Reflection 2: Student Progress Report

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Name:	Ruchit Bhardwaj
Company:	ZS Associates
Department/Team:	Software Development Track | Field Performance Team
Project Name:	Incentive Compensation

1. Brief description of the project:

The first assignment provided to all interns was to solve the 'Sales Attainment Rank Problem' within which, various pharmaceutical companies wanted to get an understanding of which sales representative is performing the best in a given month for a given product. Along with this, the pharma companies also wanted to get an understanding of which drug had the highest sales for a given month within a given city. This, cumulated with the facility to view all their sales representatives in a single place, with the ability to add new sales representatives, remove old sales representatives, and update existing sales representatives was the first task provided to us. As part of this phase of the project, I was responsible for creating the backend REST APIs along with binding them to the frontend to create a simple dashboard.

2. Work done and progress made since Report 1:

Since, the last update, I have completed the Phase One of the project. My demo was scheduled on July 11, 2022, it went on smoothly. I had to explain the following –

- Code design choices
- Architectural decisions
- API contracts

This explanation was in front of the panel of Software Engineering Leads. Apart from that, my code was reviewed by them – both the frontend and the backend code. Once the presentation and the demo were complete, I was given feedback which was mostly positive. I was also provided with some additional pointers on how I could optimize my code even more to extract more performance from the existing APIs. All in all, I would consider the demo to be a success.

3. Problems encountered:

During the development of the application, I encountered the following problem –

- The data that was supposed to be copied from the CSV file to the PostgreSQL table, was taking a lot of time for files that had more than a million records. I optimized that approach and the time taken for the entire operation was reduced by 50%
- We had to implement an optional search feature which would search for the given keyword across all the columns in the sales-representatives table i.e. name, country, city, zipcode. I explored the full-text search functionality that is provided out of the box by Postgres and analyzed and presented my findings on how this could essentially improve the search APIs 10x times.

All in all, the issues that I faced were definitely challenging for me and I was able to learn various things from it.