

The screenshot shows the Eclipse IDE interface with the following details:

- Toolbar:** Standard Eclipse toolbar with icons for file operations, search, and run.
- ActionBar:** Shows tabs for "HardwareShop.java", "Customer.java", "PrivilegedCustomer.java", and "Tester.java".
- Left Sidebar:** Package Explorer view showing project structure. The "src" folder under "oops" contains files: "Customer.java", "HardwareShop.java", "PrivilegedCustomer.java", and "Tester.java". Other projects like "FA", "JRE System Library [JavaSE]", and "FirstProject" are also listed.
- Central View:** Code editor displaying the "Customer.java" file content. The code defines a class "Customer" with private attributes: custName, mobNumber, quantity, and reqCustomizationArr. It includes a constructor, three getters, and two setters.
- Bottom Status Bar:** Shows "Problems", "Javadoc", "Declaration", "Console", and the current date and time: "10-Apr-2021, 10:16:04 PM - 10:16:04 PM".
- Bottom Log:** Displays the output of the last run: "S101" and "787.5".

```
1 package oops;
2
3 public class Customer {
4     private String custName;
5     private long mobNumber;
6     private int quantity;
7     private String[] reqCustomizationArr;
8
9     public Customer(String custName, long mobNumber, String[] reqCustomizationArr, int
10                this.custName=custName;
11                this.mobNumber=mobNumber;
12                this.quantity=quantity;
13                this.reqCustomizationArr=reqCustomizationArr;
14            }
15    public String getCustName() {
16        return custName;
17    }
18    public void setCustName(String custName) {
19        this.custName = custName;
20    }
21    public long getMobNumber() {
22        return mobNumber;
23    }
24    public void setMobNumber(long mobNumber) {
25        this.mobNumber = mobNumber;
```

The screenshot shows the Eclipse IDE interface with the following details:

- Top Bar:** Standard Eclipse menu items: Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help.
- Toolbar:** Includes icons for New, Open, Save, Cut, Copy, Paste, Find, Replace, and others.
- Left Sidebar:** Shows the project structure under "JRE System Library [JavaSE-1.8] src". Projects listed include: bad, bubblesorting, card, date, eight_jan, eighth_feb, fourth_jan, numberplate, oops, Customer.java, HardwareShop.java, PrivilegedCustomer.java, and Tester.java. A file named queue111 is also visible.
- Central Editor:** Displays the code for **Customer.java**. The code defines a class with methods for setting and getting customer name, mobile number, quantity, and required customization array.
- Bottom Bar:** Includes tabs for Problems, Javadoc, Declaration, and Console. The Console tab shows the output of a terminated Java application named "Tester".
- Terminal Output:** The Console tab shows the following output:

```
<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)
S101
787.5
```

Refactor Navigate Search Project Run Window Help



```
1 package oops;
2
3 public class PrivilegedCustomer extends Customer{
4     private static String[] privilegedIdArr= {"P101","P345","P785","P099"};
5     private String privilegedId;
6     private int creditPoints;
7
8     public PrivilegedCustomer(String custName, long mobNumber, String[] reqCustomizationArr, int quantity, String
9         super(custName,mobNumber,reqCustomizationArr,quantity);
10    this.privilegedId=privilegedId;
11    this.creditPoints=creditPoints;
12 }
13 public boolean validateCustomer() {
14     if(this.getCustName().length()>=3) {
15         for(String s: privilegedIdArr) {
16             if(s.equals(this.privilegedId)) {
17                 return true;
18             }
19         }
20     }
21     else {
22         return false;
23     }
24     return false;
25 }
```

oops
PrivilegedCustomer
privilegedId
privilegedIdArr
creditPoints
validateCustomer
getId
setPrivilegedId
getCreditPoints
setCreditPoints

Problems Javadoc Declaration Console

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)

S101

787.5

```
HardwareShop.java Customer.java PrivilegedCustomer.java Tester.java  
16             if(s.equals(this.privilegedId)) {  
17                 return true;  
18             }  
19         }  
20     }  
21     else {  
22         return false;  
23     }  
24     return false;  
25 }  
26 public int identifyDiscountPercentage() {  
27     int discountPercentage=0;  
28     if(this.creditPoints>=1 && this.creditPoints<50) {  
29         discountPercentage=5;  
30     }  
31     else if(this.creditPoints>=50 && this.creditPoints<100) {  
32         discountPercentage=10;  
33     }  
34     else if(this.creditPoints>=100) {  
35         discountPercentage=15;  
36     }  
37     return discountPercentage;  
38 }  
39 public static String[] getPrivilegedIdArr() {  
40     return privilegedIdArr;  
<
```

Problems Javadoc Declaration Console

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)

S101

787.5

Outline

oops

- PrivilegedCustomer
 - privilegedIdArr : String[]
 - privilegedId : String
 - creditPoints : int

- PrivilegedCustomer(String, int)
- validateCustomer() : boolean
- identifyDiscountPercentage() : int
- getPrivilegedIdArr() : String[]
- setPrivilegedIdArr(String[]) : void
- getPrivilegedId() : String
- setPrivilegedId(String) : void
- getCreditPoints() : int
- setCreditPoints(int) : void

Refactor Navigate Search Project Run Window Help

HardwareShop.java Customer.java PrivilegedCustomer.java Tester.java

Library [JavaSE-11] Reporting

Customer.java HardwareShop.java PrivilegedCustomer.java Tester.java 11

vn e-info.java

else if(this.creditPoints>=50 && this.creditPoints<100) {
 discountPercentage=10;
}
else if(this.creditPoints>=100) {
 discountPercentage=15;
}
return discountPercentage;

public static String[] getPrivilegedIdArr() {
 return privilegedIdArr;
}
public static void setPrivilegedIdArr(String[] privilegedIdArr) {
 PrivilegedCustomer.privilegedIdArr = privilegedIdArr;
}
public String getPrivilegedId() {
 return privilegedId;
}
public void setPrivilegedId(String privilegedId) {
 this.privilegedId = privilegedId;
}
public int getCreditPoints() {
 return creditPoints;
}
public void setCreditPoints(int creditPoints) {
 this.creditPoints = creditPoints;

Problems Javadoc Declaration Console

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)
S101
787.5

oops

PrivilegedCustomer
privilegedIdArr : String[]
privilegedId : String
creditPoints : int
PrivilegedCustomer(String, long)
validateCustomer() : boolean
identifyDiscountPercentage() : int
getPrivilegedIdArr() : String[]
setPrivilegedIdArr(String[]) : void
getPrivilegedId() : String
setPrivilegedId(String) : void
getCreditPoints() : int
setCreditPoints(int) : void



HardwareShop.java Customer.java PrivilegedCustomer.java Tester.java

```
35         discountPercentage=15;
36     }
37     return discountPercentage;
38 }
39 public static String[] getPrivilegedIdArr() {
40     return privilegedIdArr;
41 }
42 public static void setPrivilegedIdArr(String[] privilegedIdArr) {
43     PrivilegedCustomer.privilegedIdArr = privilegedIdArr;
44 }
45 public String getPrivilegedId() {
46     return privilegedId;
47 }
48 public void setPrivilegedId(String privilegedId) {
49     this.privilegedId = privilegedId;
50 }
51 public int getCreditPoints() {
52     return creditPoints;
53 }
54 public void setCreditPoints(int creditPoints) {
55     this.creditPoints = creditPoints;
56 }
```

Outline

oops

PrivilegedCustomer

- privilegedIdArr : String[]
- privilegedId : String
- creditPoints : int
- PrivilegedCustomer(String, int)
- validateCustomer() : boolean
- identifyDiscountPercentage()
- getPrivilegedIdArr() : String[]
- setPrivilegedIdArr(String[]) : void
- getPrivilegedId() : String
- setPrivilegedId(String) : void
- getCreditPoints() : int
- setCreditPoints(int) : void

Problems Javadoc Declaration Console

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)

5101
787.5



Page Expl... X

```

1 package oops;
2
3 public class HardwareShop {
4     private static int counter=100;
5     private static String[] customizedItemArr= {"Hammer","Screws","Piller"};
6     private static int[] customizedItemCostArr= {50,10,100};
7     private String serviceId;
8     private PrivilegedCustomer customer;
9     private double totalCost;
10
11    public HardwareShop(PrivilegedCustomer customer) {
12        this.customer=customer;
13    }
14
15    public String getServiceId() {
16        return serviceId;
17    }
18
19    public double getTotalCost() {
20        return totalCost;
21    }
22    public void generateServiceId() {
23        this.serviceId="S"+(++counter);
24    }
25    public void calculateTotalCost(){

```

Problems Javadoc Declaration Console X

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)

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787.5



y [JavaS

java
Shop.java
Customer

.java

```

17    }
18
19    public double getTotalCost() {
20        return totalCost;
21    }
22    public void generateServiceId() {
23        this.serviceId="S"+(++counter);
24    }
25    public void calculateTotalCost(){
26        boolean flag1=customer.validateCustomer();
27        int check=0;
28        double finalCost=0;
29        double finalCost1=0;
30        double tax=5/100.0;
31        double res=0;
32        for(String e12: customer.getReqCustomizationArr()) {
33            for(String e11:customizedItemArr) {
34                if(e11.equalsIgnoreCase(e12)) {
35                    check++;
36                }
37            }
38        }
39        if(flag1==true && customer.getQuantity()>=1 && customer.getReqCustomizationArr().length>=1) {
40            if(check==customer.getReqCustomizationArr().length) {
41                for(int i=0;i<customer.getReqCustomizationArr().length;i++) {

```

Outline

```

oops
HardwareShop
  counter : int
  customizedItemArr : String[]
  customizedItemCostArr : int[]
  serviceId : String
  customer : PrivilegedCustomer
  totalCost : double
HardwareShop(PrivilegedCustomer)
  getServiceId() : String
  getTotalCost() : double
  generateServiceId() : void
  calculateTotalCost() : void

```

Problems Javadoc Declaration Console

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)

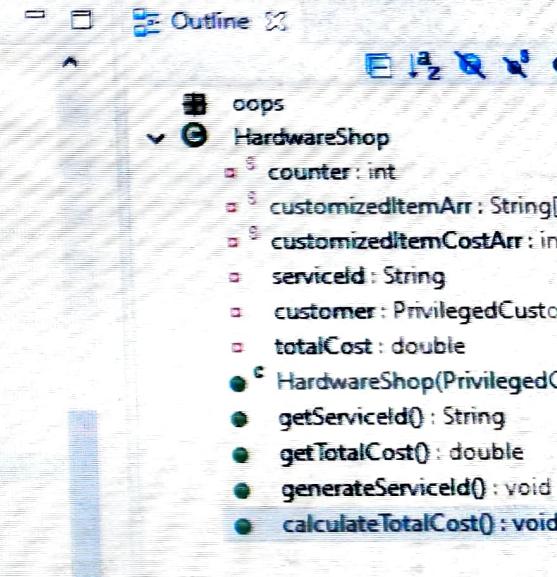
S101

787.5

```

35         check++;
36     }
37   }
38   if(flag1==true && customer.getQuantity()>=1 && customer.getReqCustomizationArr().length>=1) {
39     if(check==customer.getReqCustomizationArr().length) {
40       for(int i=0;i<customer.getReqCustomizationArr().length;i++) {
41         String tar=customer.getReqCustomizationArr()[i];
42         for(int j=0;j<customizedItemArr.length;j++) {
43           if(tar.equalsIgnoreCase(customizedItemArr[j])) {
44             finalCost=finalCost+customizedItemCostArr[j];
45           }
46         }
47       }
48       finalCost1=finalCost*customer.getQuantity();
49       res=finalCost1+(tax*finalCost1);
50       this.generateServiceId();
51       this.totalCost=res;
52     }
53     else {
54       this.serviceId="NA";
55       this.totalCost=-1;
56     }
57   }
58   else {
59   }

```



Problems Javadoc Declaration Console

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)

S101

787.5



Package Expl... X

Assignments

Demo

FA

JRE System Library [JavaSE-11]

src X

bad
bubblesortingcard
date
eight_jan
eighth_feb
fourth_jannumberplate
oops XCustomer.java
HardwareShop.java
PrivilegedCustomer
Tester.java

queue111

seven
unknown

module-info.java

FirstProject

Iteration1

Java

New

```

43         for(int j=0;j<customizedItemArr.length;j++) {
44             if(tar.equalsIgnoreCase(customizedItemArr[j])) {
45                 finalCost=finalCost+customizedItemCostArr[j];
46             }
47         }
48         finalCost1=finalCost*customer.getQuantity();
49         res=finalCost1+(tax*finalCost1);
50         this.generateServiceId();
51         this.totalCost=res;
52     }
53     else {
54         this.serviceId="NA";
55         this.totalCost=-1;
56     }
57 }
58 else {
59     this.serviceId="NA";
60     this.totalCost=-1;
61 }
System.out.println(this.getServiceId());
63 System.out.println(this.getTotalCost());
64
65 }
66 }
67 }
```

Problems Javadoc Declaration Console X

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)

S101

787.5

Outline X

oops

- G HardwareShop**
 - S counter : int
 - S customizedItem
 - S serviceId : String
 - S customer : PrivilegedCustomer
 - P totalCost : double
- C HardwareShop(Param)**
 - getServiceId() : String
 - getTotalCost() : double
 - generateServiceId()
 - calculateTotalCost()



Package Expl...



HardwareShop.java



Customer.java



PrivilegedCustomer.java



Tester.java



> Assignments

> Demo

> FA

> JRE System Library [JavaSE]

> src

> bad

> bubblesorting

> card

> date

> eight_jan

> eighth_feb

> fourth_jan

> numberplate

> oops

> Customer.java

> HardwareShop.java

> PrivilegedCustomer

> Tester.java

> queue111

> seven

> unknown

> module-info.java

> FirstProject

> Iteration1

> Java

> New

```
1 package oops;
2
3 public class Tester {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         String[] thingsToBuy= {"Piller","Hammer"};
8         Customer cust=new Customer("Nitin", 9583844299L, thingsToBuy,2);
9         PrivilegedCustomer pcust=new PrivilegedCustomer("Soumen",9584442200L,thingsToBuy,5,"P101",50);
10        HardwareShop hs=new HardwareShop(pcust);
11        hs.calculateTotalCost();
12    }
13
14 }
15
```

Problems Declaration Console

<terminated> Tester (28) [Java Application] C:\Program Files\Java\jdk-12\bin\javaw.exe (10-Apr-2021, 10:16:04 PM – 10:16:05 PM)

5101

787.5



Writable

Smart Insert

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