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# TEST BRIDGE

## Online Examination System

A Full-Stack Web Development Project

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**Section:** 3J

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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.

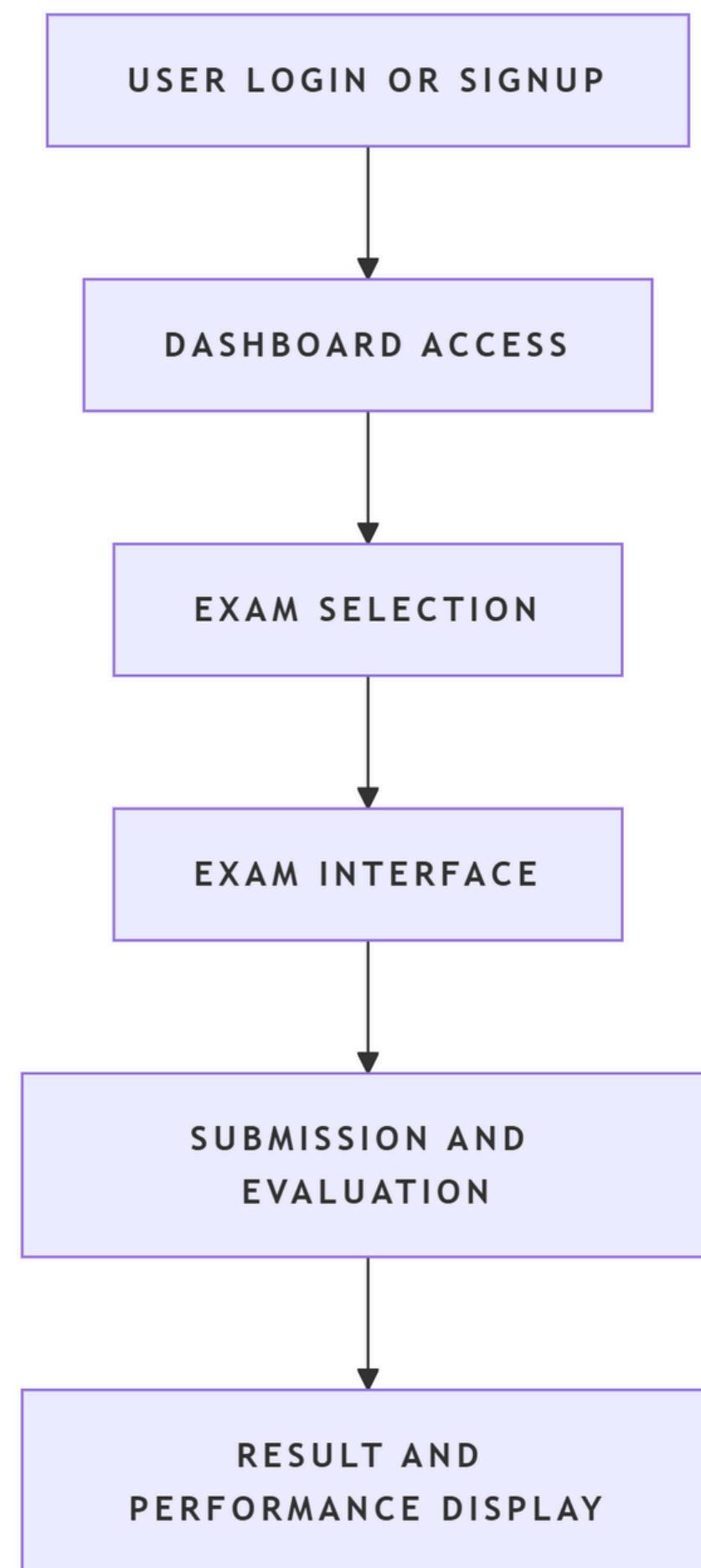
# Tech Stack

- **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.

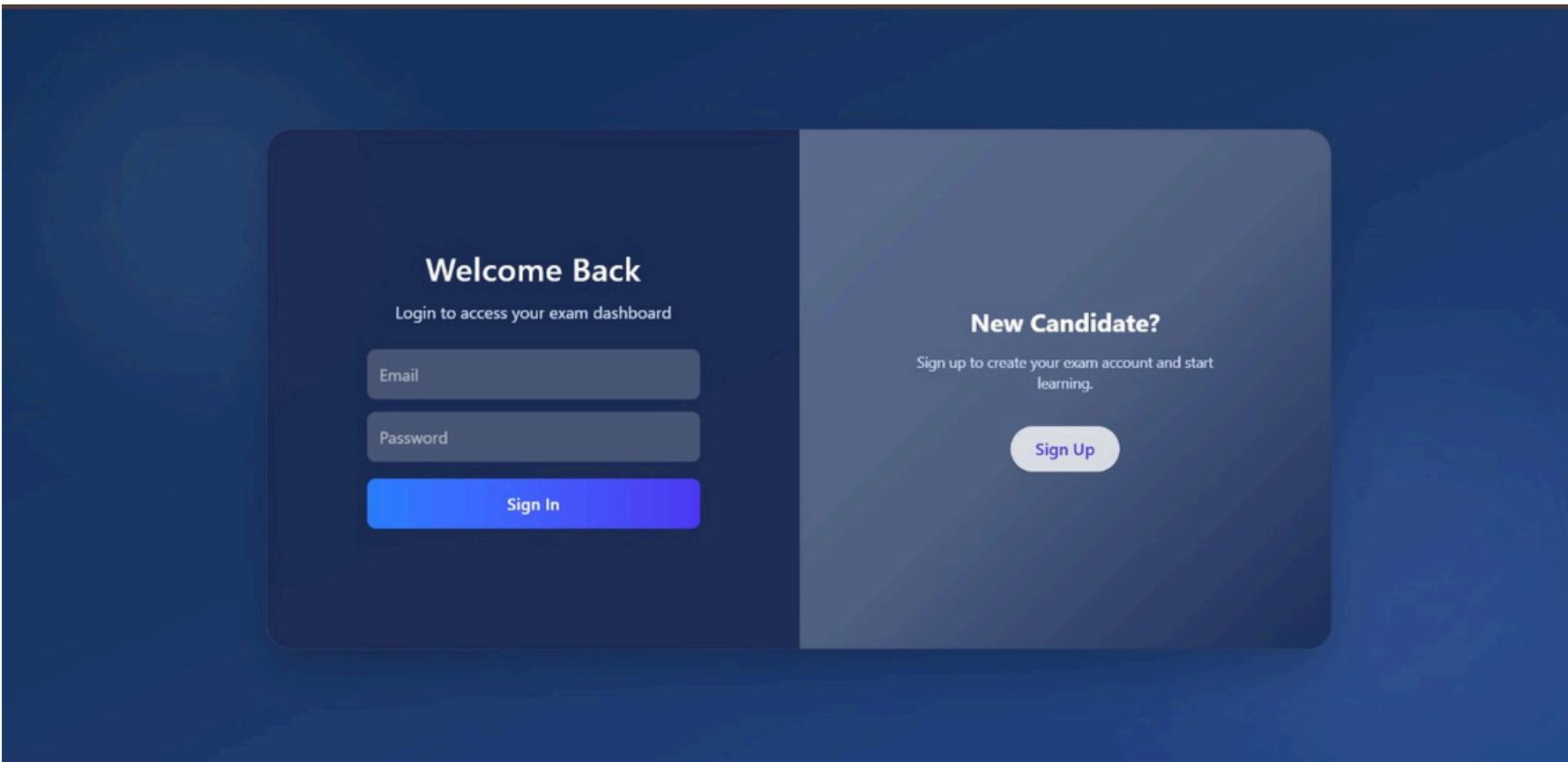
# Flowchart



# Website Structure

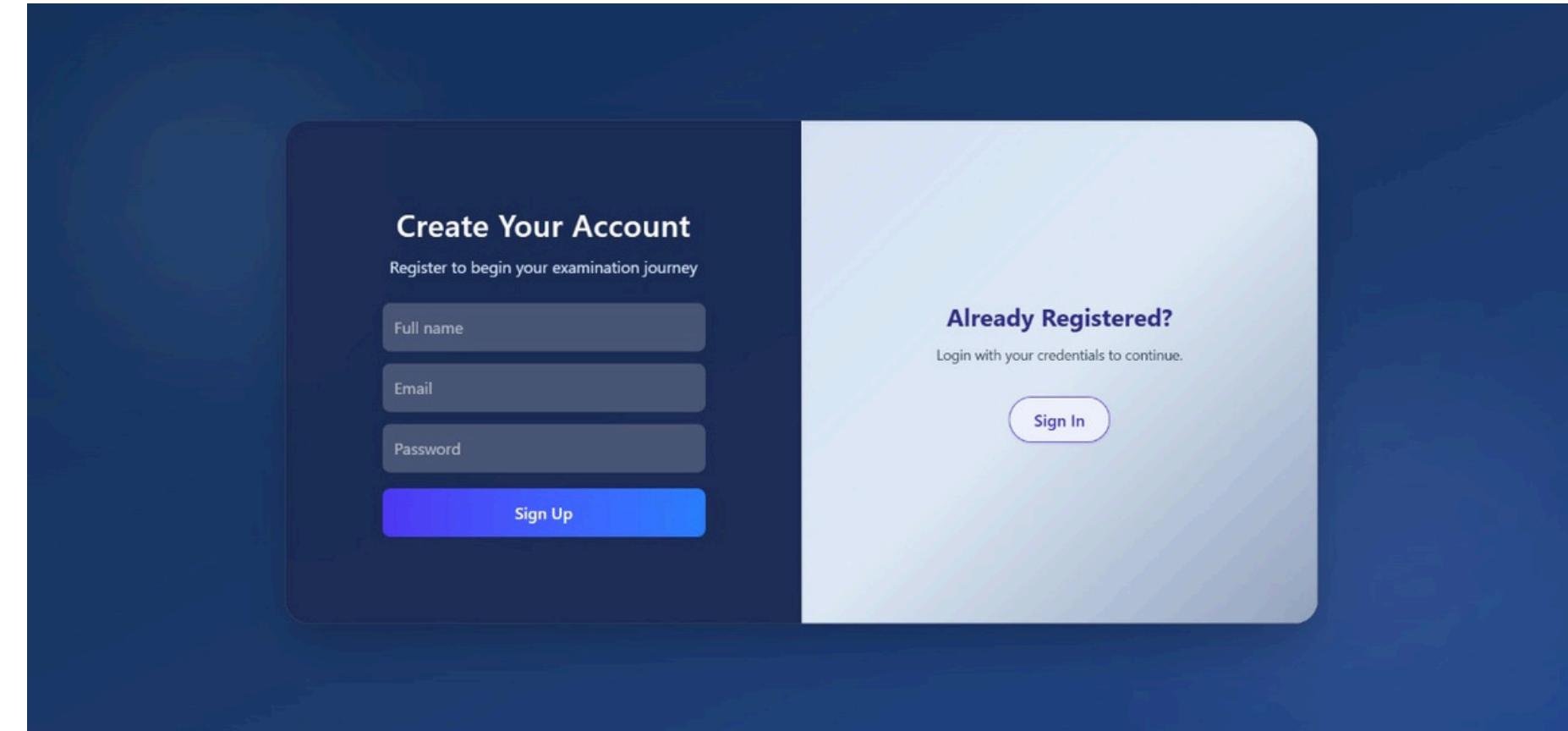
## Login Page:

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

The screenshot shows a dark-themed student dashboard with a navigation sidebar on the left and a main content area on the right.

**Navigation Sidebar:**

- Student Dashboard
- Dashboard** (selected)
- Exams / Test
- Result & Performance
- Resources
- Settings

**Main Content Area:**

- Your Next Exam:** Physics I Midterm, Course: PHY 101. Date: Nov 15, 2025 | Time: 10:00 AM. Duration: 60 Minutes. [Start Exam](#)
- Performance Snapshot:** 85% Overall Average Score. [View Details](#) [Feedback](#)
- Quick Access:** Practice Tests, Mock Exams, Study Materials
- Recent Portal Activity:**
  - New Result: Chemistry II Final is now available.
  - Announcement: Maintenance scheduled for Sunday.
  - New Resource: Chapter 4 Notes uploaded.
- To-Do List:**
  - Read Portal Policy - Pending
  - Verify Webcam Setup - Done
  - Complete Fee Payment - Due

[Logout](#)

- 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

The screenshot shows the Student Dashboard with a dark blue header and sidebar. The sidebar on the left includes links for Dashboard, Exams / Test, Result & Performance (which is highlighted in blue), Resources, and Settings. The main content area has a search bar at the top. Below it, a section titled "Results & Performance" displays three summary cards: "Average Score" (75.7%), "Completed Exams" (3), and "Highest Score" (85%). A table below lists completed exam results with columns for Exam Title, Course, Date, Score, Grade, and Status. The table entries are: Physics I Midterm (PHY 101, Nov 15, 2025, 85%, A, Completed); Mathematics Final (MTH 102, Oct 20, 2025, 78%, B+, Completed); and Chemistry II Test (CHE 202, Nov 5, 2025, 64%, C+, Completed). A "Performance Insights" section at the bottom encourages maintaining consistency and improving on Chemistry II.

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.

- 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>