

A
PROJECT REPORT
ON
REVISION TOOL: WEB BASED APPLICATION FOR
STUDENTS REVISION

Submitted in partial fulfillment for the award of
Post Graduate Diploma in Advance Computing
(PG-DAC) from
INSTITUTE OF EMERGING TECHNOLOGIES
Authorized Training Centre



Under the Guidance of
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BY

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CERTIFICATE

This is to certify that the project report entitled **REVISION TOOL-WEB BASED APPLICATION FOR STUDENTS REVISION** is a bonfire work carried out by **1. Nikhil Dhole 2. Krushna Salunke, 3. Vishal Musmade, 4. Purva Wagh** submitted in partial fulfillment of the requirement for the C-DAC ACTS, DAC course in the Institute of Emerging Technology in the batch of March 2023.

Course Coordinator

External Examiner

ACKNOWLEDGEMENT

This project **REVISION TOOL- Web Based Application for Students Revision** was great learning experience for us and we are submitting this work to Advanced Computing Training School (CDAC).

We are very glad to mention **Mrs. Prachi Godbole** for her valuable guidance to work on this project. Her guidance and support helped us to overcome various obstacles and intricacies during the course of project work.

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Sign of students

Name of Students

Sr.No.	Name	PRN	Sign
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1 INTRODUCTION

The Revision Tool is a Web Application used for revise the topic Subject wise. It is designed for Students, which would help them in the revision. Used Spaced repetition algorithm to maximize retention and minimize study time.

1.1 Purpose

This Revision Tool Software Requirement Specification (SRS) main objective is to provide a base for the foundation of the project. It gives a comprehensive view of how the system is supposed to work and what is to be expected by the end users. Client's expectation and requirements are analyzed to produce specific unambiguous functional and non-functional requirements, so they can be used by development team with clear understanding to build a system as per end user needs.

This SRS for RTS can also be used for future as basis for detailed understanding on how project was started. It provides a blueprint to upcoming new developers and maintenance teams to assist in maintaining and modifying this project as per required changeability.

1.2 Need Of Revision Tool System

With the progressive change in the education system of the country students, working professionals, need online platforms to study. One of the main difficulties faced by such students is lack of platforms and information. They need all subject material at one platform to revise and also provide when they need to revise.

Students and working concern

- Users can easily find variety in questions and subject
- No need to pay anything extra to get study material
- Flexible dates for short time and long-time revisions
- Community presence in same atmosphere.
- Peaceful and Healthy atmosphere for students for study.
- Lack of resource availability in single software

Institute owners concerns

- Management of teacher is easy
- Easy track of student records
- Easily get progress.

1.3 Overview

The remaining sections of this documentations describes the overall descriptions which includes product perspective and functions, characteristics of users. It also consists of Assumptions, and Constraints. Overall description is listed in section 2. Section 3 includes Specific Requirements which consists of Functional and Non-functional requirements, External Interface Requirements, Software System Attributes, Performance Requirements, Capacity Requirements, Availability Requirements, Safety Requirements and Requirement Traceability Matrix.

2 PROBLEM DEFINITION AND SCOPE

2.1 Problem statement and Scope of the Project

Web based online Revision Tool system is designed for students to manage various upcoming challenges occurs in revision. This application is preferring design for students where we can see for last two decades number of Education Institutes, Private courses is increasing rapidly so to fulfill needs we see number of student faced problems in their study and revision. Students forgets which subject they need revise again so this tool remind them.

The project is based on a spaced repetition algorithm to maximize retention and minimize study time. Spaced repetition is a memory technique that involves reviewing and recalling information at optimal spacing intervals until the information is learned at a sufficient level. The project is intended for students, which would help them in the revisions.

2.2 Goals and Objective

The Web based and App based Revision Tool System is intended to provide complete solution for Teacher and Students. It will enable Students to manage subjects, track all records, Tenants to search appropriate hostel browse through Website or app and book hostel room online without visiting hostel

2.3 Product Functions

Our Product General functions are:

- Students Registration,
 - Brows and search subjects
 - Check Availability of subjects
 - Display Answers
 - Revise the subjects
-

- Email – SMS Notification
- Show Statistical Data
- Manage subjects Details
- Generate Report
- Customer Service

2.4 User Characteristics

There are 3 user Levels in our Revision Tool System:

- A. Students
 - B. Teacher
 - C. Admin – Support system
-

Students

Search for the appropriate subject according

Provide the required details for user management payment track records.

Teachers

Add subject to web application with app required details questions details like multiple choices, descriptive and answers

Update questions and maintain and update track students data web based on portal

Admin – Support

They should be able to manage subjects and available teacher if necessary. Students have access to admin service desk portal to forward their inquiry. Students should at least be capable to use the web UI interface.

2.5 Major Constraints and Outcomes

Major Constraints in Revision Tool System

1. **Scalability:** The system needs to be able to handle a large number of students and subjects, as well as handle spikes in traffic during peak seasons.
2. **Security:** The system must ensure the security of user data, including personal information, statistical data.
3. **Reliability:** The system must be available and responsive at all times to ensure that users can make revision and access their information without interruption.
4. **Integration:** The system must be able to integrate with other systems such as social media, and third-party APIs.
5. **User experience:** The system must be easy to use and navigate for both students and staff to ensure a smooth revision process.
6. **Data privacy:** The system must comply with data privacy regulations such as GDPR and HIPAA.
7. **Customizability:** The system must allow for customization to meet the unique needs of different students.
8. **Accessibility:** The system must be accessible for differently abled users and comply with web accessibility standards.
9. **Cost:** The system must be cost-effective and provide a good return on investment.
10. **Maintenance:** The system must be easy to maintain and update to ensure that it stays up-to-date with the latest technologies and features.

3. SOFTWARE REQUIREMENT SPEIFICATION

3.1 Proposed System and Scope:

The scope of the system is to provide a user-friendly application that is easy to navigate and provides sufficient information about the subject.

Two potential groups of viewers exist:

- i. Institute: Who are seeking an automated system to manage their subject.
- ii. Student/ Bachelor: Those who are looking for platform where they can revise their subjects can get the best platforms and revise subject without any external help.

This system allows Owners to manage/maintain their subjects. Keep track of subject, teachers, and students. This system also allows Students to search for subjects and revise without any external help.

4. SYSTEM MODULES

1. **Profile Management:** This module allows users to view their subject, attempted questions. It also allows the admin to view and manage all the subject.
2. **User Management:** This module manages all user-related activities such as registration, login, and profile management.
3. **Subject Management:** This module allows the admin to add, edit, and delete Subject. It also shows the most visited subject and sub topics status.
4. **Points Management:** This module handles all question related problems such as accept answers, show answers repetition time.
5. **Communication Module:** This module allows the user to communicate with the teacher through chat or email for any queries or issues.
6. **Security Module:** This module ensures the security of the system and user data by implementing various security measures such as encryption and authentication.

5. PERFORMANCE REQUIREMENTS

Performance requirements in a revision tool typically include fast loading times, reliable and secure data storage, and the ability to handle a high volume of simultaneous users. Other important factors may include user-friendly navigation and user interface, mobile compatibility, and integration with payment systems. Additionally, a good hostel booking system should also have robust reporting and analytics capabilities to help the hostel management track occupancy, revenue, and other important performance metrics.

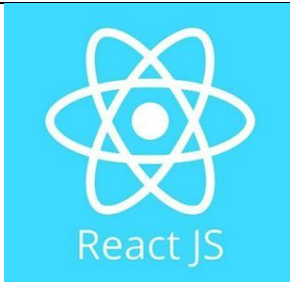

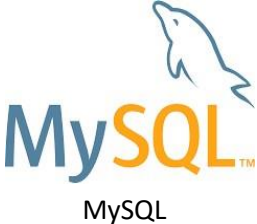
5.1 Hardware and Software REQUIREMENTS

External Interface Requirements

User Interfaces

The user interface for system shall be compatible to any type of web browser such as Mozilla Firefox, Google Chrome, and Microsoft EDGE, Opera, BING

Software Interfaces

	FRONT END	BACKEND	DATABASE
	 REACT JS		 MySQL

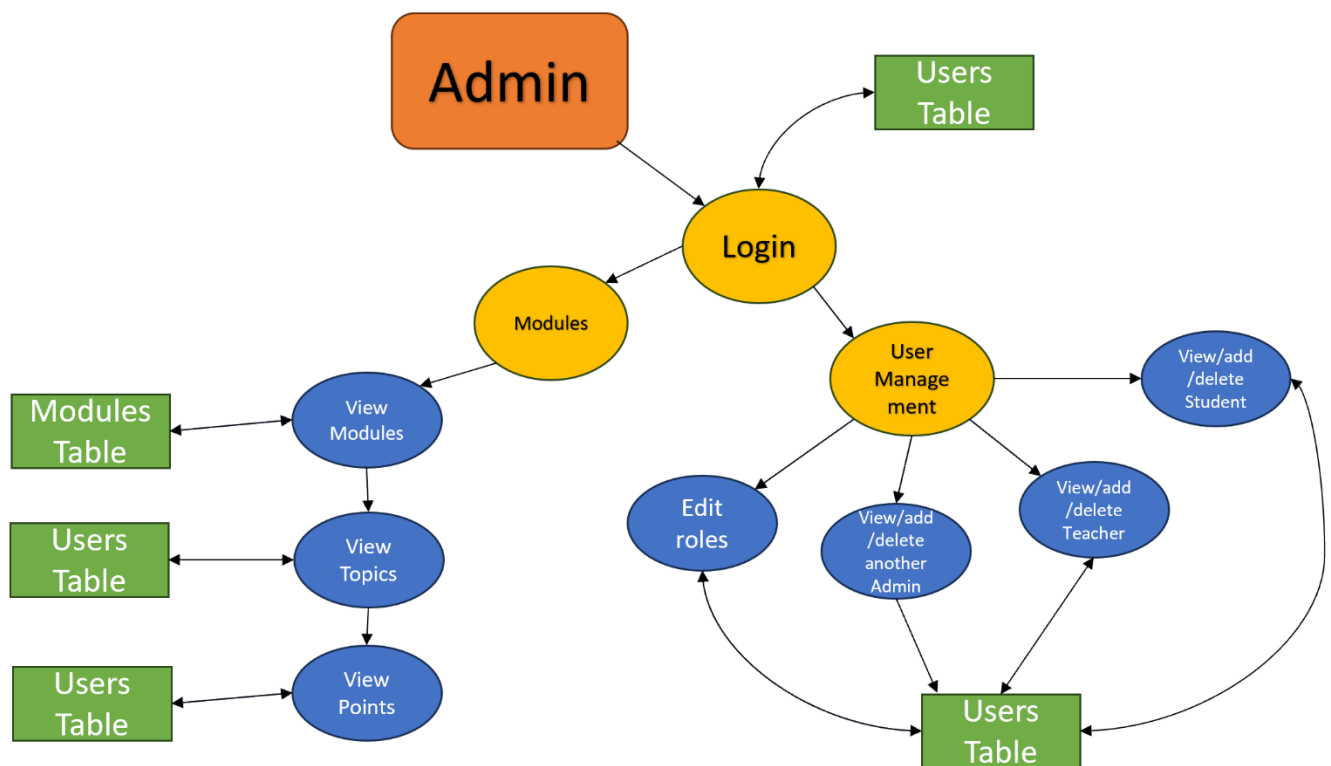
Hardware Interfaces

Server Side			
Monitor	Processor	RAM	Disk Space
Resolution: 1024x768	Intel or AMD 2GHZ OR HIGHER	4GB	10GB
Client Side			
Monitor	Processor	RAM	Disk Space
Resolution: 1024x768	Intel or AMD 1GHZ DUAL CORE MIN	2 GB	128 GB

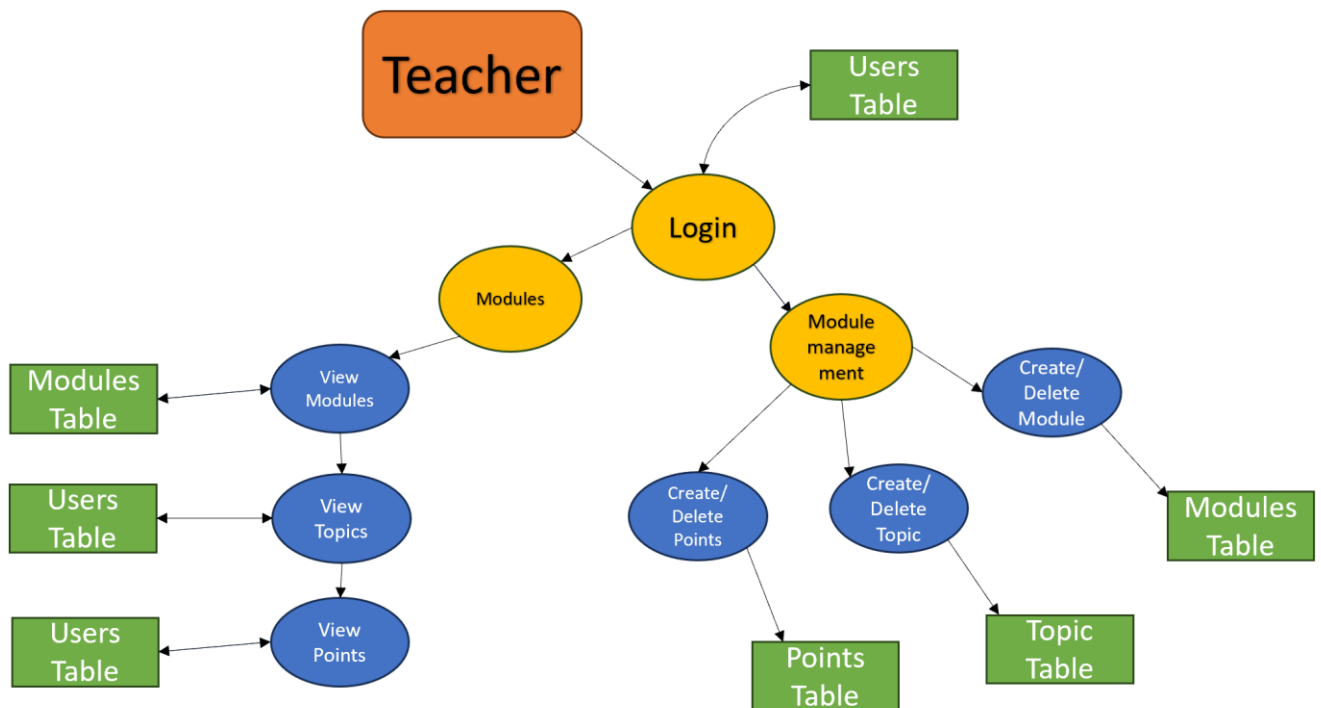
6 UML DIAGRAMS

6.1 Data Flow Diagram

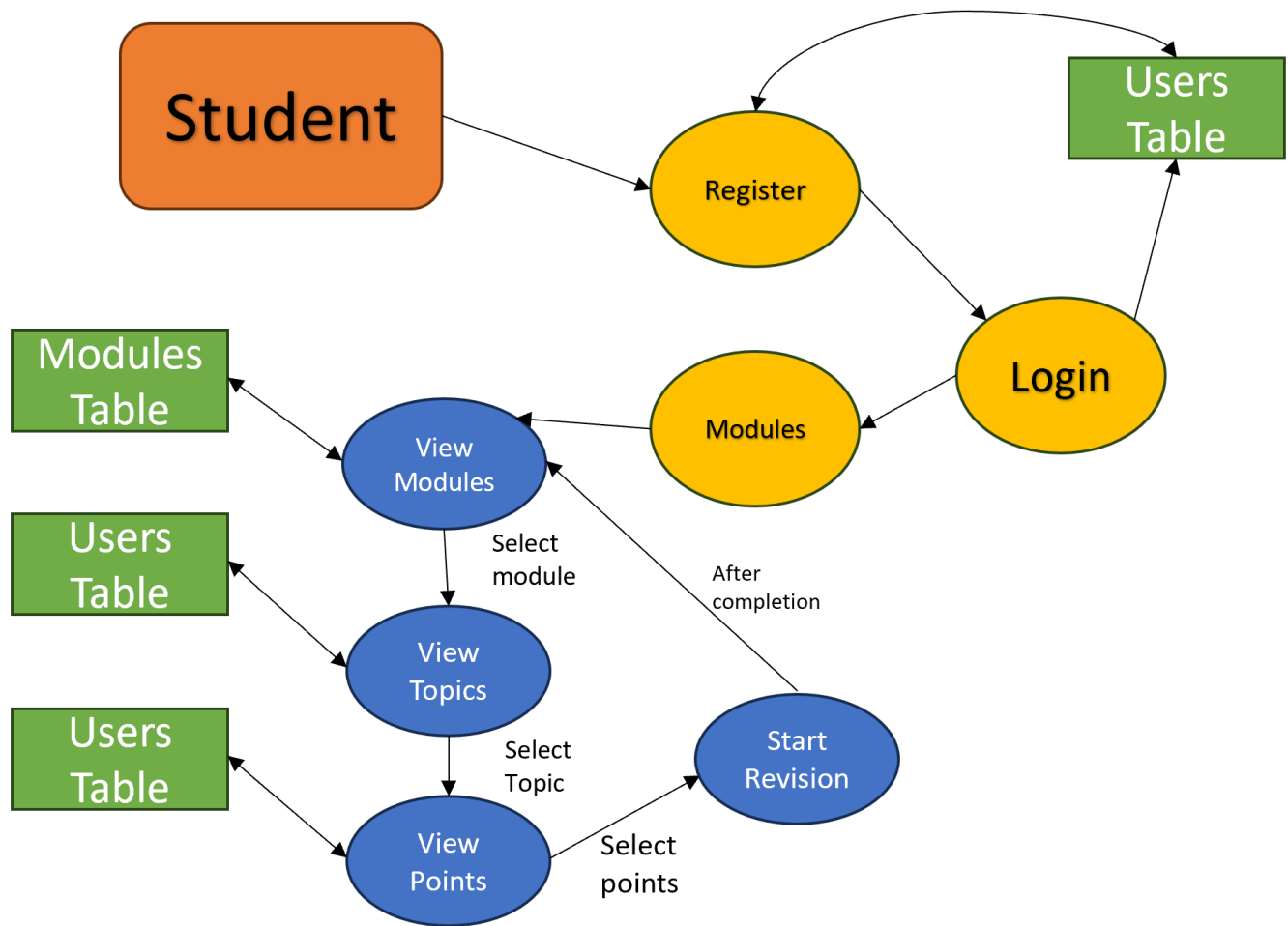
6.1.1 Level 1 Data Flow Diagram for Admin



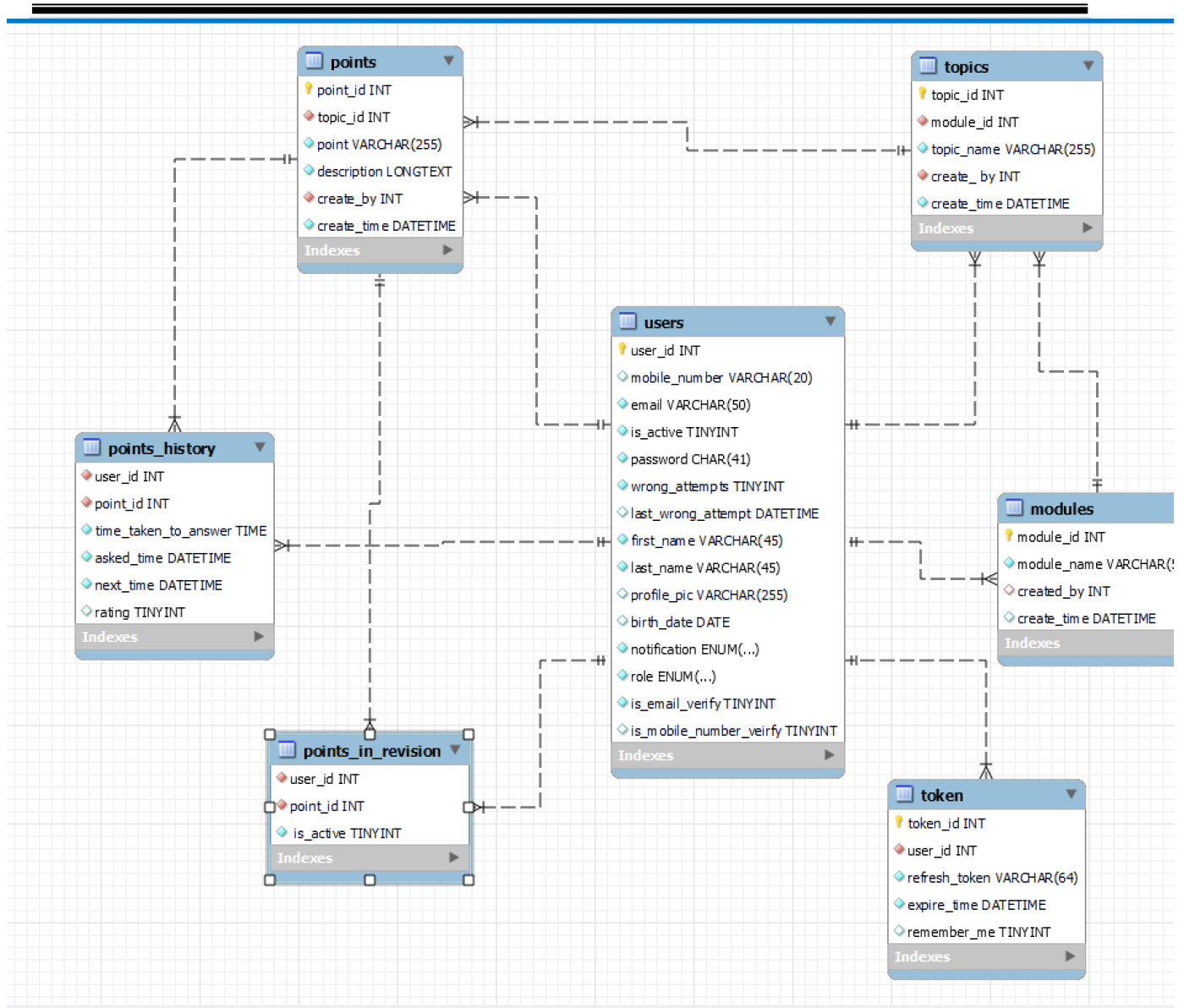
6.1.2 Level 1 Data Flow Diagram for Teacher



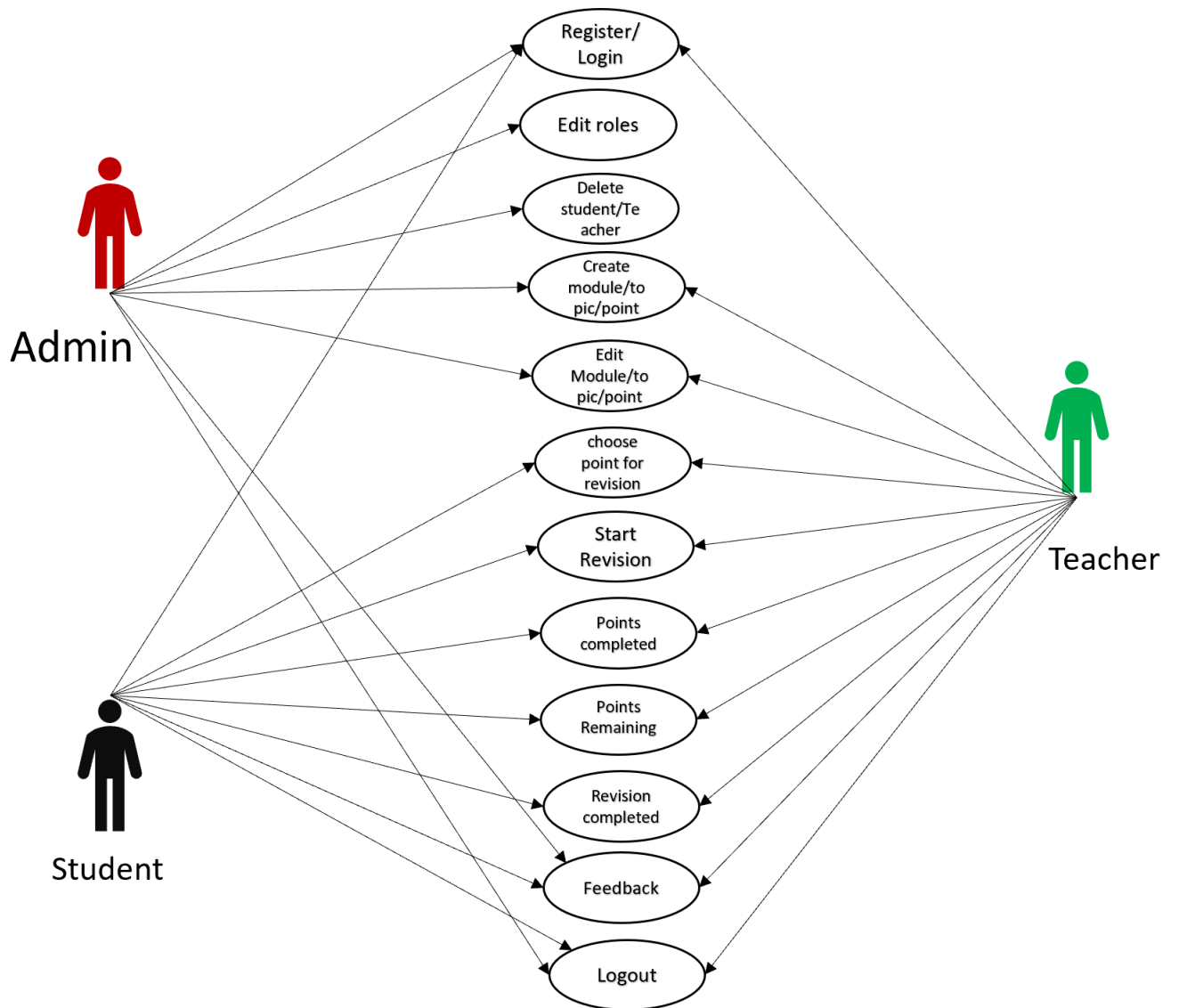
6.1.3 Level 1 Data Flow Diagram for Student



6.2 Entity Relationship Diagram



6.3 Use-case Diagram



7. Test Cases

Login Test Cases

Test Case ID	Test Case	Test Case I/P	Actual Result	Expected Result	Test case criteria(P/F)
001	Admin enter the correct username or password click on submit button	Username or password	Accept	Accept	P
001	Admin enter the wrong username or password click on submit button	Username or password	Error come	Accept	P
002	Teacher enter the correct username or password click on submit button	Username or password	Accept	Accept	P
002	Teacher enter the wrong username or password click on submit button	Username or password	Error come	Accept	P
003	Student enter the correct username or password click on submit button	Username or password	Accept	Accept	P
003	Student enter the wrong username or password click on submit button	Username or password	Error come	Accept	P

Registration Test Cases

Test Case ID	Test Case	Test Case I/P	Actual Result	Expected Result	Test case criteria(P/F)
001	Enter the number in first name, last name field	Number	Error Comes	Error Should Come	P
001	Enter the character in first name, last name field	Character	Accept	Accept	p
002	Enter the invalid email id format in email id field	npkvgmail,com	Error comes	Error Should Come	P
002	Enter the valid email id format in email id field	pp@gmail.com	Accept	Accept	P
003	Enter the invalid digit no in phone no field	99999	Error comes	Error Should Comes	P
003	Enter the 10 digit no in phone no field	9999999999	Accept	Accept	P
006	Enter the 8 digit password	44444444	Error comes	Accept	P

System Test Cases

Test Case ID	Test Case	Test Case I/P	Actual Result	Expected Result	Test case criteria(P/F)
001	Student login into the system	Email or password	Accept	Accept	P
001	Search for Modules	Display all modules within modules	Accept	Accept	P
001	Student will Start the revision	It redirect to question page	Accept	Accept	P
001	Click on show Answer	It is showing answer	Accept	Accept	P
001	Teacher login to the system	Username or password	Accept	Accept	P
001	Teacher will list his subject and questions into the system	Module Details	Accept	Accept	P
001	Admin can check Users Information	User Table	Accept	Accept	P
001	Admin login into system	Username or password	Accept	Accept	P
002	Admin Dashboard	Dashboard	Accept	Accept	P
002	Admin can see users table	Users table	Accept	Accept	P
003	Admin can Add Teacher	Teacher Verification	Accept	Accept	P

Revision Tool

003	Admin can Edit or Delete User	User Table	Accept	Accept	P
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Logout Test Cases

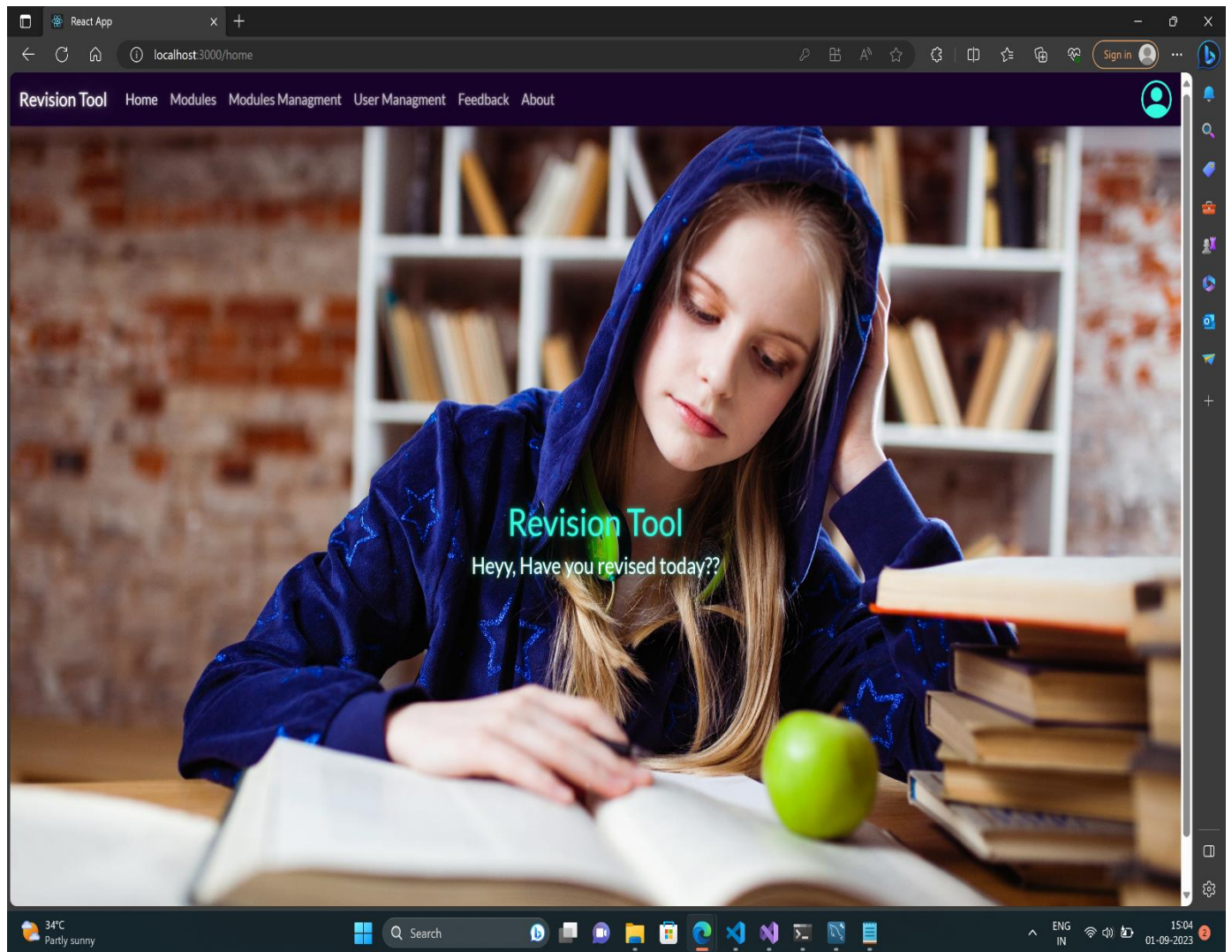
Test case ID	Test case	Test case I/P	Actual Result	Expected Result	Test cases criteria(P/F)
001	Logout	User exit	Session exit	Logout successfully	P

GUI Testing

Test case	Login Screen- Sign up
Objective	Click on sign up button then check all required/ mandatory fields with leaving all fields blank
Expected Result	All required/ mandatory fields should display with symbol “*”. Instruction line “* field(s) are mandatory” should be displayed
Test case	Create a Password >>Text Box Confirm Password >>Text Box
Objective	Check the validation message for Password and Confirm Password field
Expected Result	Correct validation message should be displayed accordingly or “Password and confirm password should be same” in place of “Password mismatch”.

8. Screenshots

Home page for every panel



Revision Tool | Home | Modules | Modules Managment | User Managment | Feedback | About

Modules List | Revision Completed

Revision remaining: 0 | Revision completed: 0 | For tomorrow: 0

OPERATING SYSTEM

Revision remaining: 0

Revision completed: 0

For tomorrow: 0

DATABASE TECHNOLOGY

Revision remaining: 0

Revision completed: 0

For tomorrow: 0

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Revision Tool | Home | Modules | Modules Management | User Management | Feedback | About

Module Management Panel

Create module

Module List

Module Id	Name	Create By	Add Question	Edit Name	Delete
26	OPERATING SYSTEM	44	Manage Topic	OPERATING SYSTEM Save Delete	
27	DATABASE TECHNOLOGY	44	Manage Topic	DATABASE TECHNOLOGY Save Delete	

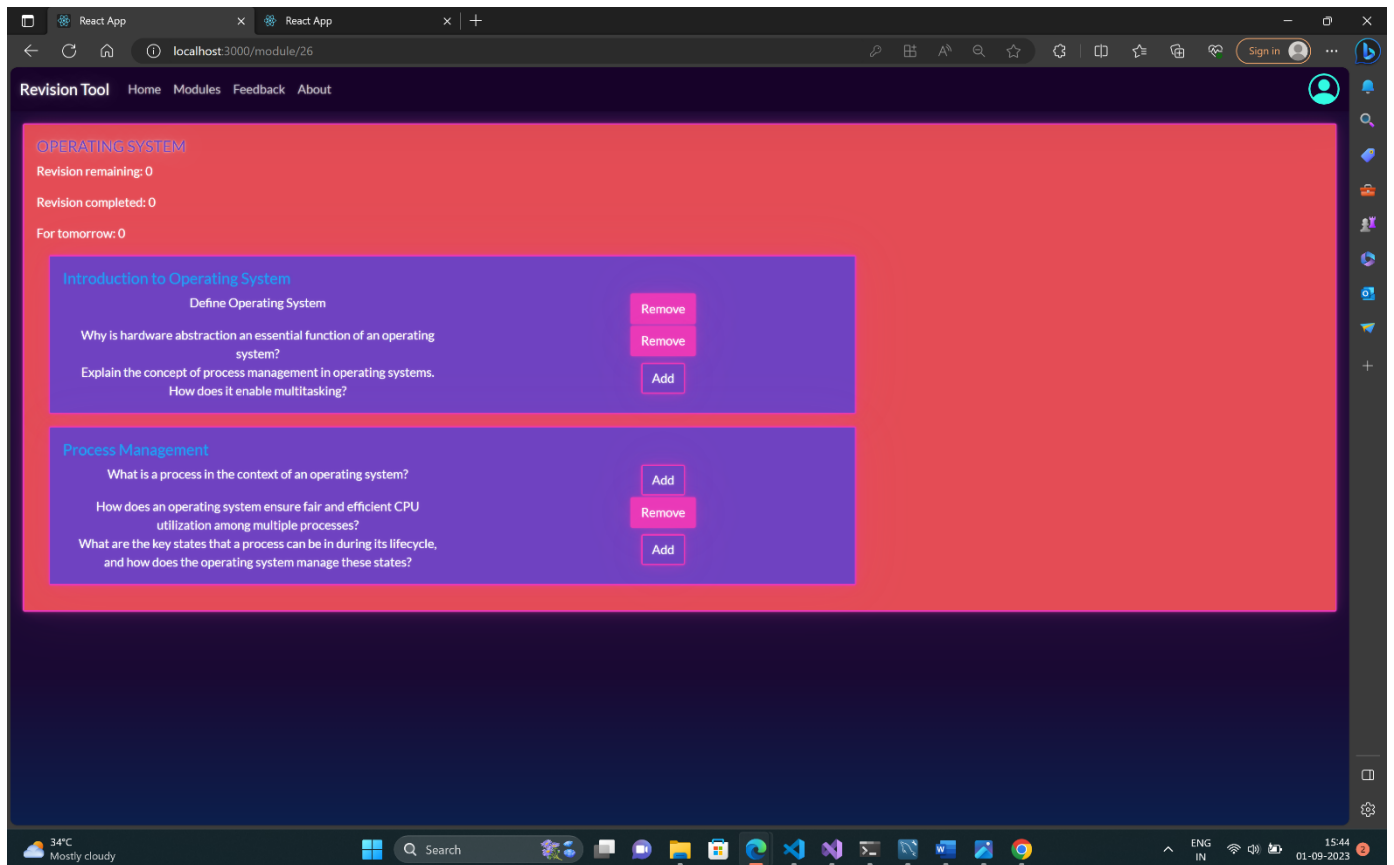
Revision Tool | Home | Modules | Modules Management | User Management | Feedback | About

Admin Panel

List of Users

User Id	Role	First Name	Email	Mobile Number	Password	Is Active	Profile Pic	Birth Date	Email Verify	Mobile Verify	Edit	Delete
1	student	asd	a		a	0			0		Edit	Delete
42	admin	Krushna	krushna@gmail.com		qqqq1111\$	0			0		Edit	Delete
43	student	dlikj	nksadf@gallo.com		VPsKhlg7klqGKDCCVNuWhw==.d8eczJYvqJBbYdGBbVnanS20HyhJXy380GT/9k9If9c=	1			0		Edit	Delete
44	admin	purva	purvawagh8600@gmail.com		rIj3+I38bWRPOc72tzEHcA==.6yoosdKUKqnVZSN+F+SixySd3tZhdScur3Y9ue83ls=	1			1		Edit	Delete
45	student	sumedh	sumedh@gmail.com		+ICnLmoTPvtMnMDbFMB+IA==.k61Jq/G/RLJwkiOwZ7r62gCepsIqODTzA1USZcAYKWU=	1			0		Edit	Delete

Revision Tool



Revision Tool | Home | Modules | Modules Management | User Management | Feedback | About

[Module Management](#) / [Topic Management](#) / [Point Management](#)

Point Management Panel

Create Point

Point List

Point Id	Topic Id	Point	Description	Created by	Created Time	Edit Point Name	Edit Point Description	Delete
23	30	Define Operating System	An operating system (OS) is a system software that serves as the fundamental software component of a computer or computing device. It manages and controls the hardware resources of the computer, provides essential services and functionalities, and acts as an intermediary between the user, application software, and the computer's hardware components.	44	2023-09-01T14:55:40	Define O	An opei	Save Delete
24	30	Why is hardware abstraction an essential function of an operating system?	Hardware abstraction is crucial because it shields application software from the complexities of hardware differences. It provides a consistent interface, allowing software to run on various hardware configurations without modification.	44	2023-09-01T14:56:59	Why is h:	Hardw:	Save Delete
25	30	Explain the concept of process management in operating systems. How does it enable multitasking?	Process management involves the creation, scheduling, and control of processes (programs in execution). It enables multitasking by rapidly switching between processes, giving the illusion that multiple programs are running simultaneously on a single CPU.	44	2023-09-01T14:57:23	Explain ti	Process:	Save Delete

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Revision Tool | Home | Modules | Modules Management | User Management | Feedback | About

Admin Panel

List of Users

Edit User

Role : student

First Name : krushna

Name : krushna

Email : krrishsalunke8999@gmail.com

Mobile Number :

Password :

Is Active : yes

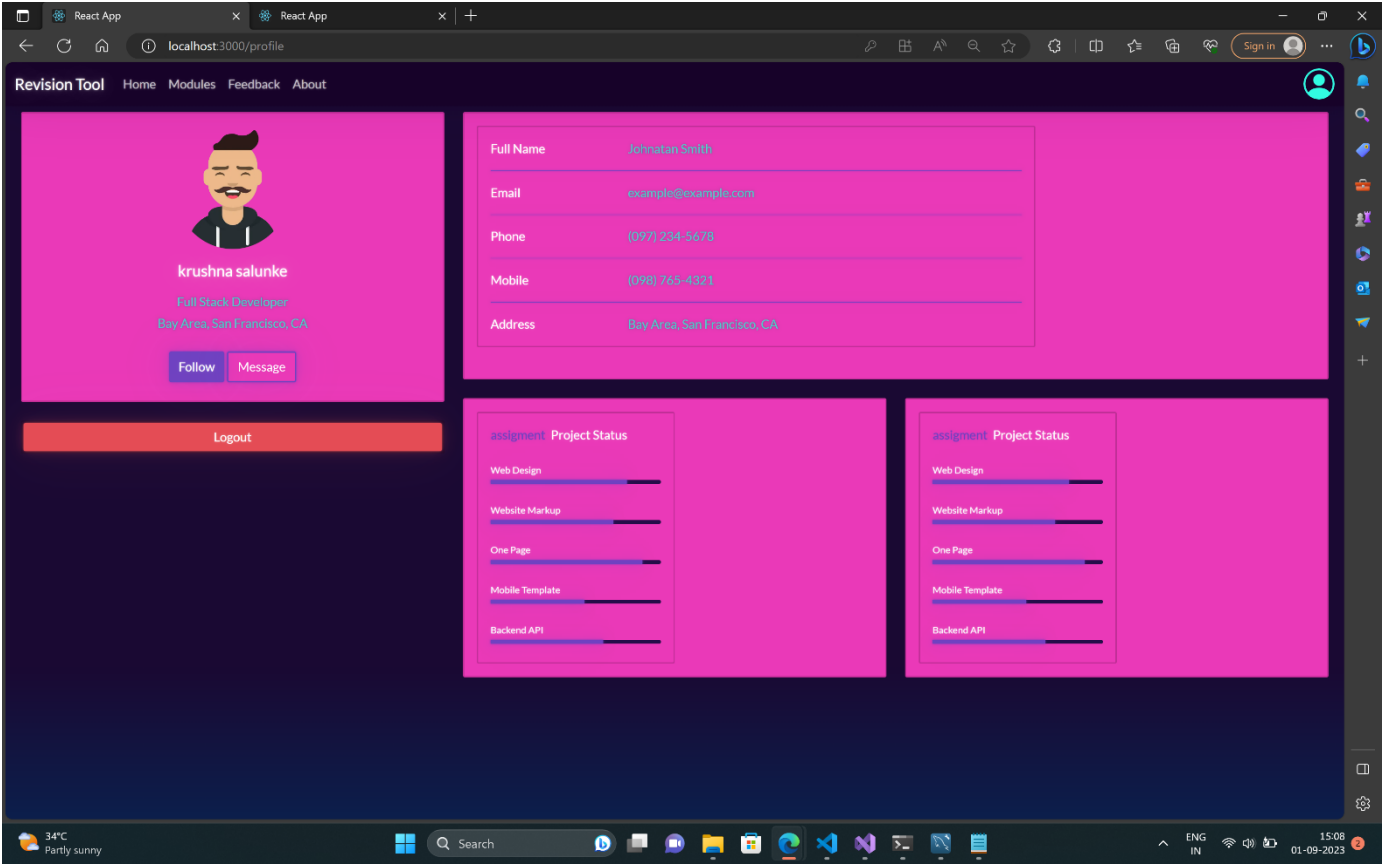
Profile Pic : No file chosen Birth Date : dd-mm-yyyy

Email Verify : yes

Mobile Number Verify : yes

Notification Preference: none

34°C Mostly cloudy | Search | ENG IN | 15:45 01-09-2023



9. References

- ✓ https://en.wikipedia.org/wiki/Spaced_repetition
 - ✓ https://en.wikipedia.org/wiki/Forgetting_curve
 - ✓ https://www.youtube.com/watch?v=zNRVz7dgfuE&ab_channel=NihiraTechiees
 - ✓ https://www.youtube.com/watch?v=2Mv4-S-Cdw0&ab_channel=DotNetTech
 - ✓ https://www.youtube.com/watch?v=lk5dhDzfzsU&ab_channel=TheDotNetChannel
 - ✓ <https://getbootstrap.com/docs/5.3/getting-started/introduction/>
 - ✓ <https://react.dev/learn>
 - ✓ <https://bootswatch.com/vapor/>
-