Summative Assessment - Task 1-6

Lesson VI

T-shirt production plant

For this assessment you will build a small system to run a mass market t-shirt production plant. In this assessment the key areas that will be examined is you ability to use objects, control statements (if or switch) and general programming good practices.The plant is responsible for printing t-shirts for three different brands, namely Adibas, Nikea and pumba. The system is to assist the brands get a price estimation when placing orders. The price depends on three factors:

- Brand
- Quantity/No of t-shirts
- Type of material used for the T-shirts

The system should operate in the following manner

- When the program starts, display the three brands to the client
- The client selects their preferred brand by entering the number associated with the brand i.e 1.Adibas ,2.Nikea or 3.Pumba
- The client should then be asked to enter the quantity for the order
- The client is then displayed with material options and asked to select the preferred material (associate numbers to material type) and then the price for the production costs should be displayed to them
- Order information should be displayed as follows: Your order for 'quantity' 'brand name' t-shirts made from 'material' will cost 'calculated amount'

Inventory Data

Brand	**Adibas**	**Nikea**	**Pumba**
Material available	Silk, Cotton, Polystyrene	Cotton, silk	Denim, wool
Material cost	Silk, cotton = 24 Polystyrene = 19	Cotton = 24 Silk = 25	Denim = 23 Wool = 27

Price = quantity*material cost*1.4

The 1.4 multiplier accounts for running costs for the plant.

Assumptions

- There is only one type of T-shirt per brand
- Assume the client will enter information in the correct format e.g. when asked for quantity they will enter a number

Implementation

The code should be split into two files, the main class and the class object to hold the methods required to determine prices called stockManager. All communication between client and system must be displayed on the console.

Main

- Contains the main function
- Responsible for getting input from the user

stockManager

- Has method to give the available material for given brand
- Has method to calculate price

Approach

1. First create the main function
2. Code the functionality to get user input for the brand they want
3. Create the stockManager
4. Code the method to get the available material (Here use if statement where needed)
5. Code the method to calculate the price of production (Here use switch statement where needed)

What will be assessed

- Understanding of objects
- Understanding of control statements
- General programming good practices (e.g. commenting on code)
- Ability to translate given information to variables, methods and eventually code a system

Tips

- Take a modular approach, make sure every step functions before moving on to the next e.g You are able to successfully receive input from user - a method brings back the expected result
- Make use of printing out results to check for values, also make use of the debugger on the intelliJ IDE