

➤ **List of Platforms, Tools, and Software Used**

Frontend Technologies

- **HTML5** – Structure and layout of web pages
- **CSS3** – Styling and responsive design
- **JavaScript** – Client-side interactivity and form validation

Backend Technologies

- **Node.js** – JavaScript runtime environment for server-side logic
- **Express.js** – Web framework for routing and middleware handling

Database

- **MongoDB** – NoSQL database for storing user data, quiz questions, and results
- **Mongoose** – ODM (Object Data Modeling) library for MongoDB schema and queries

Development Environment

- **Visual Studio Code** – Code editor with extensions for Node.js and MongoDB
- **Git** – Version control system for tracking changes
- **GitHub** – Repository hosting and collaboration

Security and Configuration

- **bcrypt.js** – Password hashing for secure storage
- **crypto** – Token generation and encryption
- **dotenv** – Environment variable management to protect sensitive credentials

➤ **Step-by-step guide on how to run the project:**

1. Prerequisites

Before starting, ensure the following software is installed:

- Node.js (v18 or later)
- MongoDB (local or cloud via MongoDB Atlas)
- Git (for cloning the repository)
- Code Editor (e.g., Visual Studio Code)

2. Install Dependencies

```
npm install
```

3. Configure Environment Variable

Create a .env file in the root directory and add the following

```
PORT=5000
```

```
MONGO_URI=your_mongodb_connection_string
```

```
EMAIL_USER=your_gmail_address
```

```
EMAIL_PASS=your_gmail_app_password
```

4. Start MongoDB Server

```
Mongod
```

5. Run the backend Server

```
npm start
```

6. Access the Application