

Criterion A: Planning

Defining the problem

The client is part of a company named “The Karadi Path Education Company”. Her name is Ms XX. One day, during an internship in 2019, I accompanied her to their warehouse in Chennai during her visit to carry out product quality checking. She told me that their company was planning to make the warehouse’s current data digital to better evidence the products at the warehouse. On understanding the problems of a manual system, I was keen to find a solution. Hence, I offered to provide a software which can manage the titles in the warehouse and create reports on the relevant data at any point in time. In the warehouse, the records can be saved and accessed only by the 4 administrative staff.¹

Ms XX wanted the software to efficiently manage the inventory of books in the warehouse. As of now, the manual process is time consuming. Management seeks quick compiling of data to make decisions on purchase orders/requests coming from the retail show room as requirements need to be calculated. Presently, the records have to be searched manually through paper logs, compiled, and processed. Since the inventory handles around 70 different books¹, the energy and time spent increases over time as the records increase. To reduce the excess work, she wanted to be able to create reports relating to both the stocks and the profits of the inventory. Mr XX, my advisor, is associated with the development of previous software at Karadi Path. He agreed to be my advisor for this project.

Word Count: 261

Rationale for the solution

The software should run on the desktop (at the admin table) in the warehouse. As of now, the desktop has a Windows 10 operating system and is connected to common peripherals- a mouse, keyboard, and printer¹.

I have decided to program in Java in the IDE NetBeans for many reasons. The client requested the software to be in java because all the other software in use is written in java as well. Moreover, Java, being an OOP language, facilitates objects, abstraction, and encapsulation. These features will allow me to organize the functions and the classes needed for each success criteria in an ordered and hierarchical manner. NetBeans has an in-built java virtual machine which will allow the program to run on any type of computer. A server is required to hold all the warehouse module’s backend data. MySQL was the most logical choice for holding the said data. Firstly, MySQL is a free to download software, reducing the company’s cost. Like Java Virtual Machine, it is platform independent. It can be queried directly from Java (JDBC) and other languages as well, making it efficient and giving it adaptability as well. In addition, MySQL servers facilitate multiple instances, allowing the software to be simultaneously accessed by multiple users¹.

Word Count: 206

¹ Refer to Interview 1 and 2 from Appendix-Consultation

Success criteria

1. Provide login credential for each managerial staff
2. Create a warehouse staff directory with the name, email ID and username, of each of the managerial staff
3. Provide the users with a functionality to check the current stock of any title using a search feature through a title name
4. Provide functionality for the users to record stock received
5. Provide functionality for the users to record stock shipped out
6. Search for the details of each transaction recorded in a date wise manner
7. Search for the details of each transaction recorded in a title wise manner
8. Calculate the revenue, expenses/losses, and profits over a date range for price-based reports
9. Produce periodic price-based reports for a single title (specific) or for all titles (general)
10. Calculate total inventory in, total inventory out, stock flow, total number damaged, and % damaged over a date range for stock-based reports
11. Produce periodic stock-based reports for a single title (specific) or for all titles (general)
12. Produce reports which can be saved in a pdf format to be shared through emails and printed if required