Criterion A: Planning

Defining the scenario:

My client is the owner of Labket Merchandising which manufactures customised apparels for colleges, schools and corporate customers. The process includes procuring knitted fabric, stitching the garment and printing it as per customer requirements. Customers are given the option to customise their garments as per requirement. This is done via a phone call, email, message etc. After the garment is prepared, it is shipped to the required delivery location via the logistic partners.

The challenge that is currently faced by my client is the inventory management. [1]As mentioned by him, it is difficult for the firm to keep a track on the stock of all the raw materials. These include a lot of items whose inventory has to be taken care of like ready plain garments, inks, raw fabric, other raw materials.

There are situations where the unavailability of raw materials is discovered after new orders are placed, leading to order cancellations.

Some other problems faced by my client include tracking the status of orders i.e., if they are pending or completed, along with maintaining their records. The progress status for each order is difficult to keep a track of when there are more than three-four orders, due to the limited staff available.

Hence, a system that has the ability to manage the inventory and solve other problems like order tracking, maintaining records etc, would be highly beneficial. The system would help keep track on the quantity of various raw materials, giving frequent reminders on reaching the minimal limit. It would further help in managing orders, along with keeping a record of previous orders and clients.

[1] Refer to Appendix 1 (Initial Interaction with Client)

Justification of the proposed solution:

After discussing the problems with my client, I came up with a solution to create a stand-alone application rather than a web-based one, that would be able to efficiently manage the firm's inventory. It would update the stock as per the orders received, and would help the firm to efficiently keep track of the orders.

The reason behind choosing a stand-alone application is that it would be faster and easier to access since there would no longer be any requirement of a stable internet connection. It would also keep the data secure from any online threat of theft, virus or malware. Data retrieval would also be faster.
The languages that I intend to use are java along with a backend database in MySQL. I chose java above other languages because of its object-oriented nature and platform independence, making it extensible, flexible and scalable thus enabling easier and faster development of forms and other objects in my solution. It will also facilitate easier correction of errors and bugs in the application. It would also enable me to reuse certain codes and would give me access to a variety of open-source libraries, thus speeding up the development process. I have chosen MySQL for the database mainly due to its scalability which would enable to easily make changes in the database in accordance to changes in the firm. Also, its high performance and enhanced data security persuaded me towards choosing MySQL.

Word Count: 487

Success Criteria:

The system would include:

1. A login page which would be password protected.
   1.1 Two separate access levels for ‘Manager’ and ‘Employee’.
   1.2 Managers and Employees would be redirected to separate dashboards, where the Manager’s dashboard would have additional functionality of managing employees.
   1.3 A ‘Reset password’ option to enable users to change their login passwords.
2. An ‘Add Customer’ form to enable the client to add records of new customers with important details such as Name, Email ID, Address, Contact Number etc.
3. A functionality to enable the client view/search the existing customers based on different criteria such as Name, Contact etc.
   3.1 Functionality enabling the client to update existing customer records such as changing the contact number, address etc.
   3.2 Functionality enabling the client generate PDF reports of their existing customer records.
4. An ‘Add Order’ form to enable the client place new orders, mentioning important details such as ID of the customer placing the order, item type, quantity ordered, order date etc.
   4.1 An order confirmation email sent to the respective customer, with an attached order receipt mentioning the essential order details.
5. Functionality enabling the client to view their existing orders, sort orders within a given date range, and check if they are complete, or are there any payment dues.
   5.1 Functionality enabling the client to update the Amount dues, status and completion date of orders as per order progress.
   5.2 Functionality enabling the client to generate PDF reports of their existing orders.

6. A window enabling the client to view their inventory records including the necessary details such as the remaining quantity, and the date of last stock reorder.
   6.1 Window enabling the client to view Out of Stock items where Quantity=0.
   6.2 Functionality enabling the client to view items within a specific quantity range from the inventory.
   6.3 Functionality enabling clients to generate PDF reports of their inventory stock.
7. A stock ‘Reorder Form’ form enabling the client to reorder the stock of existing items, updating the item’s quantity accordingly.
   7.1 Functionality enabling client to generate PDF reports of stock reorders.
8. An ‘Add Employee’ form enabling ‘Managers’ to add new employees into the system, with details such as their username and demo password.
9. Window enabling ‘Managers’ to view their existing employees and perform additional functionality such as updating their salary or making them a ‘manager’.
   9.1 Functionality enabling ‘Managers’ to generate PDF reports of employee records from database.