

# Assignment (Full-Stack Development)

## Summary

You need to create a ASP.net Core / Python Django/ Flask / NodeJS Web API with following specification.

1. It should be based on **any backend platform, preferably Asp.NET Core.**
2. You need to use a **sql server database.** There will be two api sections =
  - TodoController : Should have all the CRUD APIs
    - /get/{id} : Get single todo item
    - /getAll : Get all the todo items
    - /put/{id} : Update single Todo item /create/{id}
    - : Create new todo item
    - /delete/{id} : Delete a todo item
  - AuthController : Should have APIs related to registration and login
4. TodoController will be protected via authorization of the auth controller header and only authenticated users will have access to the controller. There will be two roles in the database for user with different set of access.
  - User : These users will be able to get list of todo items, when accessing other APIs, they should get a HTTP 401: Unauthorized error
  - Admin : Admin users will be able to access all the APIs
5. In AuthController as response to successful login, a JWT token will return in response. The JWT token should have following fields encoded:
  - First Name
  - Last Name
  - Email
  - IsActive
  - Roles
6. The code should be uploaded to a public GitHub repository and its link should be shared with the moderator or interviewer. Also, it needs to be deployed somewhere where UI can access the same.
7. You need to create a front-end application consuming the above api with proper authentication. Front end application should be in ReactJs and Redux.
8. UI and HTML should be built using any of the existing framework. The application should be created in such a way a user can maintain the same for maintaining the task.
9. Deploy the front-end and add the username and password to test in the github repository. You can deploy the application on any platform like Heroku or Netlify or Azure. Azure is preferred.

**While coding please keep following things in mind:**

- Please document all the controllers and APIs by using proper comments throughout the application
- Proper indentation and naming of the variables is highly appreciated
- Verbose commit messages will be appreciated
- A ReadMe file in the GitHub repo root folder explaining what the API does and small documentation of each API can be beneficial. Similar needs to be done for the front-end application.

For any doubt or questions, contact your interviewer.

**Submission**

- Deployed web api on any server like Heroku with github and hosted url.
- Swagger interface link of the solution where we can test the working.
- Deployed front-end application github and hosted url.