# **Machine Test for MERN Full-Stack Development**

## Frontend (React)

#### User Authentication

- 1. Create a React application with user authentication.
- 2. Implement user registration and login functionalities with email and password.
- 3. Display a "Welcome, [username]" message when a user is logged in.

## **User Profile**

- 1. After logging in, create a user profile page that displays user information.
- 2. Allow users to update their profile details (e.g., username, email).
- 3. Implement form validation for profile updates.

## Create a Blog Post

- 1. Add a feature to create a blog post.
- 2. Implement a form with fields for the post title and content.
- 3. Save blog posts to a local state using Redux.
- 4. Backend (Node.js/Express, MongoDB)

# Set Up Express Server

- 1. Create an Express server that listens on port 5000.
- 2. Set up necessary middleware for handling JSON data and authentication.

## Blog Post Model and Database

- 1. Define a blog post model for MongoDB using Mongoose with the following fields: title, content, and author (store the author's user ID).
- 2. Use proper Mongoose schema and model definitions.
- 3. Implement database operations to save and retrieve blog posts.

#### API Endpoints

- 1. Create API endpoints for:
- 2. Creating a new blog post.
- 3. Fetching all blog posts.
- 4. Fetching a specific blog post by ID.

#### (optional)

- 1. Implement user roles (e.g., Admin and regular users). Admin users can delete any blog post.
- 2. Add pagination to the list of blog posts.
- 3. Allow users to add comments on blog posts.
- 4. Secure password storage by hashing it before saving it in the database.