

CENG 114 – Computer Programming

Spring 2020 – 2021

Homework # 1

Due Date: 12 March 2021 until midnight

- Imagine you cultivate and sell roses. You cultivate roses only in 5 colors. (Red, Pink, White, Yellow, Black)
- You need a menu based program for your shop to track rose commerce.
- You should be able to do the following operations:
 - Check current stock information
 - Update stocks
 - Update prices
 - Sell product (with stock control)
 - Check current cash information

- Notes :
 - Initial stocks :
 - Red Rose : 0
 - Pink Rose : 0
 - White Rose : 0
 - Yellow Rose : 0
 - Black Rose : 0
 - Initial prices :
 - Red Rose : 5 TL
 - Pink Rose : 6 TL
 - White Rose : 7 TL
 - Yellow Rose : 8 TL
 - Black Rose : 20 TL

- Use the following functions :

- | | |
|---------------------------|---|
| - printMainMenu() | Prints main menu (as seen in the sample run) |
| - printStockInformation() | Prints stock information (as seen in the sample run) |
| - printProductPrices() | Prints product price (as seen in the sample run) |
| - printProducts() | Prints product information (as seen in the sample run) |
| - printCashInfo() | Prints current cash information (as seen in the sample run) |
| - stockControl() | parameters: 'productStockInfo' and 'numberOfRequested'
return: if stock is enough return 1, else return 0 |
| - updateStocks() | Changes products stocks |
| - updatePrices() | Changes products prices |
| - sell() | Check the stock, sell products, then update stocks and arrange a bill |
| - calculateBill() | Prints 'productPrice x numberOfRequested = resultant.' message.
parameters: 'productPrice' and 'numberOfRequested'
return: resultant value. |
| - addMoney() | Prints 'Add x TL to cash register.' message and update total cash.
parameters: resultant from the bill |

- You can add other functions, but you have to implement all the functions listed above.

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Sample Run: (inputs are marked as bold)

OPERATIONS :

1. Stock Info
2. Update Stocks
3. Update Prices
4. Sell
5. Current cash info
6. Quit

Select your operation : **2**

Current Stock Information :

1. Red Rose : 0
2. Pink Rose : 0
3. White Rose : 0
4. Yellow Rose : 0
5. Black Rose : 0

Select product : **2**

Enter stock for 'Pink Rose' product : **55**

Current Stock Information :

1. Red Rose : 0
2. Pink Rose : 55
3. White Rose : 0
4. Yellow Rose : 0
5. Black Rose : 0

OPERATIONS :

1. Continue update stock
2. Return main menu

Select your operation : **2**

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OPERATIONS :

1. Stock Info
2. Update Stocks
3. Update Prices
4. Sell
5. Current cash info
6. Quit

Select your operation : 3

Prices :

1. Red Rose : 5 TL
2. Pink Rose : 6 TL
3. White Rose : 7 TL
4. Yellow Rose : 8 TL
5. Black Rose : 20 TL

Select product : 2

Enter new price for 'Pink Rose' product : 3

Prices :

1. Red Rose : 5 TL
2. Pink Rose : 3 TL
3. White Rose : 7 TL
4. Yellow Rose : 8 TL
5. Black Rose : 20 TL

OPERATIONS :

1. Continue update price
2. Return main menu

Select your operation : 2

OPERATIONS :

1. Stock Info

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2. Update Stocks
3. Update Prices
4. Sell
5. Current cash info
6. Quit

Select your operation : 4

Products :

1. Red Rose - 5 TL - (0)
2. Pink Rose - 3 TL - (55)
3. White Rose - 7 TL - (0)
4. Yellow Rose - 8 TL - (0)
5. Black Rose - 20 TL - (0)

Select product : 2

Enter how many 'Pink Rose' products are requested : 15

15*3=45.

Add 45 TL to cash register.

Products :

1. Red Rose - 5 TL - (0)
2. Pink Rose - 3 TL - (40)
3. White Rose - 7 TL - (0)
4. Yellow Rose - 8 TL - (0)
5. Black Rose - 20 TL - (0)

OPERATIONS :

1. Continue selling
2. Return main menu

Select your operation : 1

Products :

1. Red Rose - 5 TL - (0)
2. Pink Rose - 3 TL - (40)
3. White Rose - 7 TL - (0)

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4. Yellow Rose - 8 TL - (0)

5. Black Rose - 20 TL - (0)

Select product : 5

Enter how many 'Black Rose' products are requested: 15

SORRY... 'Black Rose' product is out of stock.

OPERATIONS :

1. Continue selling
2. Return main menu

Select your operation : 2

OPERATIONS :

1. Stock Info
2. Update Stocks
3. Update Prices
4. Sell
5. Current cash info
6. Quit

Select your operation : 5

Current cash information : 45 TL

OPERATIONS :

1. Stock Info
2. Update Stocks
3. Update Prices
4. Sell
5. Current cash info
6. Quit

Select your operation : 6

Bye!

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NOTES:

This coding assignment should

- **Compile and run without any errors, otherwise you do not get any points!**
- Be done **INDIVIDUALLY!**
- Include comments to explain your program.
- Be indented correctly and carefully.
- Be easy to follow.
- Work for all possible inputs.
- Give your student id to your source file name. Otherwise, you will lose 10 points from your grade. (e.g. 200111032_hw.c)