Criterion A: Planning

Defining the problem

My client, Mrs xx, is a small business owner in xx. She sells sarees, an Indian traditional dress for women. Her transactions range from buying the raw materials for the sarees, sending them off to designers and actually selling the readymade sarees.

Presently, all of her business transactions are done manually. She keeps a stock list, a list of the raw materials she has sent off to designers (including the build of the sent items, their colour, the name of the designers and their relevant details), and a list of the readymade items for sale. She also uses the readymade list to calculate her remaining stock, items sold per month, and profit.

However, as her business expands and she has to deal with more and more transactions, such a method becomes inadequate. Moreover, since there is no efficient method of sorting items, she has faced considerable difficulty in tracking down lost materials in the past. Also, manual computation and management is becoming more and more tedious and eats up most of her time, affecting the productivity of the entire business.

I volunteered to take up the matter and write a GUI based software for handling all her transactions digitally, as well as develop a better sorting and management method for her materials. My CS teacher, Mr xx, agreed to be my advisor for this endeavour.

Word count: 228

Stating success criteria

i> An input which allows the user to add raw items (including build, and cost price).
ii> Creation of a database table that stores all the raw items added.
iii> A method of assigning unique id nos. to each raw item added.
iv> An output that allows the user to see the stock list sorted according to build.
v> An input that allows the users to enter the id numbers of sarees being sent off to designers, along with relevant information from those designers. The kind of design done for each saree and the price of the same also need to be recorded.
vi> A method of updating the raw items table with these information
vii> An output that allows the user to view a list of all items sent to designers with relevant details of the designers.
viii> An input that allows the user to add items returned from the designers.
ix> An input that allows the user to record any additional costs of the transactions.
x> Creation of a separate database table that stores all the readymade items.
xi> A method to move relevant items from the raw items list to the readymade items list.
xii> An output to view all the readymade items not yet sold.
xiii>A calculator that will allow the user to get the selling price of a particular saree. It should take profit (or profit percentage) and discount percentage as input.
xiv>If the saree is sold off, an input to indicate the same.
xv> An input that allows users to enter additional investments like salaries of employees, maintenance costs, etc.
xvi>A method to show the monthly and yearly investments or profits.

Rationale for proposed solution

I decided that choosing an OOP would be the best solution for Mrs. xx because of the complexity of the problem, and the amount of interactivity required between the graphical user interface and the functionality. I chose to use MS Access databases to store the data because it's the most widely used Office software program, and most other mainstream Office programs are designed to read MS-Access files.
After much consideration, I realized that creating an online system wouldn't be the best option because of the increased level of complexity it would lead to. Also, I couldn't guarantee enough security to make sure that no one could hack into an online. Plus, because her business was still restricted to a single retail store, it wouldn't be a big handicap. Java was chosen as the medium because it's platform independent, free and user-friendly. Moreover, writing a Java code meant flexibility to extend the product to android devices very easily, which could be required at some point.

Word count : 164