DEPARTMENT OF COMPUTER SCIENCE, IT & ANIMATION

A PROJECT SYNOPSIS

On

Education Hub

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Project Allotment Letter

This is to declare that the Project entitled **"Education Hub"** has been allotted to **'Akash B. Mundhe'**, **'Prachi Sunil Nagave'**,**'Sakshi Rajesh Nampalli'**,**'Mayur Ganesh Pawar'** in partial fulfillment of the degree of **BCA(Science)** of Dr. B. A. M. University during the academic year 2025-2026.

Project Guide	In-charge	HOD
Ms. Rashmi V. Agrawal	Dr. Rajashri A. Joshi	Dr. Ritesh A. Magre

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INTRODUCTION

Today, schools and colleges face a big problem: study materials are scattered everywhere. Teachers share notes through WhatsApp, students save PDFs on Google Drive, exam papers are in email, and some materials are just loose papers. Nobody knows where to find what they need. When teachers want to check how their students are doing, they have look through notebooks, emails, and multiple folders. This takes so much time and is very confusing.

When exam season comes, teachers spend many hours. trying to find information about each student's progress from different sources. By the time they find everything, they realize a student was struggling the whole time, but nobody noticed! Students also face problems. They waste time searching for study materials from many different places. They do not have one place to see how they are doing in studies. Nobody tells them which topics they are weak in, so they do not know what to study more carefully.

Another big problem is money. Schools and colleges that want to use professional learning software like Blackboard or Moodle must pay a lot of money. These systems are expensive and need special technical people to run them. Most small and medium schools in India cannot afford this. So, they keep using the old way - scattered WhatsApp groups, Google Drive folders, and emails. When a teacher leaves the school or changes class, all that important information is lost or forgotten.

Teachers spend 30% of their time doing paperwork and organizing materials instead of teaching students. They cannot give personal attention to each student because they are busy managing all this scattered information. Without seeing clear data and patterns, teachers teach in the same way for everyone. They cannot find out which student is weak in which topic. This means some students get left behind without anyone noticing.

OBJECTIVE

1. **Easy Access to Study Material**

   To present organized and high-quality notes for college students.

   To make study resources easily accessible anytime and anywhere.

2. **Support Academic Learning**

   To provide students with an understanding of the subject through clear and structured notes.

   To back self-learning and revision during class hours.

3. **Centralized Learning Platform**

   To deploy a unified approach to learning where students can get notes for different subjects and semesters.

   To minimize the reliance on multiple websites and scattered resources.

4. **User-Friendly Interface**

   To craft a straightforward, uncluttered, and user-friendly website.

   To guarantee easy movement for students of all tech levels.

5. **Time-Saving for Students**

   To cut down students' time by offering ready-to-use notes and summaries.

   To make the preparation for exams and assignments very efficient for students.

6. **Digital Education Promotion**

   To encourage digital learning and lessen the need for paper notes.

   To be in line with the modern education methods.

MODIFICATION & IMPROVEMENT OVER EXISTING SYSTEM

A. Present System

1. Difficulty in Finding Study Material

In the present system, study materials are mainly shared through classroom notes, WhatsApp groups, or different websites. These resources are not always available when needed and often depend on class timings or external sources.

2. Lack of Support for Self-Study

Currently, students rely mostly on classroom teaching and handwritten notes. There is limited support for self-learning and revision during or after class hours.

3. Scattered Learning Resources

The existing system does not provide a single platform for all subjects and semesters. Students must search multiple websites and sources to collect required study materials.

4. Confusing and Difficult Websites

Most existing educational websites are complex and difficult to navigate. Students with basic technical knowledge often face problems in finding the correct study material.

5. Waste of Time for Students

Students spend a significant amount of time searching for reliable notes and summaries. This makes exam preparation and assignment work less efficient.

B. After Implementation (Proposed System)

1. Easy Access to Study Material

The proposed system provides well-organized and high-quality notes on a single website. Students can access study materials anytime and anywhere through an internet-enabled device.

2. Support Academic Learning

Clear and structured notes help students understand subjects better. The system supports self-learning and effective revision during and outside class hours.

3. Centralized Learning Platform

The website acts as a centralized learning platform where notes for different subjects and semesters are available at one place. This reduces dependency on multiple websites and resources.

4. User-Friendly Interface

The proposed website is simple, clean, and easy to use. Students of all technical levels can easily navigate and access study materials without difficulty.

5. Time-Saving for Students

Ready-to-use notes and summaries reduce the time spent searching for study material. Students can prepare efficiently for exams and complete assignments faster.

6. Digital Education Promotion

The system encourages digital learning by providing online notes and resources. It supports modern education methods and reduces the need for paper-based notes.

SCOPE OF PROJECT

Designing and developing a web, based educational platform for college students is the creation of a centralized system for storing and accessing academic study notes. The platform will facilitate the availability of subject, wise and semester, wise learning materials with the structured presentation of notes for the easier understanding of the concepts.

Users will be given the liberty to make use of the study resources anytime and from any location and self, learning will be supported outside of the regular classroom hours. Notes that are brief, clear, and well, organized will be the way the platform will provide exam preparation assistance as well as a quick revision support will be given during tests and assignment preparation. Easy navigation will be ensured by a user, friendly interface and the platform will be compatible with various devices such as laptops and mobile phones.

The system will cut down on the hours spent on the search for credible study materials and the use of handwritten and printed notes will be lessened. At the same time, digital and paperless education will be promoted. The platform will continue to enhance the consistency and standard of academic content through the centralized management of the notes by the administrator who will be able to update and maintain the learning materials with ease

The secure storage of educational content will be the means through which reliable access to notes will be given and there will be no need for dependency on multiple platforms. The system will be scalable for the addition of new subjects and semesters and there will be a possibility of future integration of educational features.

Key Points – Scope of the Project

• Design and development of a web-based educational platform for college

students

• Centralized system for storing and accessing academic study notes

• Availability of subject-wise and semester-wise learning materials

• Structured presentation of notes for better understanding of concepts

PROJECT REQUIREMENT SPECIFICATION

1. Hardware Requirements

Processor: Intel i3 or higher

RAM: Minimum 4 GB

Hard Disk: Minimum 500 GB

Display: 13” or higher

Internet Connection: Required for accessing online resources

Input Devices: Keyboard and Mouse

2. Software Requirements

Operating System: Windows 10/11.

Web Browser: Google Chrome, Firefox, or Edge.

Programming Language: HTML, CSS, JavaScript ,PHP.

Database:MySQL

IDE / Code Editor: Visual Studio Code.

Supporting Libraries/Tools:

CSS for frontend

SQLite/MySQL connector

Version Control: Git / GitHub (optional for project tracking)

FRONTEND

1. HTML5

Purpose: Structure and semantic markup of all web pages

Used for: Registration/login forms, dashboard layouts, quiz interfaces, search pages, admin panels, forum pages. Includes proper form fields, semantic elements, and accessibility features.

2. CSS3

Purpose: Visual styling, responsive design, and user interface aesthetics.

Key Features:

- Responsive grid layout (mobile-first design)
- Modern color scheme and typography
- CSS Flexbox and Grid for layout
- Media queries for device responsiveness
- Smooth animations and transitions

3. JavaScript

Purpose: Client-side interactivity and dynamic behavior.

Key Features:

- Form validation (email, password strength, required fields)
- AJAX requests for real-time data updates without page refresh
- Quiz timer functionality
- Interactive chart rendering
- Dynamic dropdown and navigation menus
- Autocomplete for search functionality

BACKEND

1. PHP

Purpose: Server-side logic, request processing, and data manipulation.

Key Responsibilities:

- User authentication and session management
- File upload validation and processing
- Quiz grading algorithm implementation
- Full-text search query processing
- Performance metric calculations
- Forum moderation functions
- Database connection and query management

Core PHP Files:

- `login.php` — Handles user authentication
- `register.php` — User account creation with validation
- `upload.php` — Note/document file handling
- `search.php` — Full-text search implementation
- `quiz.php` — Quiz grading and result generation
- `analytics.php` — Performance metric calculations

2.MySQL

Purpose: Persistent data storage in relational database format

Database Tables Created:

1. **users** — User accounts and authentication
    - Fields: user_id, full_name, email, password_hash, role, program, created_at
2. **notes** — Uploaded study materials
    - Fields: note_id, title, file_path, uploaded_by, subject, chapter, file_type, created_at
3. **questions** — Quiz questions and answers
    - Fields: question_id, question_text, options (A-D), correct_answer, explanation, difficulty, topic
4. **quiz_results** — Student quiz performance records
    - Fields: result_id, student_id, question_id, selected_answer, is_correct, time_taken, submitted_at
5. **performance** — Aggregated student performance metrics
    - Fields: student_id, total_quizzes_taken, overall_accuracy, last_updated

FORMS

1. Registration Form

- **Purpose:** Account creation for new users
- **Input Fields:** Full Name, Email, Password (min 8 characters), Confirm Password, Role (Student/Teacher), Program/Class (dropdown)
- **Validation:** Unique email, strong password requirement, mandatory fields

2. Login Form

- **Purpose:** User authentication
- **Input Fields:** Email Address, Password, Remember Me (checkbox)
- **Features:** Error messages, forgot password link, registration link for new users

3. Student Dashboard

- **Purpose:** Home page after login showing overview
- **Sections:** Welcome message, performance summary stats, recent quiz scores, recommended topics for practice
- **Navigation:** Quick links to Search, Take Quiz, View Performance, Discussion Forum

4. Quiz Interface

- **Purpose:** Students take practice tests
- **Features:** Question display, multiple-choice options (A/B/C/D), countdown timer, progress indicator, next/previous question navigation
- **Result Page:** Score display, accuracy percentage, time taken, detailed feedback for incorrect answers

TABLES

1. Database Table

Table for Registration:

Field Name	Datatype
Id	Integer
Name	Varchar
Email_Id	Varchar
Mobile_No	Varchar
Password	Varchar
Course	Varchar

Table for Result:

Field Name	Datatype
Result_Id	Integer
Std_id	Integer
Quiz_id	Integer
DATE	Varchar

Table for Subject:

Field Name	Datatype
Sub_id	Integer
Sub_name	Varchar
Sem_id	Integer

Student table**:**

Field Name	Datatype
STD_Id	Integer
Name	Varchar
Email_Id	Varchar
Mobile_No	Varchar

Teacher Table

Field Name	Datatype
T_Id	Integer
Name	Varchar
Phone_No	Varchar
Subject	Varchar

Notes Table:

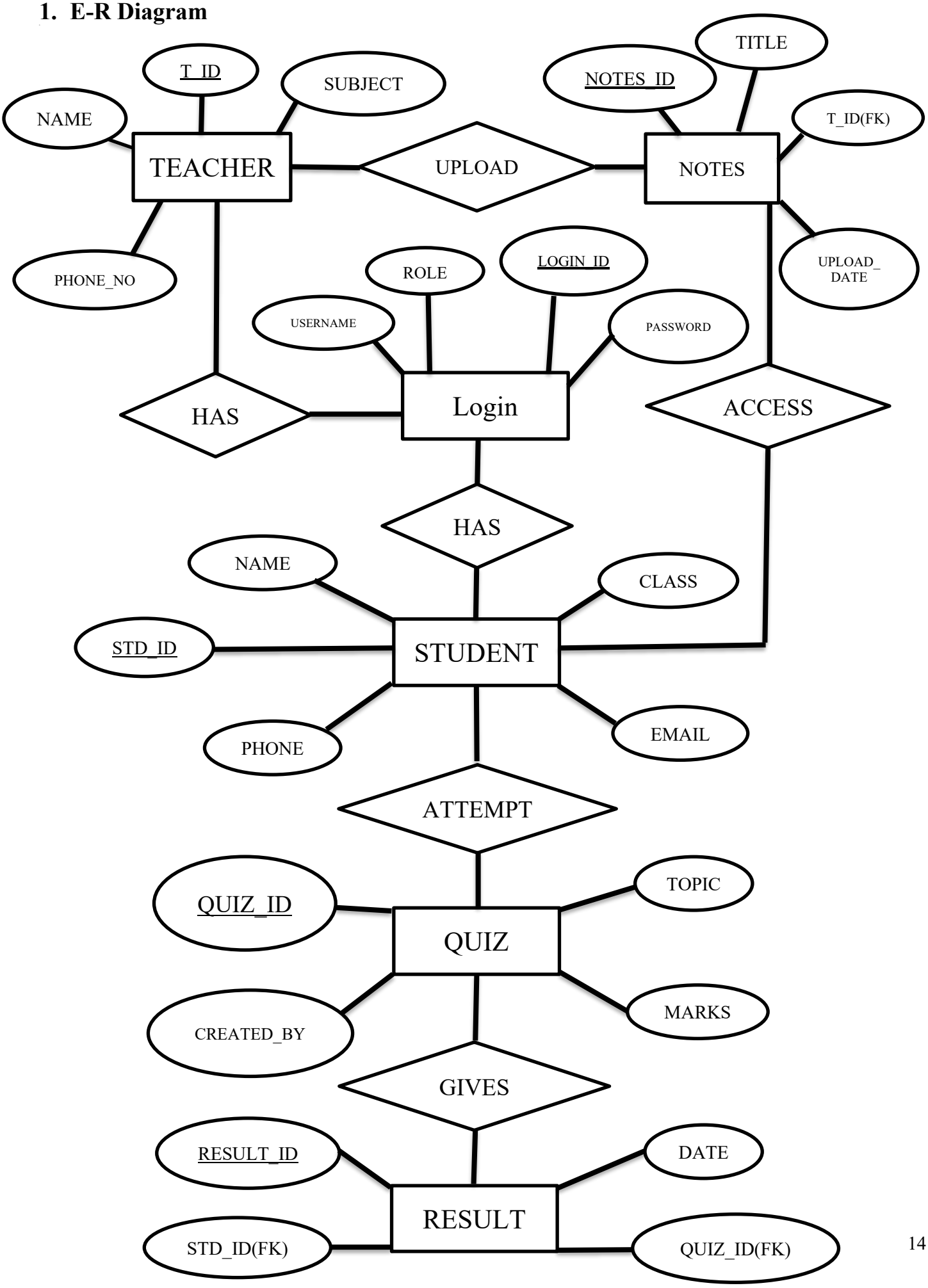
Field Name	Datatype
Notes_Id	Integer
Title	Varchar
Teacher_id	Varchar
Date	Varchar

Table for Quiz:

Field Name	Datatype
Quiz_id	Integer
Topic	Varchar
Created by	varchar
Marks	float

DIAGRAMS

1. E-R Diagram



2. Dataflow Diagram