TEST BRIDGE
Online Examination System

A Full-Stack Web Development Project

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Introduction

- **Online Examination System** is a digital platform designed to simplify the process of conducting, managing, and analyzing examinations.

- It allows students to register, take exams, and view results seamlessly, while administrators can manage questions, schedule tests, and monitor performance.

- **Purpose:** To automate the traditional examination process and provide an efficient, user-friendly digital exam experience.
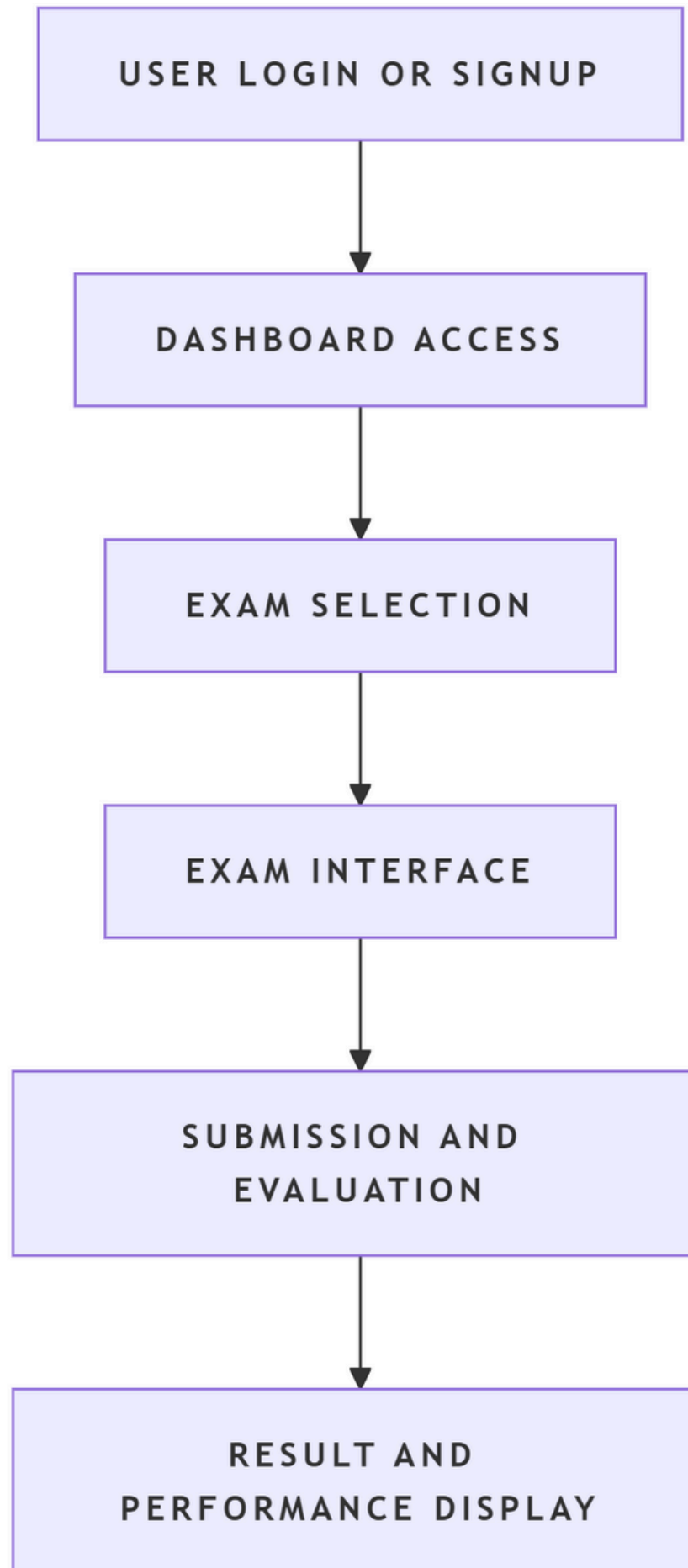
Tech Stack

- **Frontend:** HTML, CSS, JavaScript, React.js
- **Backend:** Node.js, Express.js
- **Database:** MongoDB (or JSON-based system, if applicable)
- **Other Tools:** GitHub, VS Code, Postman

Key Features

- **User Authentication:** Secure login and signup for students.
- **Exam Management:** Schedule, start, and manage exams easily.
- **Automatic Evaluation:** Scores are calculated instantly after submission.
- **Performance Dashboard:** Displays average score, completed exams, and insights.
- **Responsive Design:** Works smoothly on all devices.
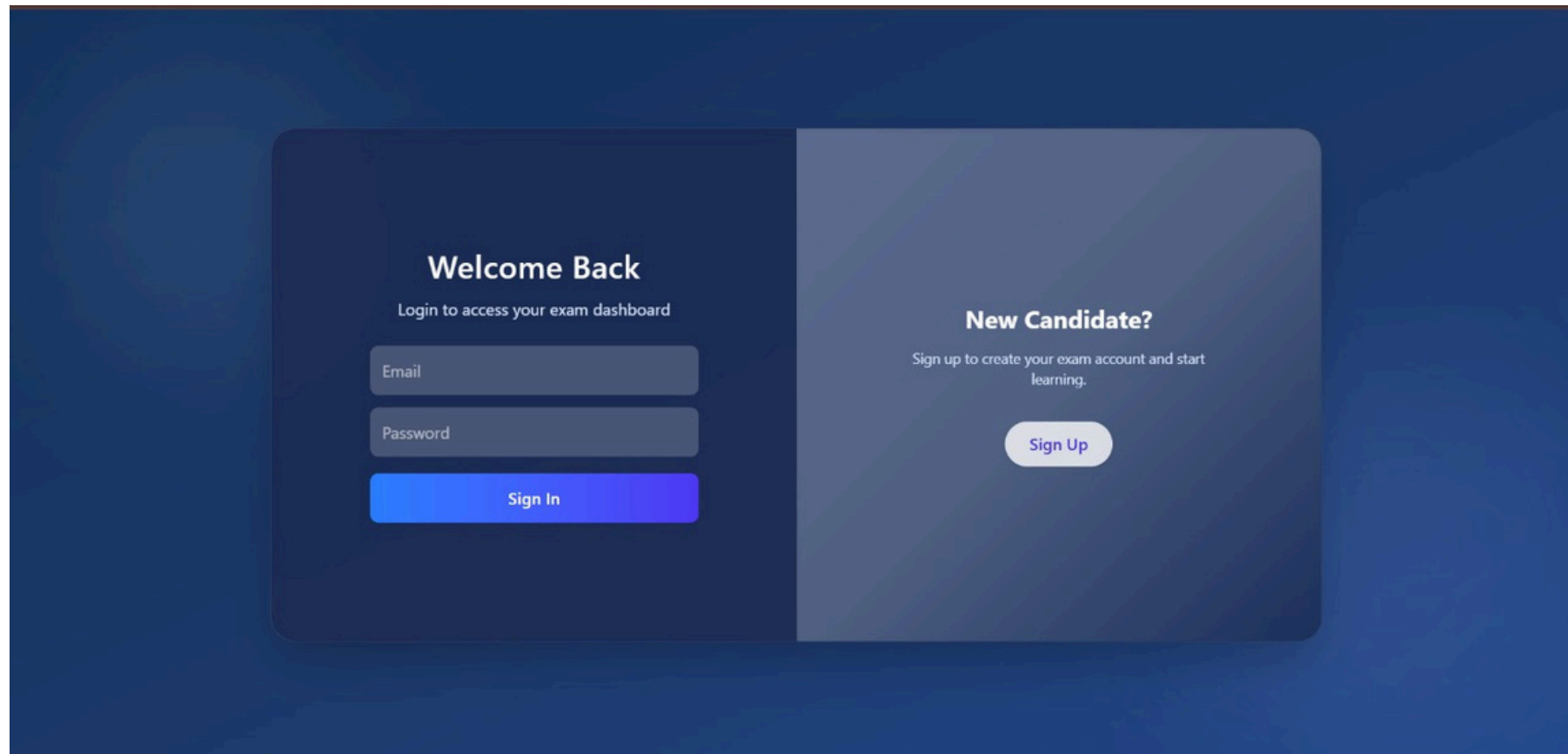- **Resource Access:** Study materials and mock tests for preparation.

Flowchart

USER LOGIN OR SIGNUP

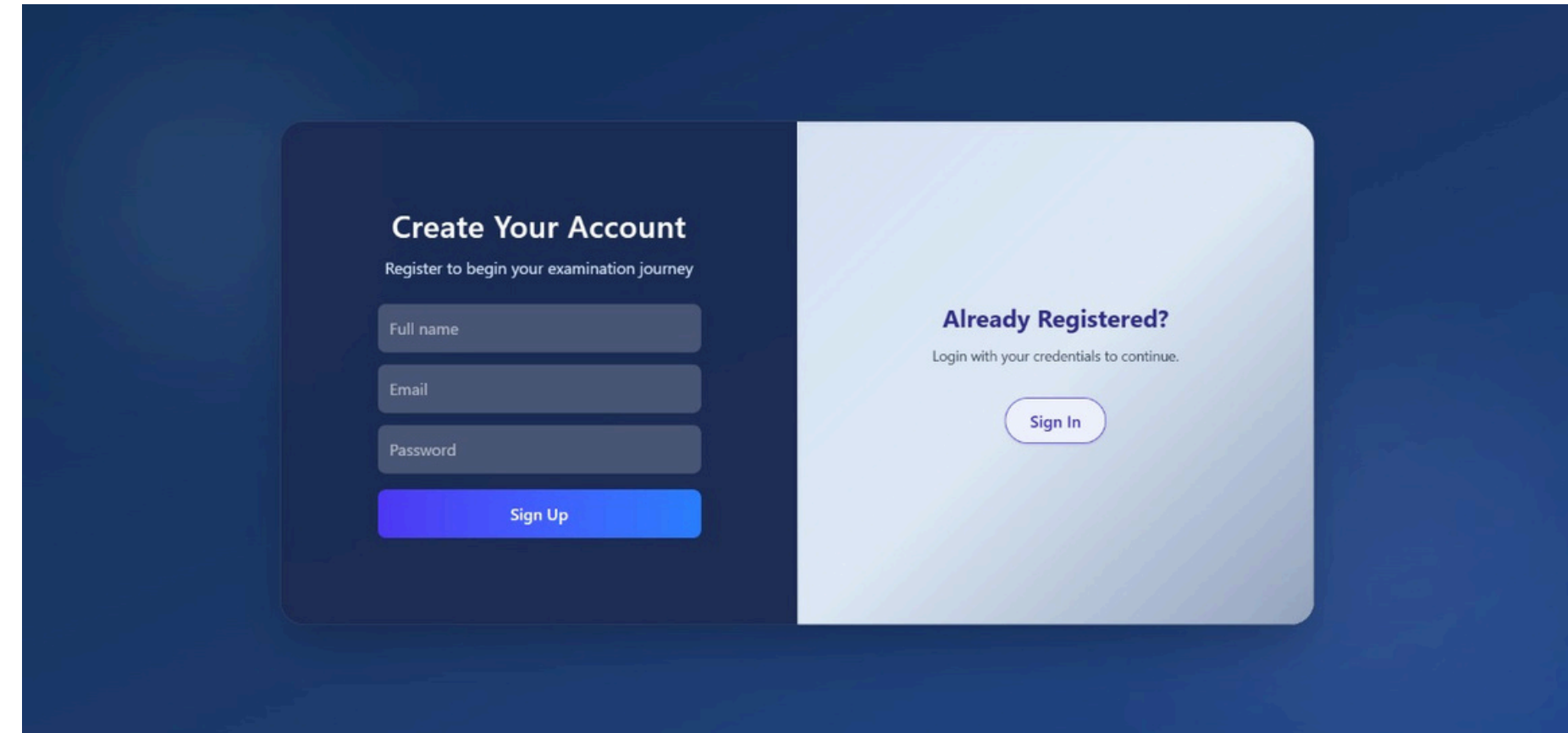DASHBOARD ACCESS

EXAM SELECTION

EXAM INTERFACE

SUBMISSION AND EVALUATION

RESULT AND PERFORMANCE DISPLAY

Website Structure

Login Page:
Existing users can log in using their email and password

Signup Page:
New users can create an account with full name, email, and password.

Key Functionality:
- Form validation using JavaScript
- Secure password handling
- Easy navigation to exam dashboard

Student Dashboard
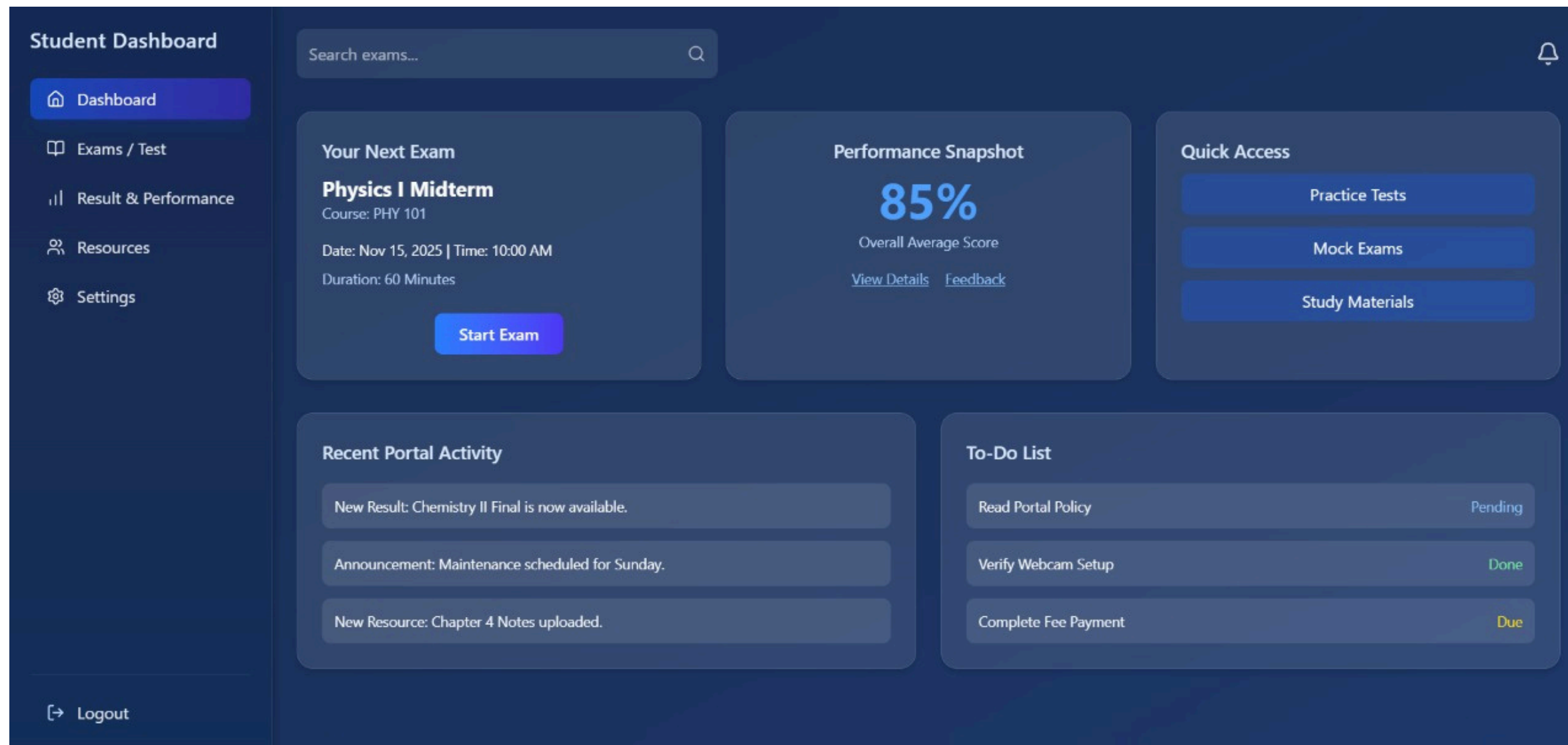
- Displays upcoming and ongoing exams.
- Provides quick access to practice tests, mock exams, and study materials.
- Shows performance snapshot and to-do list.

Result & Performance Page

Student Dashboard

- Dashboard
- Exams / Test
- Result & Performance
- Resources
- Settings

Search results...

Results & Performance

Average Score	Completed Exams	Highest Score
75.7%	**3**	**85%**

Exam Title	Course	Date	Score	Grade	Status
Physics I Midterm	PHY 101	Nov 15, 2025	85%	A	Completed
Mathematics Final	MTH 102	Oct 20, 2025	78%	B+	Completed
Chemistry II Test	CHE 202	Nov 5, 2025	64%	C+	Completed

Performance Insights

Great work maintaining consistency! Your average score is above 80%, showing strong understanding of core subjects. Focus on Chemistry II for improvement and keep practicing regularly to sustain your performance.

Logout

- Displays average score, number of completed exams, and highest score.
- Lists exam results with details like title, course, date, score, and grade.
- Provides insights for continuous improvement.

Working & Functionality

1. User signs up or logs in to access the exam dashboard.
2. Student selects an available exam and starts it.
3. Exam timer starts — answers are recorded dynamically.
4. On submission, backend processes answers and stores results.
5. Performance analytics are generated and displayed on the dashboard.

Project Work Description

The project was developed using **React.js** for the frontend and **Node.js** with **Express** for backend APIs.

Data is stored and managed in **MongoDB/JSON**, connecting user authentication, exams, and results.

Focus was given to:
- Clean UI/UX design
- Seamless navigation
- Secure data handling
- Responsive layout

Conclusion

The **Online Examination System** demonstrates how digital exams can be conducted efficiently with real-time results and analytics.

It enhanced my understanding of frontend-backend integration, authentication systems, and data-driven dashboards.

Future Improvements:
- Admin panel for managing exams
- Real-time webcam proctoring
- AI-based cheating detection
- Integration with cloud databases

Thank you

Github: https://github.com/prerit425/TestBridge