# Project Documentation

**Project Title : Clothing Shop Management Database**

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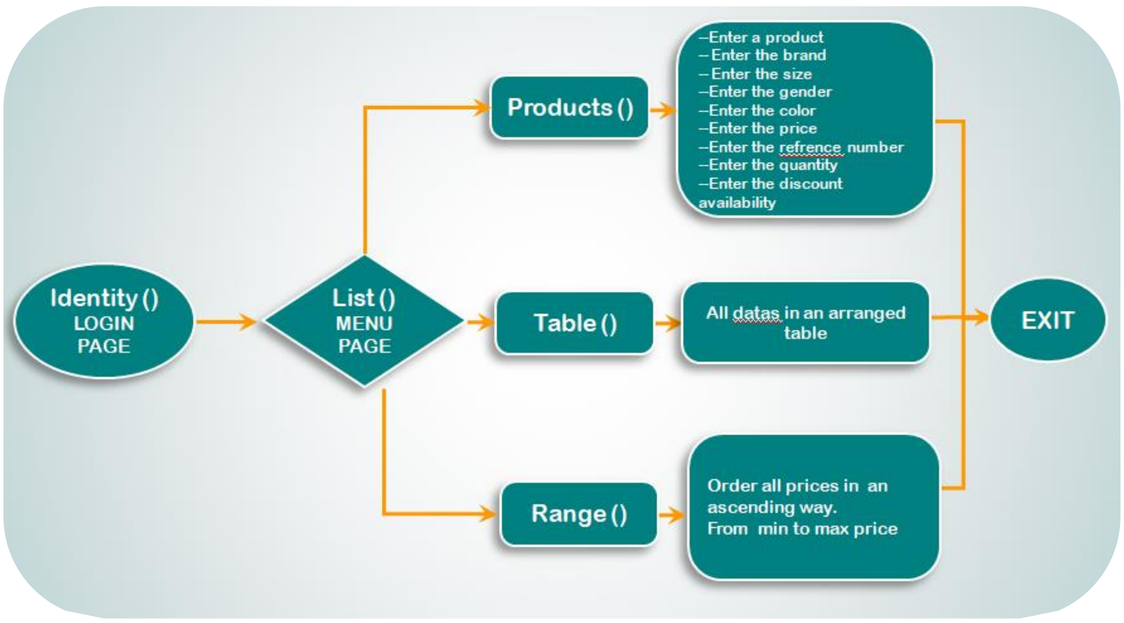
## I- Problem Description:

The solution is to create a system its main objective is to make it easier for workers to manage all information about their offered items without using boring paperwork and with less human effort. Using the required parts , the project will provide the access to add, display and order products according to a speceic category, so we can have an updated database

## II - Solution Design:

### - Flow-chart :



## III-Solution:

**Class Structure :**

**Class name** : Shop

**Access specifier** :

***private :**

**Data members:**

```
-username, password, product, brand, size,
 gender, color, discount as a string
-reference_num, quantity, price as an integer
```

**Members functions:**

***public:**

```
Products();
Identity();
Table();
List();
Range();
```

**Used Techniques :**

**1- Login function**

We choose and save "username and password" in advance.
We made an equality equation between the input and the saved datas with adding **IF statement** .
So **If** this equation is valid => access accepted
otherwise **else** => access denied (The user should try again with different datas.)

**2- Products**

We enter all the detailed information about the selled items (name, brand, size, gender, color, price, reference number, quantity, discount availability)
Using **Exception handling** we prevent any negative input for the price, reference number and quantity.
If the user made this mistake, the program won't accept it
=> "Please try again" and he should try with a positive number.

### 3- Table

Here we organize the previous information in a specific table.
The screen is cleaned from the previous output using system("CLS") .
Using **File handling**, a file is created and contains the saved items in the form of table.

### 4- Range

Based on a **Dynamic Memory Management** we allocate an integer array which contains the items prices.
Then using **For Loop** the prices will be ordered in ascending way.
So it creates a range from the minimum to the maximum price.

### 5- List

All the previous functions will get assembled in this function.
It will give the user the opportunity to choose which one he would like to enter using a **Switch() statement** : by pressing the suitable case for every function which it was designed in advance in the code.

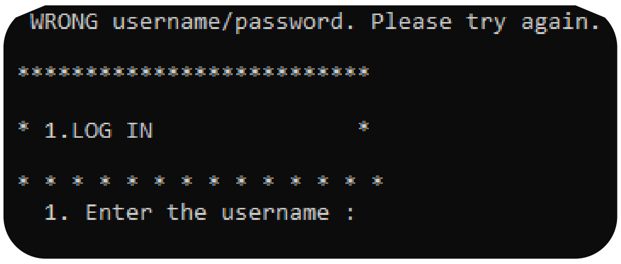
**Exp :**

```
cout << " 1. Add a new product : ";
cin >> a;
 switch (a)
 {
 case 1: Products();
break;
  }
```

## IV - Testing:

We test our program by :

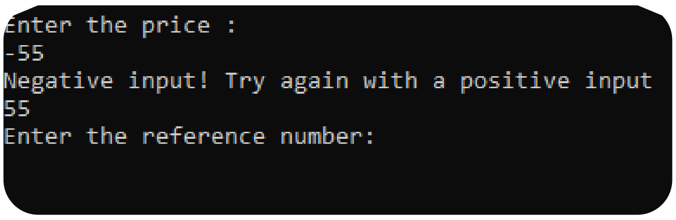
- We try a wrong input and we get :



```
 WRONG username/password. Please try again.

*************************

* 1.LOG IN              *

* * * * * * * * * * * * * *
  1. Enter the username :
```

**So it doesn't accept the wrong username or password.**
**Then we try again with the right input, and we get the next page in a proper way.**

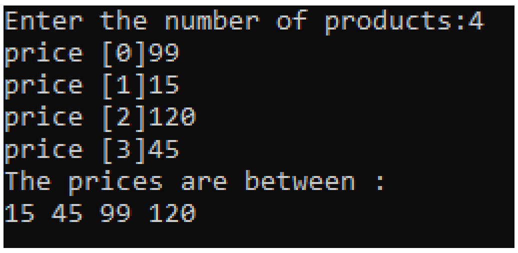
- Also we try to input a negative number for the price and we get :



```
Enter the price :
-55
Negative input! Try again with a positive input
55
Enter the reference number:
```

**So it doesn't accept the negative input.**
**Then we try again with positive input.**

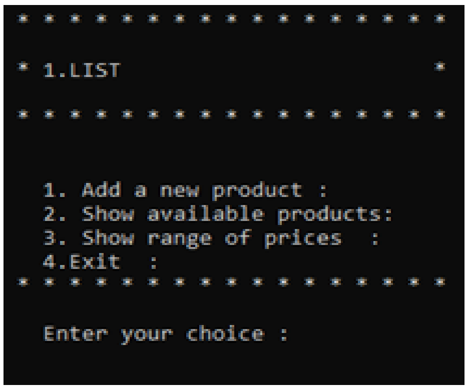
- Also we try to enter random numbers and we get :



```
Enter the number of products:4
price [0]99
price [1]15
price [2]120
price [3]45
The prices are between :
15 45 99 120
```

**The entered prices are ordered from min to max.**

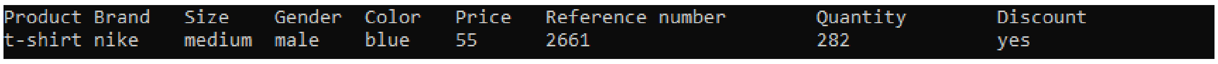
- After entering all datas with the 1st function in the menu,



```
* * * * * * * * * * * * * * * * * *

* 1.LIST                          *

* * * * * * * * * * * * * * * * * *


  1. Add a new product :
  2. Show available products:
  3. Show range of prices   :
  4.Exit   :
* * * * * * * * * * * * * * * * * *

  Enter your choice :
```

**The menu-**

we go to the 2nd function to see if the items are saved or not and we get :



```
Product Brand    Size     Gender   Color    Price    Reference number         Quantity         Discount
t-shirt nike     medium   male     blue     55       2661                     282              yes
```

**-The table-**

**So the details are saved and the program works properly.**