



Project Instruction Document

Company: LeadMasters AI Tech Solutions Pvt. Ltd.

Project Type: Fresher Selection Assessment

Document Type: Project Brief

1. Objective

The goal of this selection project is to evaluate the candidate's ability to build a full-stack application based on core engineering fundamentals and best practices. The candidate is expected to develop a functional exam-taking interface (student-side only), which tests their skills in React.js, backend APIs, and database integration using a selected technology stack.

2. Deliverables

- A functional full-stack application (student-side exam module only)
- Code hosted in a public GitHub repository
- A Postman collection or clear API testing instructions
- Shared GitHub repository link for review

3. Project Scope

The project must include the following features:

- User registration and login with JWT authentication
- "Start Exam" interface that fetches randomized questions from backend
- Display of MCQs with options
- Navigation through questions (Next/Previous functionality)
- Countdown timer (e.g., 30 minutes) with auto-submit capability
- Submit Exam functionality that calculates score
- Result display page

4. Technology Stack Options

Candidates may choose from the following stacks:

Option 1:

- Frontend: React.js
- Backend: Node.js with Express.js
- Database: MongoDB

Option 2:

- Frontend: React.js
- Backend: Python with FastAPI or Python with Django, or Python with Flask
- Database: PostgreSQL or MySQL

5. Evaluation Criteria

- Correct and secure implementation of JWT-based authentication
- Logical backend structure and modular API design
- Clean and responsive UI implementation using React.js
- Proper use of React hooks and state management
- Functional and synchronized timer logic
- Complete documentation and clarity of code structure

6. Scope Exclusions

Do NOT implement the following:

- Admin panel
- Question bank management or upload system
- Analytics or reports dashboard
- Webcam proctoring or surveillance features

7. Suggested Time Allocation

This project is designed to be completed within 2–5 working days depending on the skill level of the candidate.

8. Submission Guidelines

- All code should be pushed to a public GitHub repository
- A README.md file must be included with setup instructions
- Include a Postman collection or curl commands for API testing

- Submit the GitHub repository link to: support@leadmasters.ai

9. Final Note

This is a practical challenge designed to evaluate your real-world development skills. Use of tools like ChatGPT or GitHub Copilot is permitted for support, but direct copy-paste submissions will be easily identifiable. Focus on problem-solving, clean code, and clarity of implementation.