

Cymulate Full Stack Engineer

Task Description:

You are required to build a phishing simulation and awareness web application using the following technologies:

- **Backend:** .NET server for handling the phishing simulation and NestJS server for Phishing attempts management.
- **Frontend:** React for the web application.
- **DevOps (Bonus):** Docker for containerization.
- **Database:** MongoDB for storing user information and phishing attempts.

Detailed Requirements:

1. Phishing Simulation (.NET server):

- Build a **.NET** server to manage phishing simulations.
- Create a **POST /phishing/send** endpoint to send phishing emails to a provided email address.
- Use **any** email library to send the phishing emails.
- The phishing email should contain a link that, when clicked, will notify your server that the user has clicked the phishing test.
- Update the phishing attempt status in the DB when the link is clicked.

2. Phishing attempts Management (NestJS server):

- Implement user registration and login functionality using **JWT** for authentication.
- Create route that will retrieve all the phishing attempts (which will be displayed in the client)
- Create route that will get a phishing attempt to sent by the client. This route should communicate with the Phishing simulation server for sending email

3. Frontend with React:

- Develop a React web application to interface with both backends.
- **Login and Registration Page:** Build pages to allow admin users to register and log in using the JWT-based authentication.
- **Phishing Simulation Page:**
 - Allow users to input an email address and trigger a phishing attempt via the frontend.
 - Display a table of all phishing attempts, including the recipient email, the email content, and the status.
 - The attempt status should be updated and synced in realtime. You can choose any appropriate solution.
- The frontend should communicate with the phishing attempts management server.

4. Docker and DevOps (Bonus):

- Create Dockerfiles for both servers and the React frontend.
- Ensure that the application can be deployed using Docker Compose.

- Document the steps to set up and run the application using Docker Compose.

Notes:

- Docker solution is a Bonus.
- Use TypeScript and NOT JavaScript.
- Use NestJS and not Express.

Submission:

- A GitHub repository with the complete source code.
- A README file with instructions on how to build and run the application using Docker Compose.
- Any additional documentation or notes that will help in understanding your approach and implementation.