

# Project on simulating an E-Commerce Website using C programming

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## Team Members

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## Problem Statement

Write a C program to simulate an e-commerce website. The program should have the following modules:

- (a) User login (Is the user a seller or consumer?)
- (b) If seller: seller ID and username to be entered. Add items to the category.
- (c) Display category and items with seller ID and price.
- (d) Consumers can search an item, or select an item from the list displayed.
- (e) Enter item and quantity with seller ID.
- (f) Display total amount and complete purchase details.

# Design Steps

1. **int main()** - The main code has the definition and declaration of functions.

Each function implements the features mentioned in the problem statement. It will also display a welcome message “welcome to our e-commerce website” and then provide options like “existing seller”, “customer”, “new seller” after a certain amount of time delay.

2. **void seller\_login()** - If the user chooses the “existing seller” option, this function gets called. The user is asked for details like username and seller ID. The function scans through a database containing all the seller details. If the username and seller ID are present/match, the function displays “logged in.” and is taken back to the main function [and then to the seller\_choice() function]. If a match isn't found, it displays “Invalid ID or Username.” and gives the user another try.

3. **void seller\_choice()** - Here, the user is given options such as “Add items to your inventory”, “Display all items” and “Exit”. If the user picks option 1, seller\_itemadd() function is called. If option 2 is picked, seller\_display() is called.

4. **void seller\_itemadd()** - The seller can pick a category to which they want to add their items and then fill in details like: Item ID, Name, Stock Quantity, Price and Features. If the item ID is taken, the seller is notified and is asked to pick another item ID. They can add multiple items in one go.

5. **void seller\_displayall()** - This function displays everything the currently logged in seller has added to the item lists.

6. **void seller\_addaccount()** - If the seller is new to the platform, they can create an account. The user is asked for a username and an ID of six digits. If the username or ID is taken, they are given another chance to add a new username and ID. This information is added and saved to the seller list and these details can be used by the seller to login next time.

7. **void customer\_choice()** - This function allows the customer to choose between these options :- “Display all items”, “Display a category”, “Add item to cart”, “Check Cart” and “Exit”.

8. ***void customer\_viewall()*** - Separate text files are maintained for each category. This function displays the contents of all the text files in the form of a table for the customer to view.

9. ***void customer\_viewcat()*** - This function helps the customer in narrowing down the search by asking them to pick a category to view.

10. ***void customer\_addtocart()*** - The customer can pick the item they wish to buy by entering the item ID and the quantity of the item they would like to buy. If the item ID entered is invalid, or if the quantity exceeds stock quantity, then the user is notified. This function allows the customer to choose multiple items.

11. ***void customer\_checkcart()*** - This function allows the user to view all the items in their cart and is given an option to checkout or continue shopping.

12. ***void customer\_checkout()*** - This function displays the final bill of purchase and asks the customer their name and payment method.

**Note:**

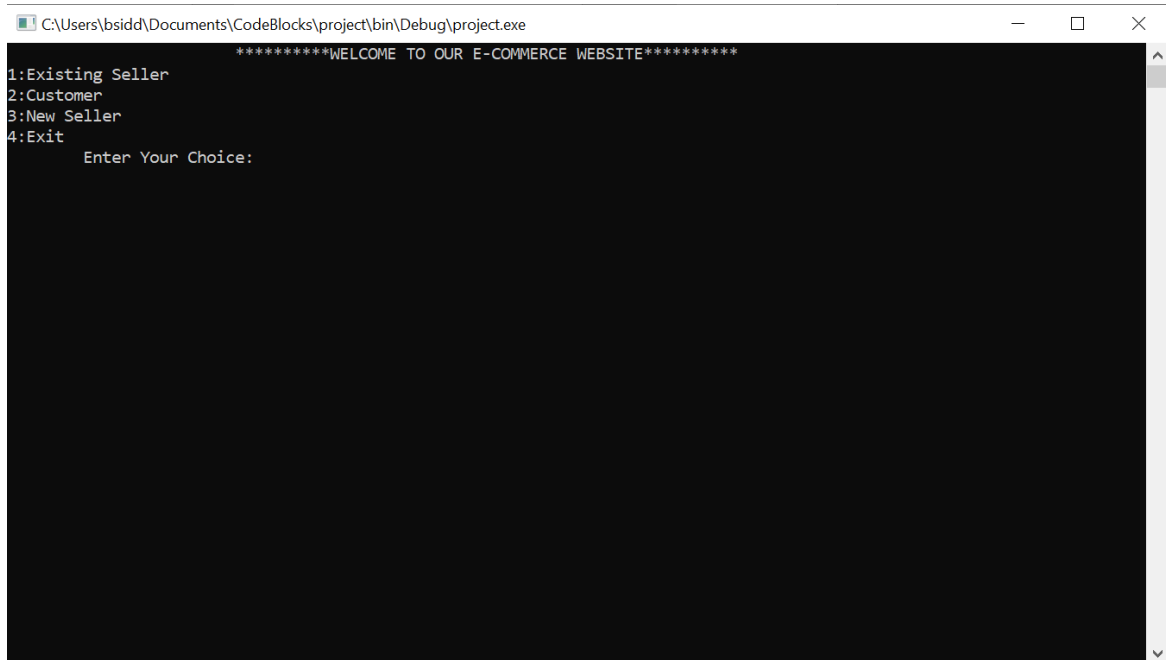
1. Every time the user enters an invalid option, the user is informed of it and is given another chance to enter their choice.
2. Details of all the customers (name, payment method, and total amount to be paid) are stored in the file "cdetails.txt" as a store transaction summary.
3. Coupons can be redeemed at checkout; info regarding this is located in the README.txt file.
4. For best performance, refrain from adding spaces in any string inputs.

## Role of team members

<i>Student Name</i>	<i>Role</i>
Siddharth	Implementing main code; functions 2, 5, 6; Documentation.
Shahil	Implementing functions 1, 4, 9; Report writing.
Rishita	Making code framework; Implementing functions 3, 7, 8, 10.
Krish	Implementing functions 11, 12; Report writing.

# Results

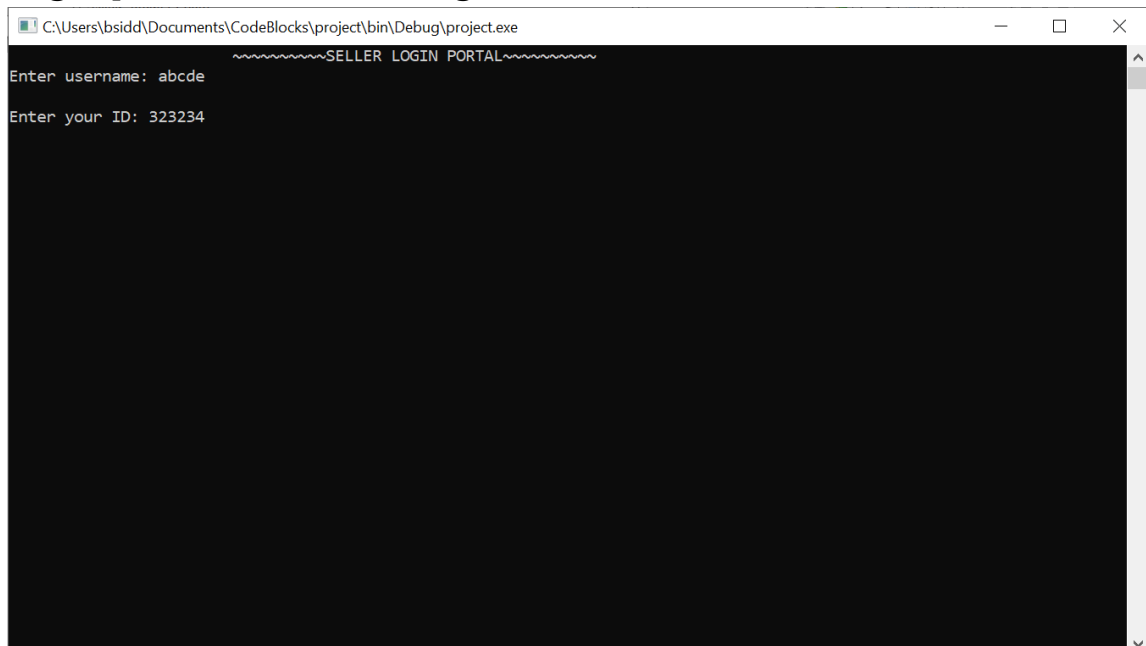
## 1. Initial display:



A screenshot of a Windows command prompt window. The title bar shows the file path: C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe. The window contains the following text:

```
*****WELCOME TO OUR E-COMMERCE WEBSITE*****  
1:Existing Seller  
2:Customer  
3:New Seller  
4:Exit  
Enter Your Choice:
```

## 2. Login portal for an existing seller:



A screenshot of a Windows command prompt window. The title bar shows the file path: C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe. The window contains the following text:

```
~~~~~SELLER LOGIN PORTAL~~~~~  
Enter username: abcde  
Enter your ID: 323234
```

### 3. On adding an item to the inventory:

```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe
*****Seller Dashboard*****
1:Add items to your inventory
2:Display all items
3:Exit
Enter Your Choice: 1

Categories:
1:Vegetables
2:Dry Fruits
3:Fruits
4:Snacks
5:Refreshments
6:Return to dashboard
Make a choice: 1

How Many Items Do You Want to Enter:1

Enter Item ID: 110
Enter Item Name: Sweet-Potato
Enter Price: 50
Enter quantity in stock: 25
Enter other features: good-for-health

*****
*****Seller Dashboard*****
1:Add items to your inventory
2:Display all items
3:Exit
Enter Your Choice:
```

### 4. On displaying the seller's inventory:

```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe
*****SELLER INVENTORY*****
+-----+-----+-----+-----+-----+
|ItemID|Item Name|Price|Qty in stock|Features|Seller ID|
+-----+-----+-----+-----+-----+
| 101|Potato|30.00|50|high-starch|323234|
| 106|pumpkin|30.00|10|for-halloween|323234|
| 109|Avocado|70.00|30|FRE_SH_AVA_CADO|323234|
| 110|Sweet-Potato|50.00|25|good-for-health|323234|
| 201|Cashew-Nuts|400.00|150|salted|323234|
| 401|Biscuits|20.00|75|with-chocochips|323234|
| 402|Wafers|30.00|15|crispy|323234|
| 501|CocaCola|100.00|30|Fizzy|323234|
+-----+-----+-----+-----+-----+
*****Seller Dashboard*****
1:Add items to your inventory
2:Display all items
3:Exit
Enter Your Choice:
```

## 5. Choices for the customer:

```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe
*****WELCOME DEAR CUSTOMER*****

1:Display all items.
2:Display a category.
3:Add item to cart.
4:Check Cart
5:Exit

Enter Your Choice:
```

## 6. On displaying all items:

```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe
*****STORE: ALL ITEMS*****
+-----+-----+-----+-----+-----+
|ItemID|Item Name|Price|Qty in stock|Features|Seller ID|
+-----+-----+-----+-----+-----+
|101|Potato|30.00|50|high-starch|323234|
|102|Gourd|50.00|10|Fresh|223344|
|103|Bitter-Gourd|50.00|15|New-in-stock|223344|
|104|Cauliflower|15.00|20|not-broccoli|223344|
|105|Tomato|12.00|100|Red|555886|
|106|pumpkin|30.00|10|for-halloween|323234|
|107|Okra|50.00|50|Long|246810|
|108|eggplant|60.00|40|Purple|246810|
|109|Avocado|70.00|30|FRE_SH_AVA_CADO|323234|
|110|Sweet-Potato|50.00|25|good-for-health|323234|
|201|Cashew-Nuts|400.00|150|salted|323234|
|202|Almonds|250.00|200|Californian|223344|
|203|Raisins|300.00|100|Fibre-rich|555886|
|204|Walnuts|1000.00|50|whole|444333|
|205|Pistachios|500.00|50|On-Clearance|234567|
|301|Apple|100.00|50|Gala|555886|
|302|Banana|30.00|50|Almost-Ripe|444333|
|303|Pineapple|38.00|25|VitaminC-rich|444333|
|304|Orange|150.00|50|Orange|234567|
|305|Grapes|55.00|45|fresh&juicy|234567|
|401|Biscuits|20.00|75|with-chocochips|323234|
|402|Wafers|30.00|15|crispy|323234|
|403|Bread|25.00|20|Literally-Just-Bread|444333|
|404|Oats|50.00|30|Avena_Sativa|444333|
|405|Instant-Noodles|60.00|50|Spicy-Hot|234567|
|501|CocaCola|100.00|30|Fizzy|323234|
|502|MountainDew|150.00|30|Blue|223344|
|503|Coffee|100.00|30|Roasted|555886|
|504|Iced-Tea|50.00|30|Cool|555886|
|505|Tropicana|160.00|40|with-pulp|234567|
+-----+-----+-----+-----+-----+

*****WELCOME DEAR CUSTOMER*****

1:Display all items.
2:Display a category.
3:Add item to cart.
4:Check Cart
```

## 7. On displaying the items of a category:

```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe

Categories:
1:Vegetables
2:Dry Fruits
3:Fruits
4:Snacks
5:Refreshments
6:Return to dashboard

Make a choice: 1

*****STORE: CATEGORY-vegetables*****

+-----+-----+-----+-----+-----+
|ItemID|Item Name|Price|Qty in stock|Features|Seller ID|
+-----+-----+-----+-----+-----+
| 101|Potato|30.00|50|high-starch|323234|
| 102|Gourd|50.00|10|Fresh|223344|
| 103|Bitter-Gourd|50.00|15|New-in-stock|223344|
| 104|Cauliflower|15.00|20|not-broccoli|223344|
| 105|Tomato|12.00|100|Red|555886|
| 106|pumpkin|30.00|10|for-halloween|323234|
| 107|Okra|50.00|50|Long|246810|
| 108|eggplant|60.00|40|Purple|246810|
| 109|Avocado|70.00|30|FRE_SH_AVA_CADO|323234|
| 110|Sweet-Potato|50.00|25|good-for-health|323234|
+-----+-----+-----+-----+-----+

*****WELCOME DEAR CUSTOMER*****

1:Display all items.
2:Display a category.
3:Add item to cart.
```

## 8. On adding items to the cart. (Screen not cleared so customer can refer to the category display):

```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe

+-----+-----+-----+-----+-----+
*****WELCOME DEAR CUSTOMER*****

1:Display all items.
2:Display a category.
3:Add item to cart.
4:Check Cart
5:Exit

Enter Your Choice: 3

Enter Item ID: 109
Enter Quantity: 4

Do you want to enter another item?(y/n) y

Enter Item ID: 105
Enter Quantity: 30

Do you want to enter another item?(y/n) y

Enter Item ID: 102
Enter Quantity: 10

Do you want to enter another item?(y/n) y

Enter Item ID: 107
Enter Quantity: 60

Invalid ID or quantity.
Do you want to enter another item?(y/n) n
```

## 9. On displaying the cart:

```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe
Enter Quantity: 3
Do you want to enter another item?(y/n) n
*****WELCOME DEAR CUSTOMER*****
1:Display all items.
2:Display a category.
3:Add item to cart.
4:Check Cart
5:Exit
Enter Your Choice: 4

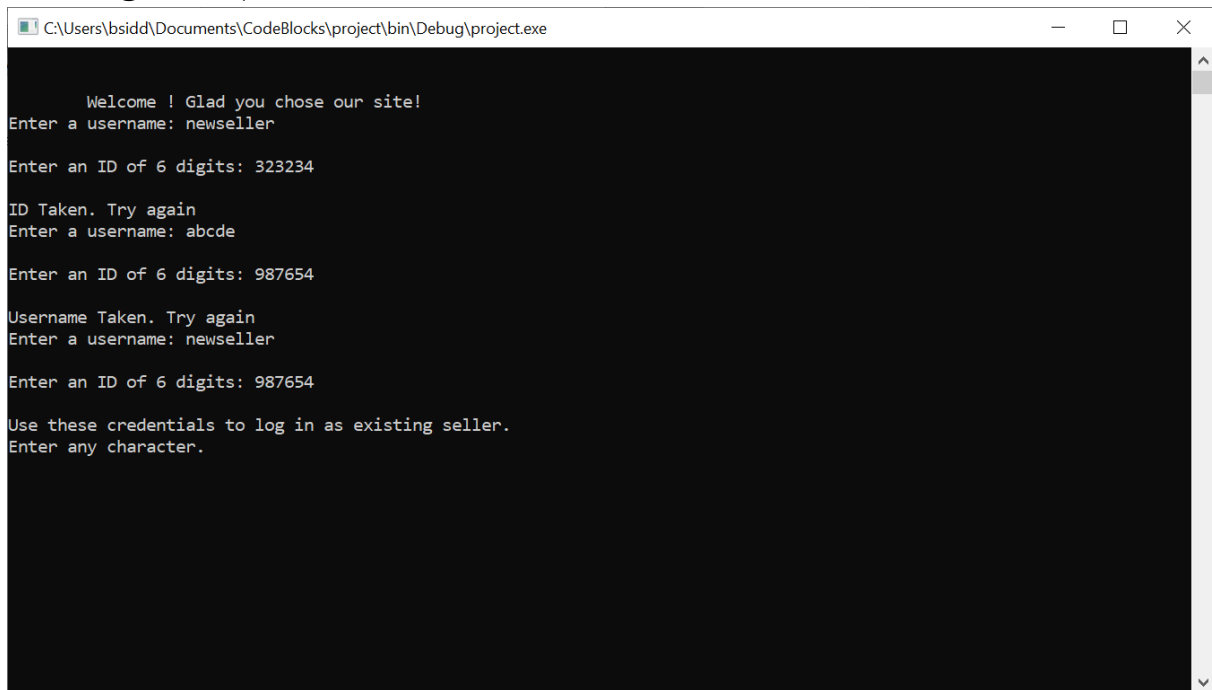
*****YOUR CART*****
+-----+-----+-----+-----+-----+-----+
|ItemID|Item Name      |Price  |Quantity|Features  |Seller ID|
+-----+-----+-----+-----+-----+-----+
| 109|Avocado         |70.00|4|FRE_SH_AVA_CADO|323234|
| 105|Tomato          |12.00|30|Red        |555886|
| 102|Gourd           |50.00|10|Fresh      |223344|
| 103|Bitter-Gourd    |50.00|3|New-in-stock|223344|
+-----+-----+-----+-----+-----+-----+
Would you like to check out?(y/n)
```

## 10. On checking out with the cart:

```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe
*****BILL OF PURCHASE*****
+-----+-----+-----+-----+-----+
|ItemID|Item Name      |Price  |Quantity|Subtotals |
+-----+-----+-----+-----+-----+
| 109|Avocado         |70.00|4|280.00|
| 105|Tomato          |12.00|30|360.00|
| 102|Gourd           |50.00|10|500.00|
| 103|Bitter-Gourd    |50.00|3|150.00|
+-----+-----+-----+-----+-----+
|                                     |TOTAL BILL AMOUNT|1290.00|
+-----+-----+-----+-----+-----+
Enter your name:tester
Choose a payment method:
1.NetBanking
2.Cash on delivery
Choose:1
THANKS FOR SHOPPING AT OUR WEBSITE
You will be redirected to a netbanking site once that is coded.
Process returned 0 (0x0)   execution time : 438.407 s
Press any key to continue.
```



11. Registration of a new seller (log in after this is same as that of an existing seller):



```
C:\Users\bsidd\Documents\CodeBlocks\project\bin\Debug\project.exe

Welcome ! Glad you chose our site!
Enter a username: newseller

Enter an ID of 6 digits: 323234

ID Taken. Try again
Enter a username: abcde

Enter an ID of 6 digits: 987654

Username Taken. Try again
Enter a username: newseller

Enter an ID of 6 digits: 987654

Use these credentials to log in as existing seller.
Enter any character.
```

## References and Sources of info

1. For concepts of records: [Data Structures Using C: CHAPTER 2: RECORDS, ARRAYS, AND POINTERS](#)
  2. For info about files: <https://faculty.winthrop.edu/dannellys/csci325/>
  3. Other concepts of structures and records from "The Spirit of C"(1998) by Mullish Cooper (Chapters 13, 14)
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