

RAiD Software Engineering Challenge

Introduction

As part of the technical interview, you will be required to work on the RAiD Software Engineering Challenge. There will be a problem statement which outlines the scope of the project, and a set technical requirements that you will need to comply with.

Your work will subsequently have to be pushed to a public GitHub repository, preferably a mono-repository which contains both frontend and backend (if you opt to create a private repository, kindly share access to the panel of interviewers). Share the link when you are done with the assignment.

During the interview, you will need to present your code, walk through various portions of the code, and add/modify functionality on the spot.

The challenge is designed to be relatively beginner friendly, and should only take about 2-4 hours to complete. Please do not plagiarise as your submission will be compared to the other candidates. Any form of plagiarism will not be tolerated.

Problem Statement

Jenny is the owner of a fruit shop. She wants to create a simple POS (point of sales) system that can:

- Input line items which contain product name (Apples, Bananas etc), and quantity of items that a customer is purchasing
- Calculate the total price of purchase
- Store the purchase as a database record

Example use case:

James would like to purchase four apples and two bananas.

Jenny can easily input 2 line items, "apple x4 and banana x2" into the system

Jenny is shown the total price of the items

Jenny store this transaction into a database

Optional:

You may chose to add **one** bonus features that could help Jenny improve her POS system including (but not limited to):

- Tracking stock of items
- Calculate cost by item weight

Data:

Apple	\$2.00
Banana	\$1.50
Pear	\$2.30
Orange	\$1.80

Technical requirements

1. Frontend
 - a. Required:
 - i. Language: Typescript / Javascript
 - ii. Framework: React CRA / NextJs
 - b. Optional:
 - i. Any component library (e.g. MUI / Chakra UI)
2. Backend API
 - a. Required:
 - i. Language: Typescript / Javascript
 - ii. Framework: NodeJS
 - iii. Database: any (e.g. Postgres, MongoDB)
3. Additional notes:
 - a. You may opt to handle both frontend and backend in NextJs