Software Requirements Specification (SRS)

# Testify - Functional and Non-Functional Requirements

## 1. Functional Requirements

### 1.1 User Management

* - Users can register, log in, and log out.
* - Each user has a role: ADMIN, CREATOR, STUDENT.
* - Admins can manage all users and roles.

### 1.2 Test Management

* - Creators and Admins can create, update, and delete tests.
* - Each test can include multiple sections.
* - Sections can contain multiple questions.

### 1.3 Question & Answer Management

* - Creators can add multiple types of questions (single, multiple choice, essay).
* - Questions can have multiple correct answers.
* - Questions and answers can include images.

### 1.4 Test Participation

* - Students can take available tests.
* - Time limits are enforced per test or per section.
* - Answers are submitted and stored.

### 1.5 Result & Submission Management

* - System stores each test attempt (submission).
* - Students can view detailed results including scores, correct/incorrect answers.
* - Admins and Creators can analyze test statistics.

### 1.6 Admin Dashboard

* - Admin can manage tests, questions, users, and view system statistics.

## 2. Non-Functional Requirements

### 2.1 Performance

* - The system should respond within 1 second for common user operations.
* - Should support 100+ concurrent users during test sessions.

### 2.2 Security

* - All authentication is JWT-based.
* - Passwords must be securely hashed (BCrypt/Argon2).
* - Role-based access control is enforced via middleware.

### 2.3 Availability & Reliability

* - 99.9% uptime SLA target.
* - System must recover gracefully from server errors.

### 2.4 Scalability

* - Architecture should support horizontal scaling for both API and database.
* - Stateless backend preferred for distributed deployments.

### 2.5 Usability

* - Clean and intuitive UI with responsive design.
* - Accessible for mobile and desktop users.

### 2.6 Maintainability

* - Modular code structure for easy feature extension.
* - Version control using Git with clear documentation.