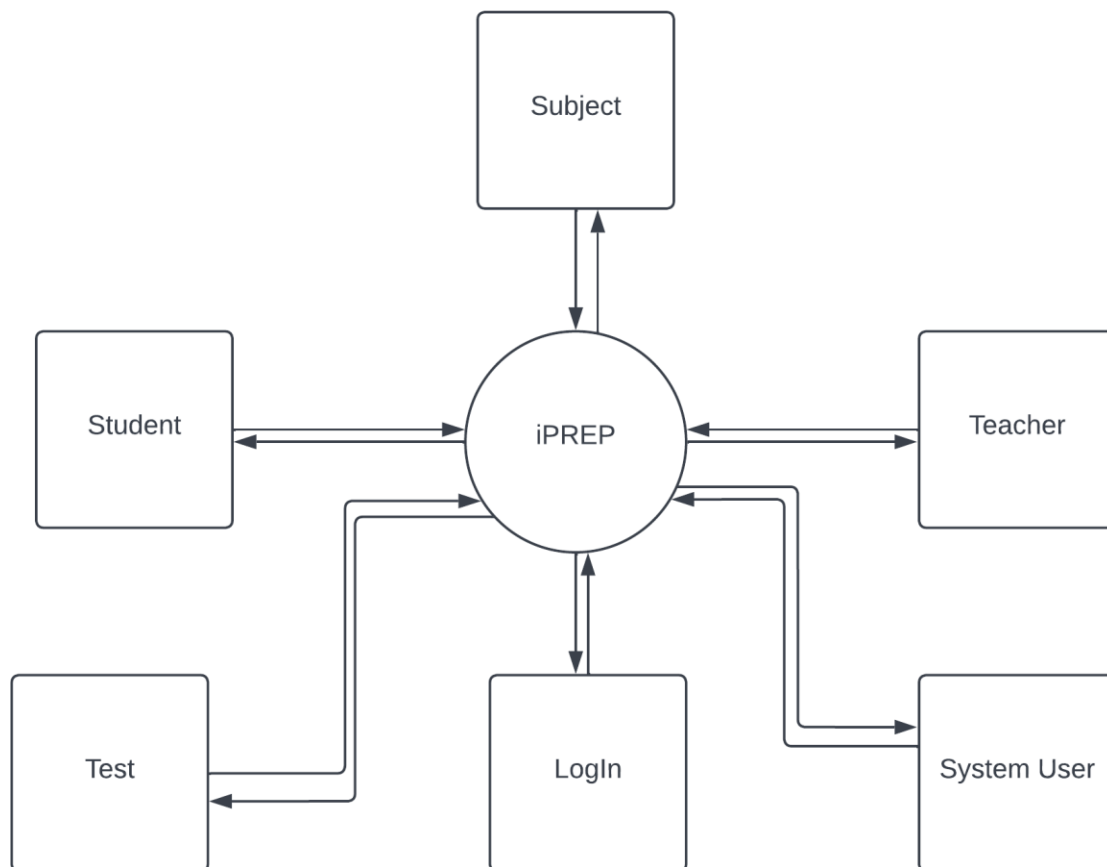
LV-1 DFD
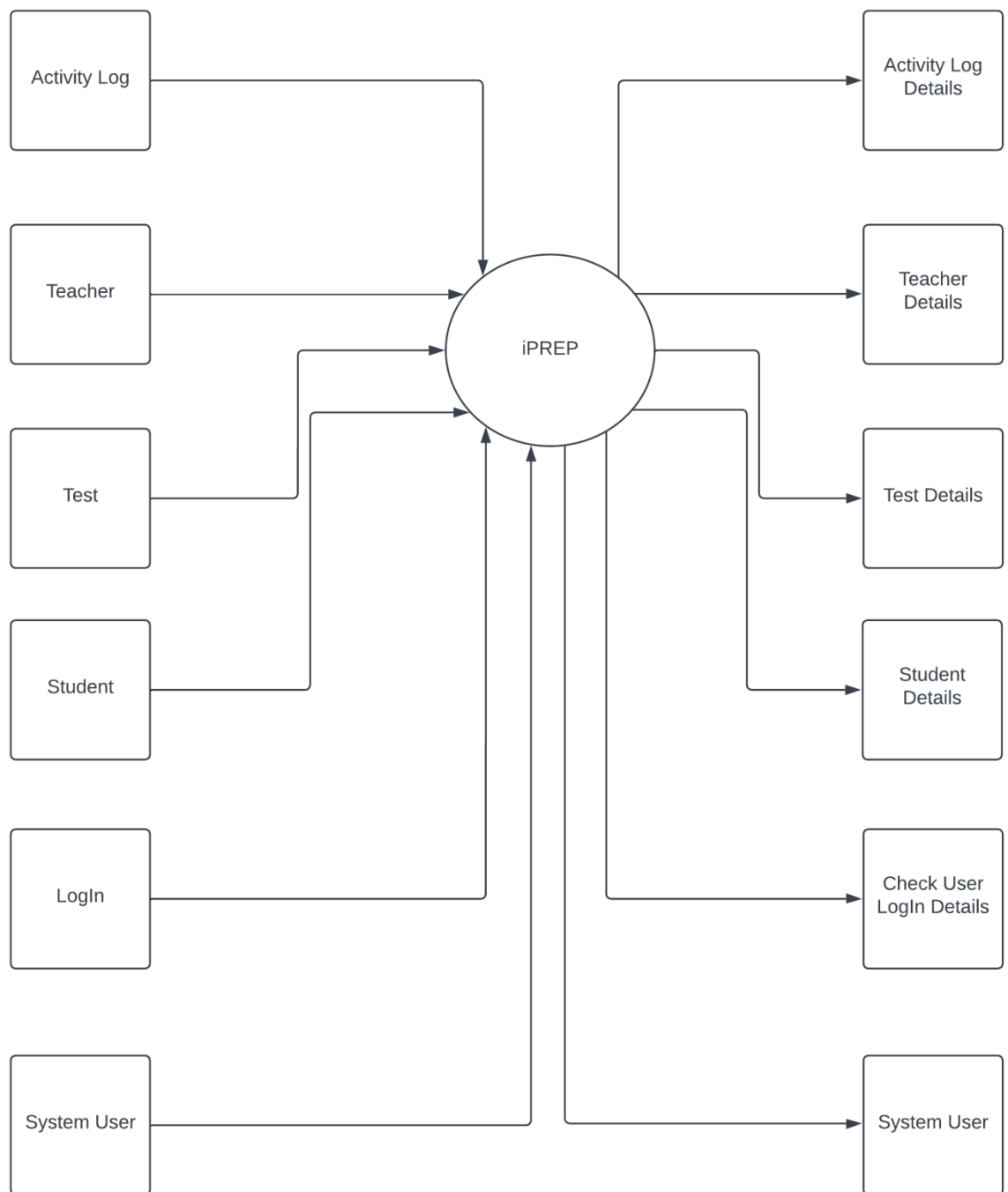
Lv-2 DFD-Teacher
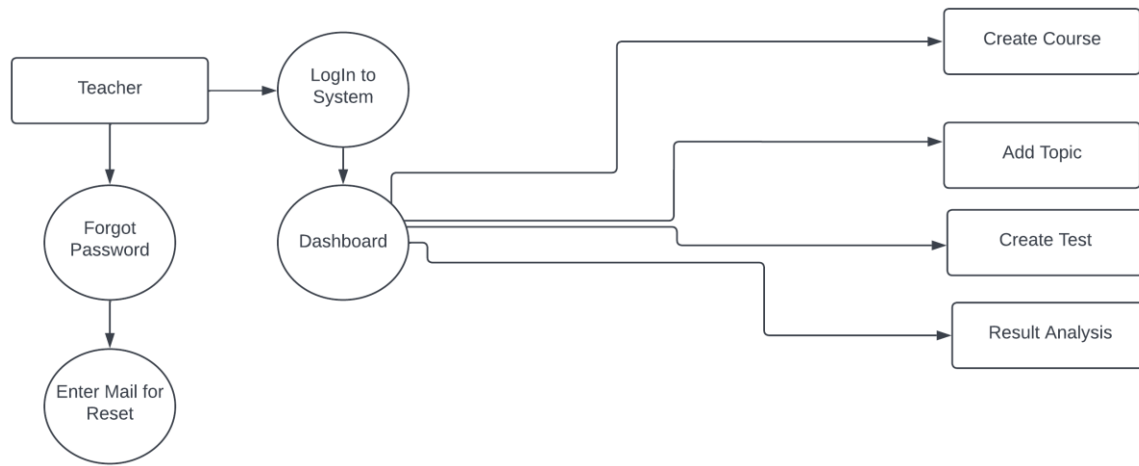
Lv-2 DFD-Student
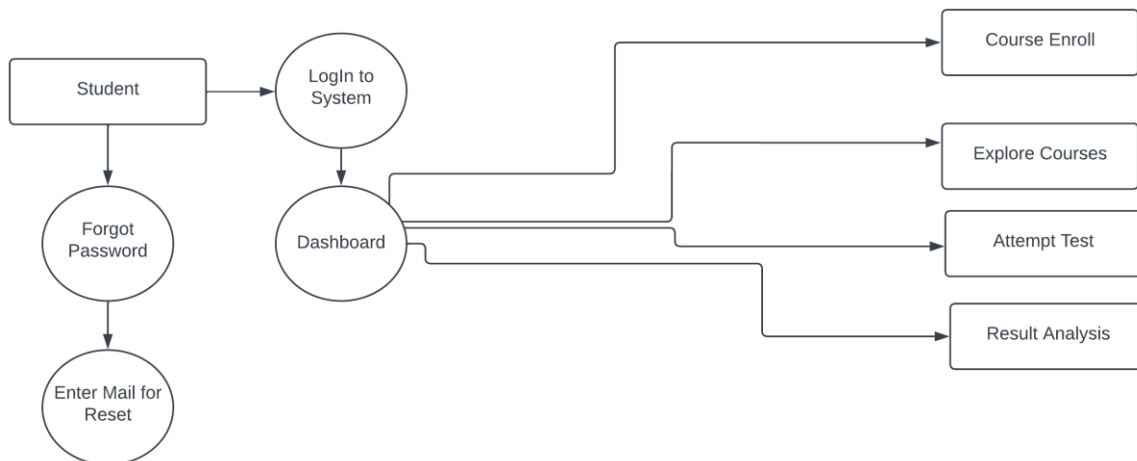
Database Design

A database is a collection of information, organized in such a way that a computer program can quickly select desired pieces of data. The computer program used to manage and query a database is known as a database management system (DBMS). Database design is the process of producing a detailed data model of a database. Databases are designed to offer an organized mechanism for storing, managing and retrieving information. This includes a detailed specification of data elements, data types, indexing options and other parameters residing in the DBMS data dictionary. Many models and languages are used for the design of the database. To design the database the Entity-Relationship Diagram (ERD) is used.
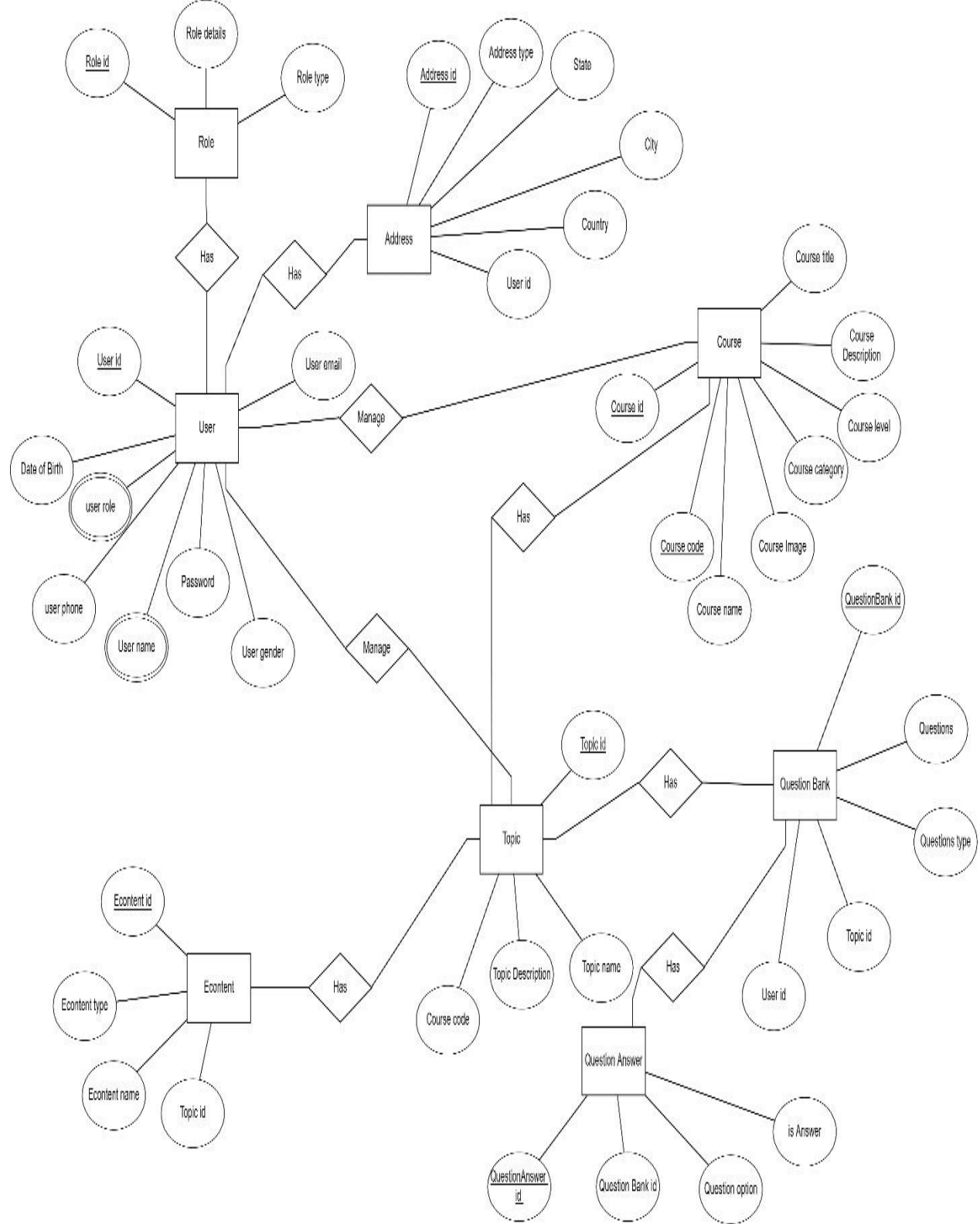
Entity relationship diagram

Database Relationship Diagram

Testing

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. Subjecting the software to various test case to identify the shortcomings and problems was the method adopted by is in our goal to test the software and remove any bugs or glitches.

Strategic Approach to Software Testing

The software engineering process can be viewed a series of levels. These levels define a particular phase in the process of testing. The next level of testing is implemented if and only if the previous phase showers no error or bugs. If a phase resulted in an erroneous output, it was tried to resolve the problem in that phase itself, or else move to the previous phase for debugging and the same process continued.
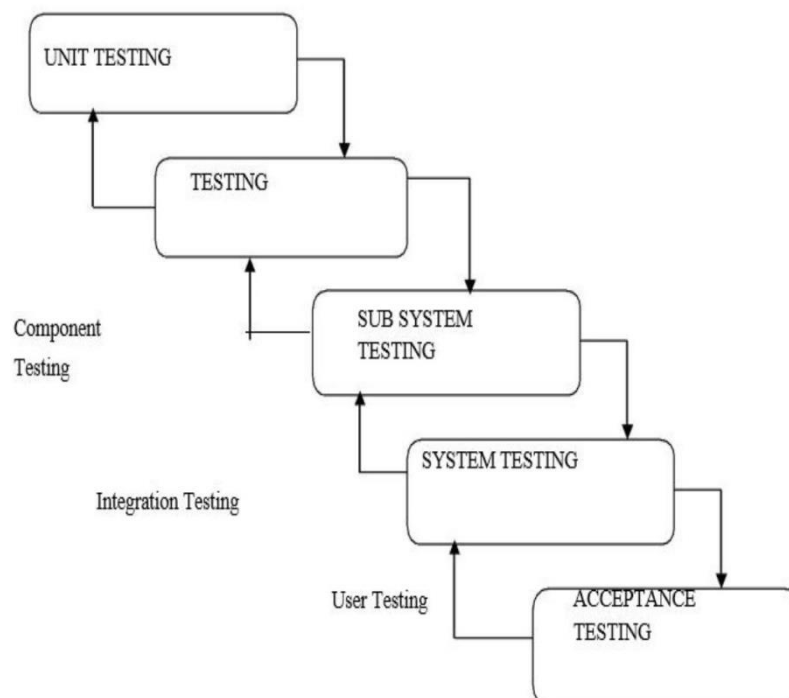
FUNCTIONAL TESTING

Functional testing is composed of these steps:

1. The identification of functions that the software is expected to perform
2. The creation of input data based on the function's specifications
3. The determination of output based on the function's specifications
4. The execution of the test case

The comparison of actual and expected outputs.

STRUCTURAL TESTING

Structural testing of the software includes the following types of Whitebox testing for determining internal flaws and bugs by the programmer:

Control flow testing - Testing whether the control flow between the modules takes place as desired.

Branch testing – Testing the conditions, how they act to situations and direct the flow in the various branches. All logical decisions have been exercised on their true and false sides. All loops are executed at their boundaries and within their operational bounds.

Path testing – Testing the path coverage of the modules according to various categories of input. All the paths presents must be covered by some or the other input.

Data flow testing – Checking and comparing the flow of data inside the modules and analyzing whether the filtering is appropriate or below expectation.

LEVELS OF TESTING

ALPHA TESTING

Unit testing

The individual modules have been tested at the time of creation by the developer creating it.

Integration testing (Top down & Bottom Up)

Integration testing was conducted after each phase of integration.

System Testing

System testing was conducted after all the modules were integrated and the result was compared with what was expected as output.

ACCEPTANCE TESTING

Acceptance testing was conducted with a predefined set of input and the expected output. The results of the software were as expectation.

BETA TESTING

The software was distributed to various individuals via storage media. We encouraged rigorous use of the software and should any problem arise, then to contact the development team to report the problem.

TESTING THE PROJECT

Some of the test cases are given following:

Table: Table of test cases

MODULE: User Registration:

TEST SUITE ID: USER REGISTRATION FORM (Signup)		CREATED BY: NITISH KUMAR RAI	DATE OF CREATION: 09-MAY-2022	
IMPLEMENTED BY: TARIQUZ ZAMAN LASKAR			DATE OF IMPLEMENTATION: 09-MAY-2022	
Pre-Requisites: - Visual studio 2019, MS SQL Server 2018, Required Field Validator, Regular Expression validation, Dropdown Lists.				
TEST CASE ID	DESCRIPTION	EXPECTED RESULTS	ACTUAL RESULTS	REMARKS
TC01	Click On the "Submit" Button when no Data input is given in any of the fields.	It should show the list of Validations that have been Violated i.e. Required Field validator, Regular Expression etc.	It Displays all the Error messages i.e. error for the fields that are required etc.	PASS
TC02	Input any number of characters Characters of input	It should not allow more the 25 characters of input	It does limit the input of twenty-five characters only	PASS
TC03	Input any special characters in the "Full Name" textbox Like "@$$$&^Name@@#"	It should allow the Input of any special characters like "@$%$^&@@"	It allows the input of special characters "@$%$^&@@"	PASS

TC04	Input any number of characters in the "Email" Textbox to check the limit of the no. of characters allowed as the input. Characters allowed for the input.	It should not allow more than 30 Characters of input in the email textbox	It limits or allows the input of Thirty characters only.	PASS
TC05	Input any number of digits in the "Contact No" Textbox to check the limit of the no. of digits allowed for the input.	Input any number of digits in the "Contact No" Textbox to check the limit of the no. of digits allowed for the input.	It does limit of ten digits only.	PASS
TC06	Input special characters like "#$^%&^*&^(" in the "Contact No." Textbox.	It should not allow any special characters like "#$^%&^*&^(" in Contact No textbox	It does not allow the input of special Characters like "#$^%&^*&^("	PASS
TC07	Input any number of character in the "Passwords" textbox to check the limit of the no. op character allowed for the input	It should not allow less than 8 digit and no more than 12 character.	It does limit of 12 character only.	PASS
TC08	Email id duplicate check	Same Email id not to be allow	Allow only different email id.	PASS
TC09	Add date of birth filled	It should not allow the input box is blank	It does not allow the input of special characters" @$$$$^"	PASS
TC10	Year range of date of birth	Date birth allow only 18+ years user	It does allow equal or more then 18 years	PASS
TC11	Select gender filed	It should not allow in the select box is blank	It does not allow the select multiple	PASS

MODULE: User LogIn:

TEST SUITE ID: USER Login FORM (Sign In)		CREATED BY: NITISH KUMAR RAI	DATE OF CREATION: 09-MAY-2022	
IMPLEMENTED BY: TARIQUZ ZAMAN LASKAR			DATE OF IMPLEMENTATION: 09-MAY-2022	
Pre-Requisites: - Visual studio 2019, MS SQL Server 2018, Required Field Validator, Regular Expression validation, Dropdown Lists.				
TEST CASE ID	DESCRIPTION	EXPECTED RESULTS	ACTUAL RESULTS	REMARKS
TC12	Click On the "Submit" Button when no Data input is given in any of the fields.	It should show the list of Validations that have been Violated i.e. Required Field validator, Regular Expression etc.	It Displays all the Error messages i.e. error for the fields that are required etc.	PASS
TC13	Check email id	Email id should exist.	Email id does exist.	PASS
TC14	Check email id format	It should not allow the Input of any special characters like "!#$%^&*"	Only special characters like @ accept	PASS
TC15	Input any number of characters in the "Passwords" textbox to check the limit of the no. op character allowed for the input	Password should be entered into correct format	Password entered is correct format	PASS
TC16	Password check with email	Password and email same	Difference password not to be accept	PASS

MODULE: Add Course:

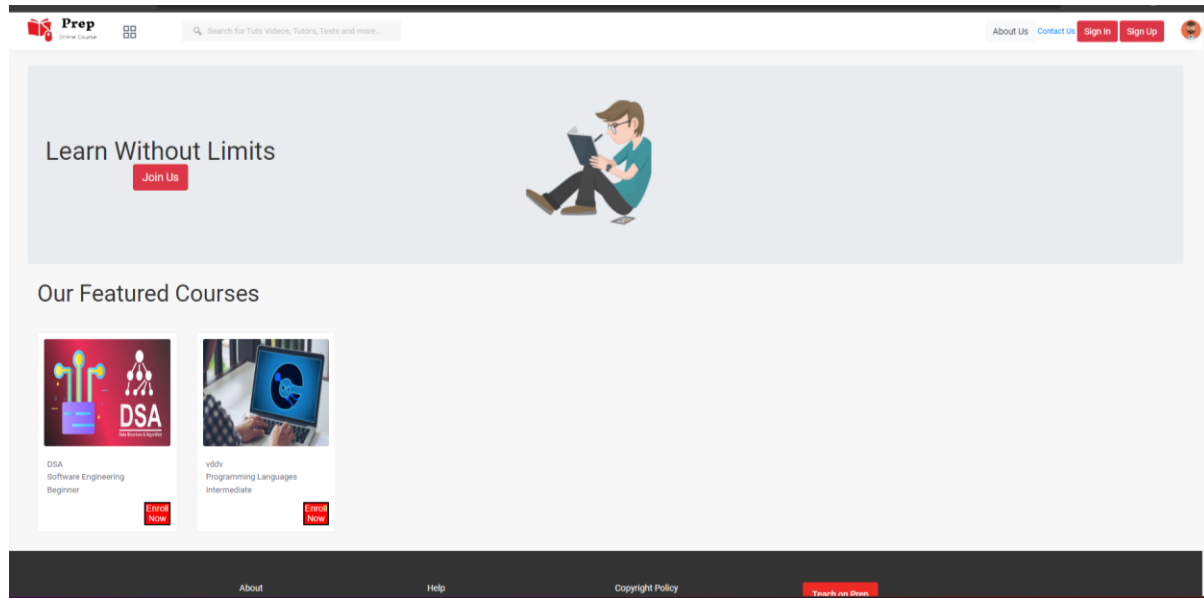| TEST SUITE ID: Create Course	CREATED BY: TARIQUZ ZAMAN LASKAR	DATE OF CREATION: 09-MAY-2022	
IMPLEMENTED BY: TARIQUZ ZAMAN LASKAR		DATE OF IMPLEMENTATION: 09-MAY-2022	
Pre-Requisites: - Visual studio 2019, MS SQL Server 2018, Required Field Validator, Regular Expression validation, Dropdown Lists.			
TEST CASE ID	DESCRIPTION	EXPECTED RESULTS	ACTUAL RESULTS	REMARKS
TC17	Click On the "Submit" Button when no Data input is given in any of the fields.	It should show the list of Validations that have been Violated i.e. Required Field validator, Regular Expression etc.	It Displays all the Error messages i.e. error for the fields that are required etc.	PASS
TC18	Input any number of characters in the "Course Name" Textbox to check the limit of the no. of characters allowed for the input.	It should not allow more the 60 Characters of input	It does limit the input of sixty characters only.	PASS
TC19	Input any number of characters in the "Course Title" Textbox to check the limit of the no. of characters allowed for the input.	It should not allow more the 60 Characters of input	It does limit the input of sixty characters only.	PASS
TC20	Input any number of characters in the "Course Description" Textbox.	All widgets (i.e. Bold, Italic, etc.) of editor should be functional	Widgets are not functional.	FAIL
TC21	Select "Course Level" from dropdown list.	When we click dropdown list of "Course Level",	It does working when we click on "Course Level"	PASS

		dropdown list should be working		
TC22	Select "Course Category" from dropdown list.	When we click dropdown list of "Course Category", dropdown list should be working	It does not allow the input of special Characters like "#$^%&^*&^("	PASS
TC23	Input box of "Course Image" to upload images	It should not allow any other file(like .txt,.pdf, etc.) except than image file(like jpg, jpeg, etc) to upload.	It does allow all kind of file to upload	FAIL

MODULE: Add Topic:

TEST SUITE ID: Create Topic		CREATED BY:NITISH KUMAR RAI	DATE OF CREATION: 09-MAY-2022	
IMPLEMENTED BY: TARIQUZ ZAMAN LASKAR			DATE OF IMPLEMENTATION: 09-MAY-2022	
Pre-Requisites: - Visual studio 2019, MS SQL Server 2018, Required Field Validator, Regular Expression validation, Dropdown Lists.				
TEST CASE ID	DESCRIPTION	EXPECTED RESULTS	ACTUAL RESULTS	REMARKS
TC24	Click On the "Submit" Button when no Data input is given in any of the fields.	It should show the list of Validations that have been Violated i.e. Required Field validator, Regular Expression etc.	It Displays all the Error messages i.e. error for the fields that are required etc.	PASS
TC25	Input any number of characters in the "Topic Name" Textbox to check the limit of the no. of	It should not allow more the 60 Characters of input	It does limit the input of sixty characters only.	PASS

	characters allowed for the input.			
TC26	Input any number of characters in the "Topic Description" Textbox.	All widgets (i.e. Bold, Italic, etc.) of editor should be functional	Widgets are not functional.	FAIL
TC27	Input URL in the "Video URL" textbox	It should not allow any other text which is not starting with "https"	It does allow other text which is not starting with "https"	FAIL
TC28	Input URL in the "External URL" textbox	It should not allow any other text which is not starting with "https"	It does allow other text which is not starting with "https"	FAIL
TC29	Input box of "Attachment" to upload file	It should not allow any other file (like .jpg, jpeg,etc.) except then file (like .pdf, .txt, .doc,etc.) to upload.	It does allow all kind of file to upload.	FAIL

MODULE: Show Topic and Courses:

TEST SUITE ID: Topic and Course List	CREATED BY: TARIQUZ ZAMAN LASKAR	DATE OF CREATION: 09-May-2022		
IMPLEMENTED BY: TARIQUZ ZAMAN LASKAR		DATE OF IMPLEMENTATION: 09-May-2022		
Pre-Requisites: - Visual studio 2019, MS SQL Server 2018, Required Field Validator, Regular Expression validation, Dropdown Lists.				
TEST CASE ID	DESCRIPTION	EXPECTED RESULTS	ACTUAL RESULTS	REMARKS
TC	Click On the "Show" Button.	By clicking on show button Topic list should appear in griedview.	It Displays all the Topic list.	PASS
TC30	Click on the "Show Econtent" button	By clicking on show button , Econtent details should appear	It Display all the Econtent details.	PASS
TC31	URLs in the EContent model	By clicking on URLs of video and externals, respective page should open of urls	Urls does not works.	FAIL
TC32	Clicking on "Delete" button.	By clicking on "Delete" button row should removed from the table.	It does remove from table after clicking on "Delete" button.	PASS

Screenshots

1. Home page Design

2. Login
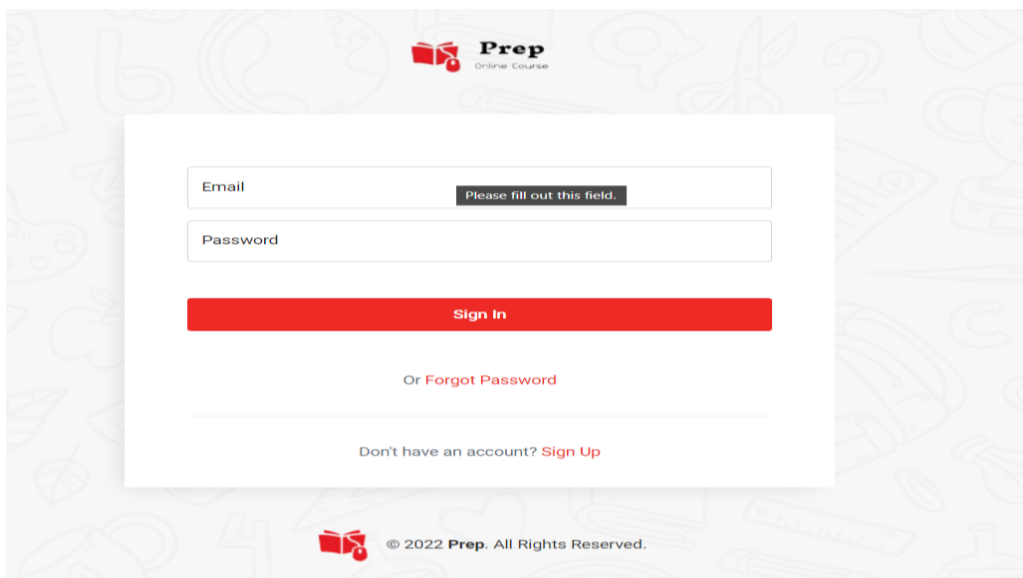
3. <u>Student Dashboard</u>
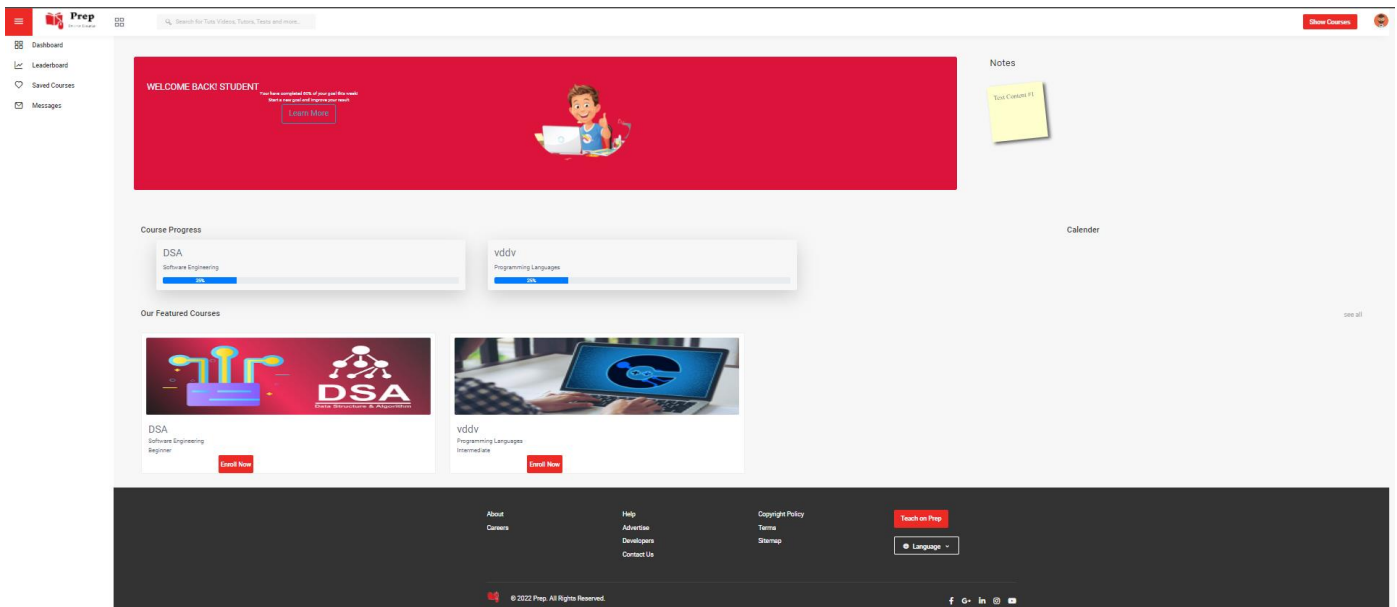
4. <u>Course Details</u>

5. Create Courses

6. Add Topic

7. Topic List

8. Course List

Chapter-3
LEARNING EXPERIENCE

Briefing in Topics Such as:

- HTML/CSS
- JavaScript and J-query
- Bootstrap

ASP.NET

ASP.NET is a free web framework for building great websites and web applications using HTML, CSS, and JavaScript. You can also create Web APIs and use real-time technologies like Web Sockets.

ASP.NET Core is an alternative to ASP.NET.

Websites and web applications

ASP.NET offers three frameworks for creating web applications: Web Forms, ASP.NET MVC, and ASP.NET Web Pages. All three frameworks are stable and mature, and you can create great web applications with any of them. No matter what framework you choose, you will get all the benefits and features of ASP.NET everywhere.

Each framework targets a different development style. The one you choose depends on a combination of your programming assets (knowledge, skills, and development experience), the type of application you're creating, and the development approach you're comfortable with.

Below is an overview of each of the frameworks and some ideas for how to choose between them.

Web Forms

With ASP.NET Web Forms, you can build dynamic websites using a familiar drag-and-drop, event-driven model. A design surface and hundreds of controls and components let you rapidly build sophisticated, powerful UI-driven sites with data access.

MVC

ASP.NET MVC gives you a powerful, patterns-based way to build dynamic websites that enables a clean separation of concerns and that gives you full control over markup for enjoyable, agile development. ASP.NET MVC includes many features that enable fast, TDD-friendly development for creating sophisticated applications that use the latest web standards.

ASP.NET Web Pages

ASP.NET Web Pages and the Razor syntax provide a fast, approachable, and lightweight way to combine server code with HTML to create dynamic web content. Connect to databases, add video, link to social networking sites, and include many more features that help you create beautiful sites that conform to the latest web standards.

All three ASP.NET frameworks are based on the .NET Framework and share core functionality of .NET and of ASP.NET. For example, all three frameworks offer a login security model based around membership, and all three share the same facilities for managing requests, handling sessions, and so on that are part of the core ASP.NET functionality.

In addition, the three frameworks are not entirely independent, and choosing one does not preclude using another. Since the frameworks can coexist in the same web application, it's not uncommon to see individual components of applications written using different frameworks. For example, customer-facing portions of an app might be developed in MVC to optimize the markup, while the data access and administrative portions are developed in Web Forms to take advantage of data controls and simple data access.

Web APIs

ASP.NET Web API is a framework that makes it easy to build HTTP services that reach a broad range of clients, including browsers and mobile devices. ASP.NET Web API is an ideal platform for building RESTful applications on the .NET Framework.

Sql

SQL is Structured Query Language, which is a computer language for storing, manipulating and retrieving data stored in a relational database.

SQL is the standard language for Relational Database System. All the Relational Database Management Systems (RDMS) like MySQL, MS Access, Oracle, Sybase, Informix, Postgres and SQL Server use SQL as their standard database language.

Also, they are using different dialects, such as −

- MS SQL Server using T-SQL,
- Oracle using PL/SQL,
- MS Access version of SQL is called JET SQL (native format) etc.

SQL is widely popular because it offers the following advantages −

- Allows users to access data in the relational database management systems.

- Allows users to describe the data.

- Allows users to define the data in a database and manipulate that data.

- Allows to embed within other languages using SQL modules, libraries & pre-compilers.

- Allows users to create and drop databases and tables.

- Allows users to create view, stored procedure, functions in a database.

- Allows users to set permissions on tables, procedures and views.

SQL Process

When you are executing an SQL command for any RDBMS, the system determines the best way to carry out your request and SQL engine figures out how to interpret the task.

There are various components included in this process.

These components are −

- Query Dispatcher
- Optimization Engines
- Classic Query Engine
- SQL Query Engine, etc.

A classic query engine handles all the non-SQL queries, but a SQL query engine won't handle logical files.

JSON

JSON or JavaScript Object Notation is a lightweight text-based open standard designed for human-readable data interchange. The JSON format was originally specified by Douglas Crockford and is described in RFC 4627. The official Internet media type for JSON is application/json. The JSON filename extension is. json.

JSON or JavaScript Object Notation is a lightweight text-based open standard designed for human-readable data interchange. Conventions used by JSON are known to programmers, which include C, C++, Java, Python, Perl, etc.

- JSON stands for JavaScript Object Notation.

- The format was specified by Douglas Crockford.

- It was designed for human-readable data interchange.

- It has been extended from the JavaScript scripting language.

- The filename extension is. json**.** JSON Internet Media type is **application/json.** The Uniform Type Identifier is **public.json.**

Uses of JSON

- It is used while writing JavaScript based applications that includes browser extensions and websites.

- JSON format is used for serializing and transmitting structured data over network connection.

- It is primarily used to transmit data between a server and web applications. Web services and APIs use JSON format to provide public data.

It can be used with modern programming languages.

Characteristics of JSON

- JSON is easy to read and write.

- It is a lightweight text-based interchange format.

- JSON is language independent.

Fig 9.6.1

```json
1  {
2    "name": "frontend-cv",
3    "version": "0.0.0",
     ▷ Debug
4    "scripts": {
5      "ng": "ng",
6      "start": "ng serve",
7      "build": "ng build --prod",
8      "watch": "ng build --watch --configuration development",
9      "test": "ng test"
10   },
11   "private": true,
12   "dependencies": {
13     "@angular/animations": "~12.1.1",
14     "@angular/cdk": "^12.2.4",
15     "@angular/common": "~12.1.1",
16     "@angular/compiler": "~12.1.1",
17     "@angular/core": "~12.1.1",
18     "@angular/forms": "~12.1.1",
```

JSON – Syntax

JSON syntax is basically considered as a subset of JavaScript syntax; it includes the following –

- Data is represented in name/value pairs.

- Curly braces hold objects, and each name is followed by ':'(colon), the name/value pairs are separated by, (comma).

- Square brackets hold arrays and values are separated by, (comma).

PROJECT LEGACY

Current Status of the Project

The current status of the project reflects a functional and responsive web application that works great with the any latest browser out there running on any operating system. There are still improvements going on. From developer point of view, we will still consider our application to be in the beta phase, so that improvements and user requirements can be made.

Technical and Managerial Lesson Learnt

Technical Lesson Learnt

This project gave me good opportunity to learn the latest technologies like ASP.NET,ASP.NET MVC, JavaScript and lots of other API's as I explained in the second section of report. And also many other like bootstrap framework, Jquery are used and MSSQL database for storing the data. I faced many hurdles along the way, but I crossed all of them by building logics and with the help of seniors to use best practices.

Managerial Lessons Learnt

I have learnt time management, division of work into modules and teamwork from this project.

- **Time Management:** Time management was an important part that had to be kept in mind all the time during development of project. Team managed the time so efficiently that we succeeded in completion of project before deadline. The very first task of our project was to decide that each day, we all will be working on a particular milestone or a set of related milestones and completing it by the end of office hours or before 1 day of the due date assigned to have time for issues if any left.

- **Division of Work into Modules:** The modules were divided equally amongst the team and at the end, the whole progress was integrated. Developers and designers then work on divided modules to achieve the goals before deadlines.

- **Teamwork:** As work was divided into modules, so I have learnt that how to work in a team and listen to each other's concern regarding technical issues and other conflicts arising in the workflow. I learnt team management skills from my senior team leaders here. I learnt how teamwork is the key to success of any company and a good harmony between team members plays a vital role in the successful completion work.

- **Problem Solving:** There was many points where there was a need of team meeting to device an effective solution to the problem. We used to note down ideas and implement the best and smartest way to tackle with the problem while keeping opinion of all the team members in mind.

Conclusion and Remaining Area of Concern(Future Work):

Conclusion

The application of iPREP is very helpful for Placement preparation. Student can prepare for each and every giant company. Day by day there are number of placement preparation portal are growing and it's very hard to track student performance by their placement cell. And sometime when student do not prepare well for any placement drive, they remain unplaced by which effect institution placement result. This platform is robust for student and even student can see their performance. Their performance will be share with their respective placement cell. And for Mentor/Teacher it is user-friendly. They can easily add courses,topic and create test, and even they can see performance of student and can guide them.

Remaining Area of Concern

In our project there are some more interface remain to design and develop. Following interfaces are listed below.

Test Interface.

In this iPREP project we are going to work on UI to make user interface easy and student can understand everything easily about examination, report and test schedule.

Video/ Content Interface.

In This iPREP we are going to add some more cool feature. Like our teacher going to upload some videos and user can easily watch video as learning purpose. Students can get benefits of vide lecture.

Result/Progress & Ranking Interface.

In this end everyone wants to know about performance. We are working on it so student can see their result and progress and ranking report. That's help then to enhance their skill.

As Student will go for content and video for preparation as created by Teacher. Teacher will create test for them to check their preparation level. And in Result/Progress & Ranking Interface, student could see their progress and teacher could also see individual student details and can keep their track, so they can guide each student individually and that can enhance each students preparation level.

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