Project To-Do List Application

Overview:

The task is to develop a To-Do List application using C# .NET MVC with Entity Framework. The application should include JavaScript Datatables with Ajax Server Side Processing and a Custom User Accounts Module. The goal is to assess your ability to design, implement, and document a complete web application using these technologies.

Requirements:

1. Project Setup:

  - Use Visual Studio to create a new C# .NET MVC project.

  - Configure the project to use Entity Framework for database interactions.

  - Use a SQL Server database for this project.

2. Database Design:

  - Create the necessary tables for managing To Do items and user accounts.

  - Each To Do item should have the following fields:

   - ID (Primary Key)

   - Title (string)

   - Description (string)

   - Due Date (DateTime)

   - Priority (enum: Low, Medium, and High)

   - Status (enum: Pending, In Progress, Completed)

   - UserID (Foreign Key)

3. Entity Framework Setup:

  - Create the Entity Framework models and DbContext.

  - Implement code-first migrations to create and update the database schema.

4. User Accounts Module:

- Implement user registration, login, and logout functionality.

- Ensure password hashing and validation.

- Create roles (Admin, User) and restrict access to certain features based on roles.

- Each user should be able to see only their own To Do items.

5. To Do List Management:

  - Create views for:

    - Listing all To Do items (with pagination and search).

    - Creating a new To Do item.

    - Editing an existing To Do item.

    - Deleting a To Do item.

  - Implement the necessary controller actions and views to manage To Do items.

  - Use JavaScript Datatables with Ajax Server Side Processing for listing To Do items.

6. JavaScript Datatables:

  - Integrate JavaScript Datatables for displaying To-Do items.

  - Implement server-side processing for Datatables using Ajax.

  - Ensure sorting, searching, and pagination functionalities.

7. User Interface:

  - Use a front-end framework (Bootstrap) for styling the application.

  - Ensure a responsive and user-friendly interface.

  - Provide validation for all forms (both client-side and server-side).

8. Documentation:

  - Document the project setup and configuration steps.

  - Provide a README file with instructions on how to run the project.

  - Include comments in the code to explain the logic and functionality.

Deliverables:

- A zip file containing the complete Visual Studio project.

- SQL scripts for setting up the Database.

- A README file with setup instructions and any other necessary documentation.

Evaluation Criteria:

- Code quality and organization.

- Correct implementation of the requirements.

- User interface and user experience.

- Proper use of Entity Framework and C# .NET MVC.

- Proper implementation of JavaScript Datatables with Ajax.

- Completeness and clarity of documentation.

Additional Information:

- Deadline for submission: Monday 8th JULY 2024

- Please send your completed project to elsayed.eldeep@gmail.com

We look forward to evaluating your work. If you have any questions, please do not hesitate to reach out.

Best regards,