
Position: Fullstack Developer for e-commerce

This assignment is designed to evaluate your coding proficiency in a real-world scenario. We believe it will provide valuable insights into your problem-solving approach, attention to detail, and ability to deliver high-quality code.

We encourage you to approach this task with enthusiasm and creativity, leveraging your skills and knowledge to produce a solution that reflects your best work. Please find the task details below, and feel free to reach out if you have any questions or need further clarification.

Project Overview:

As a fullstack developer, you are tasked with creating a web shop application that displays a list of products and allows users to add items to their shopping cart, remove them, and log in to their accounts. The project aims to deliver a user-friendly and efficient e-commerce experience.

Requirements:

- Develop a web application with the following functionalities:
 - ◆ Display a list of products with relevant information (e.g., name, price, image).
 - ◆ Allow users to add products to their shopping cart.
 - ◆ Enable users to remove items from their cart.
- The provided UI design should reflect nuki.io, with the base minimum to function.

*****These items are not required. If time allows, though, please consider these optional items.***

- Implement a rough concept for a user authentication system.
- Provide the needed deployment/development environment and consider SRE specifications.

Technical Specifications:

- Technologies and Languages:
 - ◆ Utilize Node.js with Express.js for server-side development.
 - ◆ Utilize MySQL as the preferred database solution for efficient data management.
- Automation Testing:
 - ◆ Ensure comprehensive test coverage, aiming for at least 75% of the code.
 - ◆ Implement automated testing methodologies to validate the functionality and integrity of the application.
 - ◆ Utilize testing frameworks and tools compatible with the chosen technologies.

→ Documentation and Explanation:

- ◆ Document your development approach, including architectural decisions and implementation strategies.
- ◆ Be prepared to answer questions regarding the implementation. ◆
Justify your reasoning behind certain design patterns, technology selections, and implementation methodologies.

→ Coverage of Edge Cases:

- ◆ Identify and address potential edge cases and corner scenarios in the application logic.
- ◆ Implement robust error handling mechanisms to gracefully manage unexpected situations.
- ◆ Ensure the application behaves reliably under various scenarios, including unusual or uncommon user interactions.

→ Consider the concepts of secure authentication mechanisms to protect user accounts and data.

→ Use best practices for code structure, organization, and documentation. →
Consider how the performance of the application could be improved further down the road, especially in terms of scalability.

Deliverables:

- Fully functional web shop application(Backend + frontend bare minimum functionality) meeting the specified requirements.
- Source code repository (e.g., GitHub) containing the project code with clear commit history.
- Documentation outlining the project setup, usage instructions, and any additional notes deemed necessary.
- A brief report summarizing the technical decisions made during development and any challenges faced.

Submission Guidelines:

- Include all necessary files, documentation, and resources.
- Provide any additional notes or explanations as needed.