# Online Shopping Cart

## Project Code in Java Using Eclipse

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A shopping cart is a piece of software that facilitates the purchase of a product or service. It accepts the customer's payment and organizes the distribution of that information to the merchant, payment processor and other parties.

# 1. Online Shopping Cart

The code has been designed in Java language using eclipse console.

## 1.1 Objective

This Code will ask the user to log in and then will ask about how many items he wants to buy, item name, its price and its quantity. It will make the bills & display the total amount to the user including taxes. Discount feature is also added. In the end, it will ask the user either log out or continue shopping.
The program will continue to execute until the user log out.

## 1.2 Existing Solutions

This program can be done by various methods. One of the methods is by giving static reference to attributes, methods. This project can also be done in various other languages like JavaScript, PHP, C, C++ etc.

## 1.3 Approach

This program uses multilevel inheritance approach. This code has been made by keeping simplicity in mind, so that it can be easily understood.
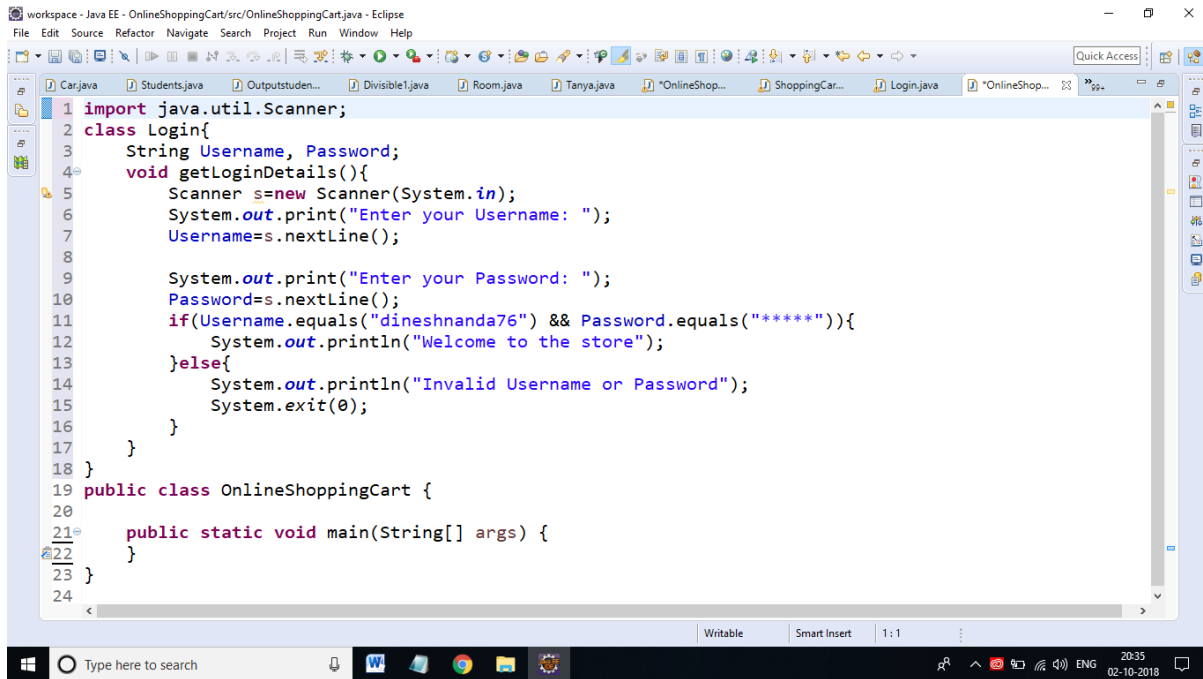
## 1.4 Algorithm Design & its implementation

As stated above, this program uses multilevel inheritance where each class inherits from its parent class except the one class.
The Code will ask for username & password to log in to the online shopping store and further ask for item name, its price and its quantity. It will display bills and discounts.
It uses six classes with methods in it and a scanner as well. Using these classes, objects are created and output is displayed.
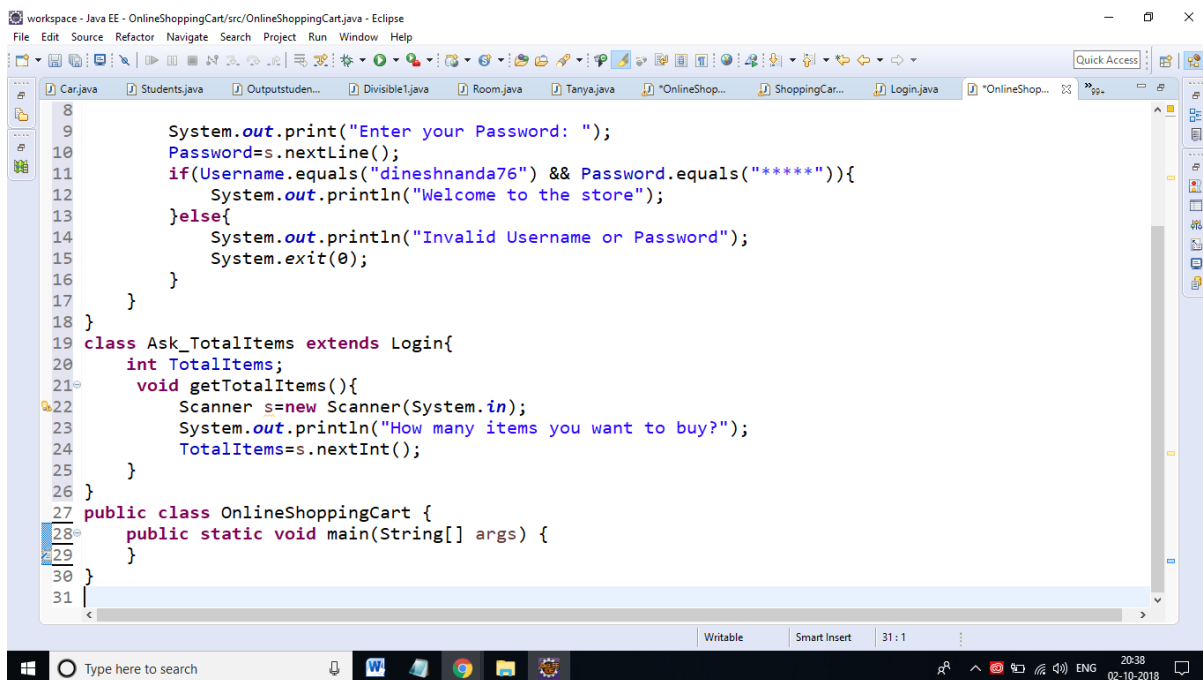
## 1.5 Code Screenshots step by step:



```java
import java.util.Scanner;
class Login{
    String Username, Password;
    void getLoginDetails(){
        Scanner s=new Scanner(System.in);
        System.out.print("Enter your Username: ");
        Username=s.nextLine();

        System.out.print("Enter your Password: ");
        Password=s.nextLine();
        if(Username.equals("dineshnanda76") && Password.equals("*****")){
            System.out.println("Welcome to the store");
        }else{
            System.out.println("Invalid Username or Password");
            System.exit(0);
        }
    }
}
public class OnlineShoppingCart {

    public static void main(String[] args) {
    }
}
```



```java
        System.out.print("Enter your Password: ");
        Password=s.nextLine();
        if(Username.equals("dineshnanda76") && Password.equals("*****")){
            System.out.println("Welcome to the store");
        }else{
            System.out.println("Invalid Username or Password");
            System.exit(0);
        }
    }
}
class Ask_TotalItems extends Login{
    int TotalItems;
    void getTotalItems(){
        Scanner s=new Scanner(System.in);
        System.out.println("How many items you want to buy?");
        TotalItems=s.nextInt();
    }
}
public class OnlineShoppingCart {
    public static void main(String[] args) {
    }
}
```

Car.java | Students.java | Outputstuden... | Divisible1.java | Room.java | Tanya.java | *OnlineShop... | ShoppingCar... | Login.java | *OnlineShop...

```java
25          }
26  }
27  class Ask_ItemDetails extends Ask_TotalItems{
28          String [] ItemName;
29          double[] ItemPrice;
30          int [] ItemQuantity;
31          void getItemDetails(){
32                  ItemName=new String[TotalItems];
33                  ItemPrice=new double[TotalItems];
34                  ItemQuantity=new int [TotalItems];
35                  int count=0;
36                  while (count<TotalItems){
37                          Scanner s=new Scanner(System.in);
38                          System.out.println("What is the name of item no."+(count+1)+"? ");
39                          ItemName[count]=s.nextLine();
40                          System.out.println("What is the price of item no."+(count+1)+"? ");
41                          ItemPrice[count]=s.nextDouble();
42                          System.out.println("How many of item no."+(count+1)+" do you want to buy? ");
43                          ItemQuantity[count]=s.nextInt();
44                          count++;
45                  }
46
47          }
48  }l
```

Writable | Smart Insert | 48 : 2

Car.java | Students.java | Outputstuden... | Divisible1.java | Room.java | Tanya.java | *OnlineShop... | ShoppingCar... | Login.java | *OnlineShop...

```java
40                  System.out.println("What is the price of item no."+(count+1)+"? ");
41                  ItemPrice[count]=s.nextDouble();
42                  System.out.println("How many of item no."+(count+1)+" do you want to buy? ");
43                  ItemQuantity[count]=s.nextInt();
44                  count++;
45          }
46
47      }
48  }
49  class BoughtItemDetails extends Ask_ItemDetails{
50      void getBoughtItemDetails(){
51          System.out.println("########################################################");
52          System.out.println("Shopping Cart Details");
53          for(int i=0;i<TotalItems;i++){
54              String QuantityDisplay=ItemQuantity[i]+"\t--\t";
55              String ItemDisplay=ItemName[i]+"...........";
56              String PriceDisplay= ItemPrice[i]+" = "+ItemPrice[i]*ItemQuantity[i];
57              System.out.println(QuantityDisplay+ItemDisplay+PriceDisplay);
58          }
59          System.out.println("########################################################");
60
61      }
62  }
63  public class OnlineShoppingCart {
64      public static void main(String[] args) {
65      }
```

Writable | Smart Insert | 62 : 2

```java
63  class DisplayBill extends BoughtItemDetails{
64      void getBill(){
65          double subtotal=0;
66          for(int i=0;i<TotalItems;i++){
67              subtotal=subtotal+ ItemPrice[i]*ItemQuantity[i];
68          }
69          System.out.println("Subtotal: "+subtotal+" $");
70
71          double tax=subtotal*0.0875;
72          System.out.println("Sales tax at 8.75%: "+tax+" $");
73
74          double total=subtotal+tax;
75          System.out.println("Total Cost: "+total +" $");
76
77          int sum=0;
78          for(int item:ItemQuantity){
79              sum=sum+item;
80          }
81          System.out.println("Average cost of all items: "+subtotal/sum+" $");
82          if(total>=20 && total<30){
83              System.out.println("Your bill is between 20 $ & 30 $ therefore you will get 5% discount");
84              double discount=total*0.05;
85              total=total-discount;
86              System.out.println("After discount of 5% your bill is "+total+" $");
87          }else if(total>=30 && total<40){
88              System.out.println("Your bill is between 30 $ & 40 $ therefore you will get 7% discount");
89              double discount=total*0.07;
90              total=total-discount;
91              System.out.println("After discount of 7% your bill is "+total+" $");
92          }else if(total>=40 && total<50){
```

```java
82          if(total>=20 && total<30){
83              System.out.println("Your bill is between 20 $ & 30 $ therefore you will get 5% discount");
84              double discount=total*0.05;
85              total=total-discount;
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87          }else if(total>=30 && total<40){
88              System.out.println("Your bill is between 30 $ & 40 $ therefore you will get 7% discount");
89              double discount=total*0.07;
90              total=total-discount;
91              System.out.println("After discount of 7% your bill is "+total+" $");
92          }else if(total>=40 && total<50){
93              System.out.println("Your bill is between 40 $ & 50 $ therefore you will get 8% discount");
94              double discount=total*0.08;
95              total=total-discount;
96              System.out.println("After discount of 8% your bill is "+total+" $");
97          }else if(total>=50 && total<60){
98              System.out.println("Your bill is between 50 $ & 60 $ therefore you will get 10% discount");
99              double discount=total*0.1;
100             total=total-discount;
101             System.out.println("After discount of 10% your bill is "+total+" $");
102         }else if(total>=60){
103             System.out.println("Your bill is greater than equal to 60 $ therefore you will get 15% discount");
104             double discount=total*0.15;
105             total=total-discount;
106             System.out.println("After discount of 15% your bill is "+total+" $");
107         }else{
108             System.out.println("Not eligible for discount");
109         }
110     }
111 }
```

workspace - Java EE - OnlineShoppingCart/src/OnlineShoppingCart.java - Eclipse

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Car.java   Students.java   Outputstuden...   Divisible1.java   Room.java   Tanya.java   *OnlineShop...   ShoppingCar...   Login.java   *OnlineShop...
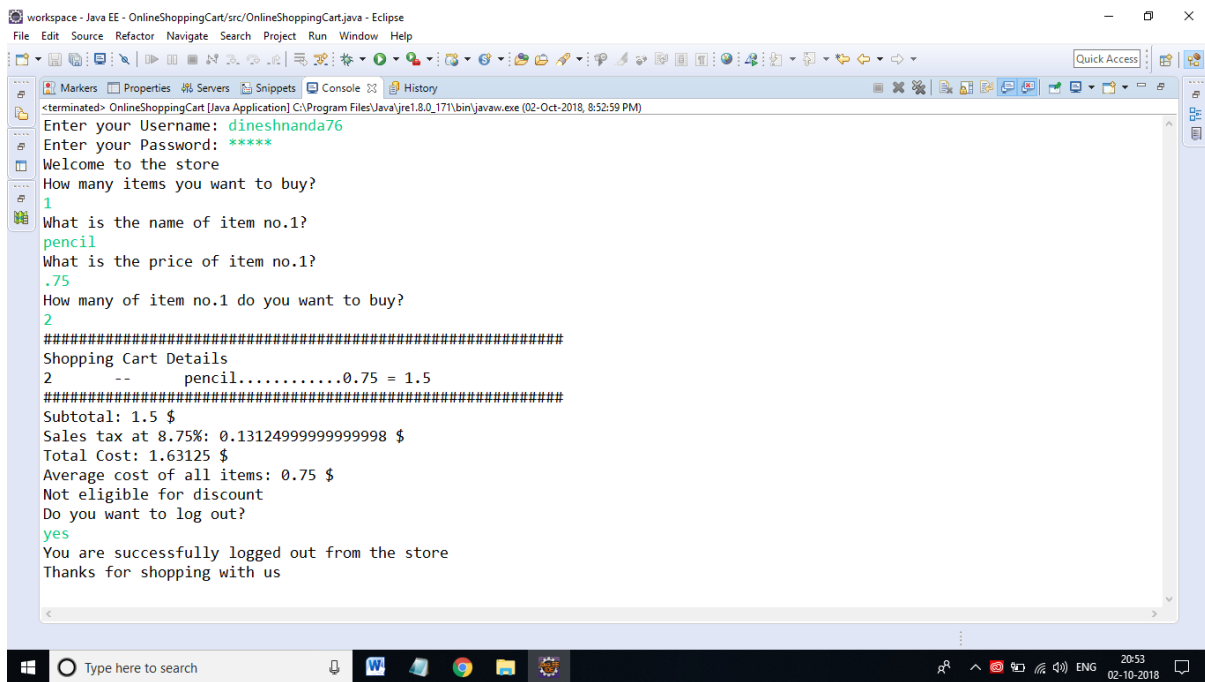
```java
107              }else{
108                  System.out.println("Not eligible for discount");
109              }
110          }
111      }
112  class Logout extends DisplayBill{
113      String LogoutButton;
114      void pressLogout(){
115          Scanner s=new Scanner(System.in);
116          System.out.println("Do you want to log out?");
117          LogoutButton=s.nextLine();
118          if(LogoutButton.equals("yes")){
119              System.out.println("You are successfully logged out from the store");
120              System.out.println("Thanks for shopping with us");
121          }else if(LogoutButton.equals("no")){
122              System.out.println("Continue your shopping");
123              getTotalItems();
124              getItemDetails();
125              getBoughtItemDetails();
126              getBill();
127              pressLogout();
128          }
129      }
130  }
131  public class OnlineShoppingCart {
132      public static void main(String[] args) {
```

workspace - Java EE - OnlineShoppingCart/src/OnlineShoppingCart.java - Eclipse

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117          LogoutButton=s.nextLine();
118          if(LogoutButton.equals("yes")){
119              System.out.println("You are successfully logged out from the store");
120              System.out.println("Thanks for shopping with us");
121          }else if(LogoutButton.equals("no")){
122              System.out.println("Continue your shopping");
123              getTotalItems();
124              getItemDetails();
125              getBoughtItemDetails();
126              getBill();
127              pressLogout();
128          }
129      }
130  }
131  public class OnlineShoppingCart {
132      public static void main(String[] args) {
133          Logout s=new Logout();
134          s.getLoginDetails();
135          s.getTotalItems();
136          s.getItemDetails();
137          s.getBoughtItemDetails();
138          s.getBill();
139          s.pressLogout();
140      }
141  }
142
```

## 1.6 Code:

```java
2.  import java.util.Scanner;
3.  class Login{
4.          String Username, Password;
5.          void getLoginDetails(){
6.                  Scanner s=new Scanner(System.in);
7.                  System.out.print("Enter your Username: ");
8.                  Username=s.nextLine();
9.
10.                 System.out.print("Enter your Password: ");
11.                 Password=s.nextLine();
12.                 if(Username.equals("dineshnanda76") &&
    Password.equals("*****")){
13.                         System.out.println("Welcome to the store");
14.                 }else{
15.                         System.out.println("Invalid Username or Password");
16.                         System.exit(0);
17.                 }
18.         }
19. }
20. class Ask_TotalItems extends Login{
21.         int TotalItems;
22.          void getTotalItems(){
23.                 Scanner s=new Scanner(System.in);
24.                 System.out.println("How many items you want to buy?");
25.                 TotalItems=s.nextInt();
26.         }
27. }
28. class Ask_ItemDetails extends Ask_TotalItems{
29.         String [] ItemName;
30.         double[] ItemPrice;
31.         int [] ItemQuantity;
32.         void getItemDetails(){
```

```java
33.                  ItemName=new String[TotalItems];
34.                  ItemPrice=new double[TotalItems];
35.                  ItemQuantity=new int [TotalItems];
36.                  int count=0;
37.                  while (count<TotalItems){
38.                          Scanner s=new Scanner(System.in);
39.                          System.out.println("What is the name of item
    no."+(count+1)+"? ");
40.                          ItemName[count]=s.nextLine();
41.                          System.out.println("What is the price of item
    no."+(count+1)+"? ");
42.                          ItemPrice[count]=s.nextDouble();
43.                          System.out.println("How many of item no."+(count+1)+"
    do you want to buy? ");
44.                          ItemQuantity[count]=s.nextInt();
45.                          count++;
46.                  }
47.
48.          }
49. }
50. class BoughtItemDetails extends Ask_ItemDetails{
51.      void getBoughtItemDetails(){
52.
         System.out.println("##############################################
    ############");
53.              System.out.println("Shopping Cart Details");
54.              for(int i=0;i<TotalItems;i++){
55.                      String QuantityDisplay=ItemQuantity[i]+"\t--\t";
56.                      String ItemDisplay=ItemName[i]+".............";
57.                      String PriceDisplay= ItemPrice[i]+" =
    "+ItemPrice[i]*ItemQuantity[i];
58.
         System.out.println(QuantityDisplay+ItemDisplay+PriceDisplay);
59.              }
60.
         System.out.println("##############################################
    ############");
61.
62.      }
63. }
64. class DisplayBill extends BoughtItemDetails{
65.      void getBill(){
66.              double subtotal=0;
67.              for(int i=0;i<TotalItems;i++){
68.                      subtotal=subtotal+ ItemPrice[i]*ItemQuantity[i];
69.              }
70.              System.out.println("Subtotal: "+subtotal+" $");
71.
72.              double tax=subtotal*0.0875;
73.              System.out.println("Sales tax at 8.75%: "+tax+" $");
74.
75.              double total=subtotal+tax;
76.              System.out.println("Total Cost: "+total +" $");
77.
78.              int sum=0;
79.              for(int item:ItemQuantity){
80.                      sum=sum+item;
81.              }
```

```java
82.            System.out.println("Average cost of all items:
    "+subtotal/sum+" $");
83.            if(total>=20 && total<30){
84.                System.out.println("Your bill is between 20 $ & 30 $
    therefore you will get 5% discount");
85.                double discount=total*0.05;
86.                total=total-discount;
87.                System.out.println("After discount of 5% your bill is
    "+total+" $");
88.            }else if(total>=30 && total<40){
89.                System.out.println("Your bill is between 30 $ & 40 $
    therefore you will get 7% discount");
90.                double discount=total*0.07;
91.                total=total-discount;
92.                System.out.println("After discount of 7% your bill is
    "+total+" $");
93.            }else if(total>=40 && total<50){
94.                System.out.println("Your bill is between 40 $ & 50 $
    therefore you will get 8% discount");
95.                double discount=total*0.08;
96.                total=total-discount;
97.                System.out.println("After discount of 8% your bill is
    "+total+" $");
98.            }else if(total>=50 && total<60){
99.                System.out.println("Your bill is between 50 $ & 60 $
    therefore you will get 10% discount");
100.                    double discount=total*0.1;
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102.                    System.out.println("After discount of 10% your
    bill is "+total+" $");
103.                }else if(total>=60){
104.                    System.out.println("Your bill is greater than
    equal to 60 $ therefore you will get 15% discount");
105.                    double discount=total*0.15;
106.                    total=total-discount;
107.                    System.out.println("After discount of 15% your
    bill is "+total+" $");
108.                }else{
109.                    System.out.println("Not eligible for discount");
110.                }
111.            }
112.        }
113.    class Logout extends DisplayBill{
114.            String LogoutButton;
115.            void pressLogout(){
116.                Scanner s=new Scanner(System.in);
117.                System.out.println("Do you want to log out?");
118.                LogoutButton=s.nextLine();
119.                if(LogoutButton.equals("yes")){
120.                    System.out.println("You are successfully logged
    out from the store");
121.                    System.out.println("Thanks for shopping with
    us");
122.                }else if(LogoutButton.equals("no")){
123.                    System.out.println("Continue your shopping");
124.                     getTotalItems();
125.                     getItemDetails();
126.                     getBoughtItemDetails();
127.                     getBill();
```

```
128.                              pressLogout();
129.                   }
130.             }
131.       }
132.       public class OnlineShoppingCart {
133.             public static void main(String[] args) {
134.                   Logout s=new Logout();
135.                   s.getLoginDetails();
136.                   s.getTotalItems();
137.                   s.getItemDetails();
138.                   s.getBoughtItemDetails();
139.                   s.getBill();
140.                   s.pressLogout();
141.             }
142.       }
```

## 1.7  Conclusion

This online shopping cart enables the user to tell the compiler how many items he/she wants to buy, item name, its price & quantity & in the end user will see the bill & might get discount depending upon the values he/she entered.