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Reg.No.: 20MIC0063

Slot: L53+54

Question:

Create a class Telephone with two members to hold customer's name and phone number. The class should have appropriate constructor, input and display methods. Derive a class

TelephoneIndex with methods to change the name or phone number. Create an array of objects and perform the following functions.

a. Search for a name when the user enters a name or the first few characters.
b. Display all of the names that match the user's input and their corresponding phone numbers.
c. Change the name of a customer.
d. Change the phone number of a customer.

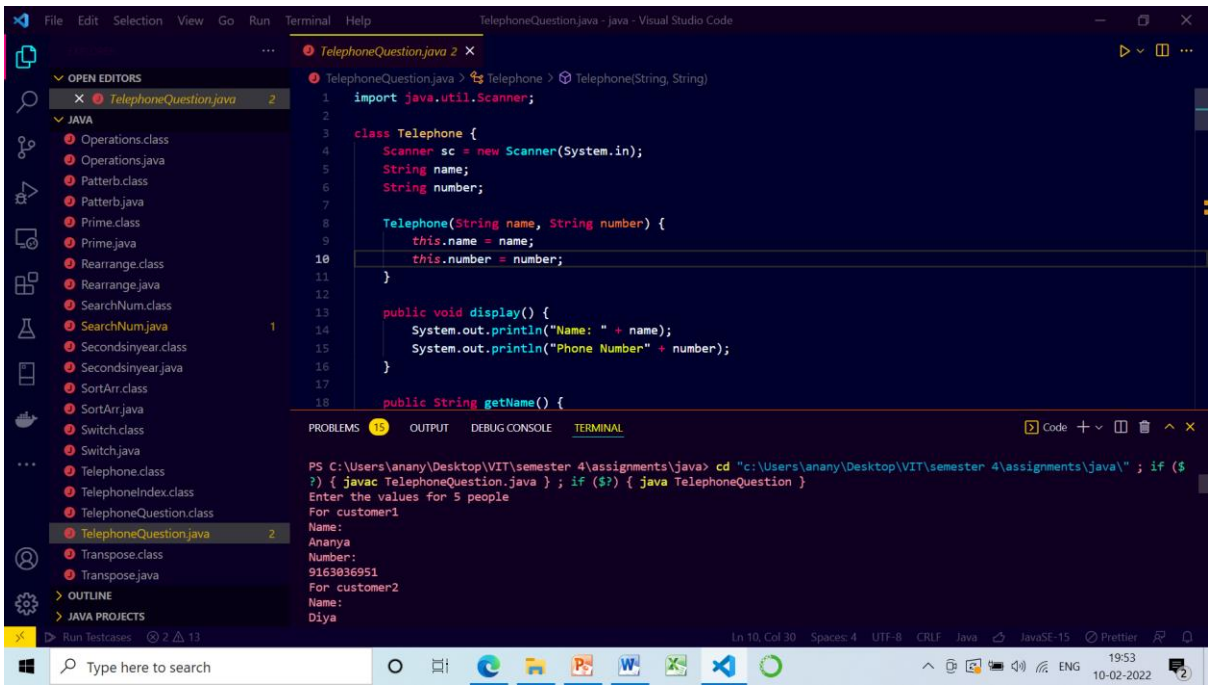
Code:

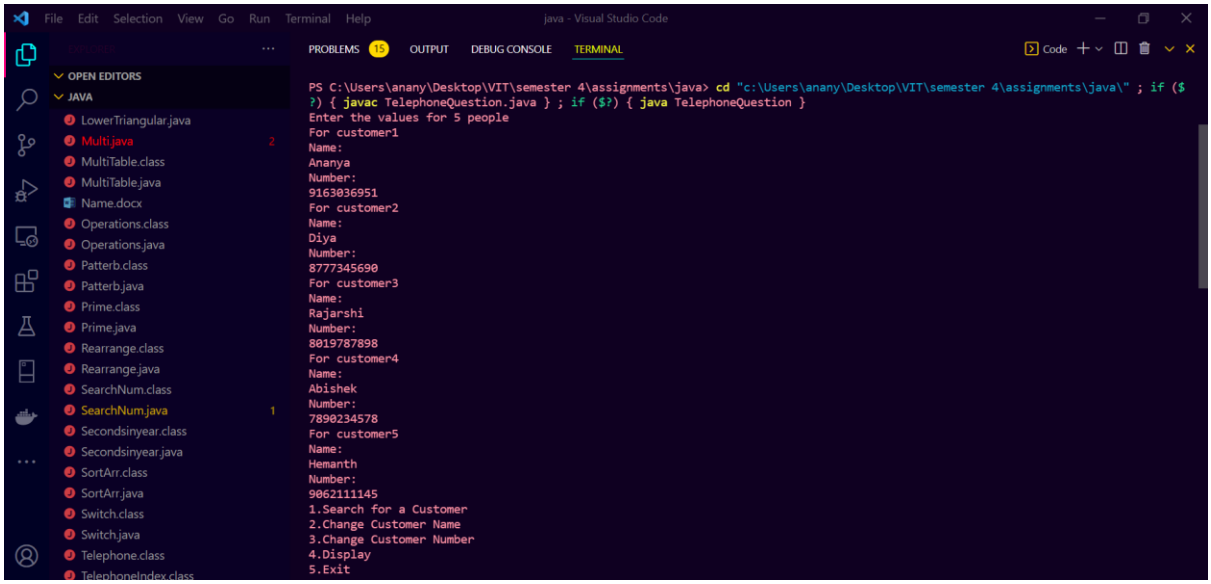
```
import java.util.Scanner;

class Telephone {
   Scanner sc = new Scanner(System.in);
   String name;
   String number;

   Telephone(String name, String number) {
      this.name = name;
      this.number = number;
   }

   public void display() {
      System.out.println("Name: " + name);
      System.out.println("Phone Number" + number);
   }

   public String getName() {
      return name;
   }

   public String getNumber() {
      return number;
   }
}

class TelephoneIndex extends Telephone {

   TelephoneIndex(String name, String number) {
      super(name, number);
   }
```

```
    public void changeName() {
        System.out.println("Enter new name: ");
        name = sc.nextLine();
    }

    public void changeNumber() {
        System.out.println("Enter new number: ");
        number = sc.nextLine();
    }

}

public class TelephoneQuestion {

    public static void main(String[] args) {
        Scanner sc1 = new Scanner(System.in);
        TelephoneIndex[] arr = new TelephoneIndex[5];
        System.out.println("Enter the values for 5 people");
        for (int i = 0; i < 5; i++) {
            Scanner sc2 = new Scanner(System.in);
            System.out.println("For customer" + (i + 1));
            System.out.println("Name: ");
            String name = sc2.nextLine();
            System.out.println("Number: ");
            String number = sc2.nextLine();
            arr[i] = new TelephoneIndex(name, number);
        }
        int choice = 1;
        do {
            System.out.println("1.Search for a Customer");
            System.out.println("2.Change Customer Name");
            System.out.println("3.Change Customer Number");
            System.out.println("4.Display");
            System.out.println("5.Exit");
            choice = sc1.nextInt();
            switch (choice) {
            case 1:
                System.out.println("Enter name or the first few characters");
                Scanner sc3 = new Scanner(System.in);
                String val = sc3.nextLine();
                for (int i = 0; i < 5; i++) {
                    String temp = arr[i].getName();
                    if (temp.equals(val) || temp.startsWith(val)) {
                        arr[i].display();
                    }
                }
                break;
            case 2:
                System.out.println("Enter Name of the customer ");
                Scanner sc4 = new Scanner(System.in);
                String val1 = sc4.nextLine();
                for (int i = 0; i < 5; i++) {
                    String temp = arr[i].getName();
                    if (temp.equals(val1)) {
                        arr[i].changeName();
                    }
```

```
            }
            break;
        case 3:
            System.out.println("Enter Name of the customer ");
            Scanner sc5 = new Scanner(System.in);
            String val2 = sc5.nextLine();
            for (int i = 0; i < 5; i++) {
                String temp = arr[i].getName();
                if (temp.equals(val2)) {
                    arr[i].changeNumber();
                }
            }
            break;
        case 4:
            for (int i = 0; i < 5; i++) {
                System.out.println("Customer " + (i + 1));
                arr[i].display();
            }
            break;
        case 5:
            break;
        default:
            System.out.println("Wrong option");
        }
    } while (choice != 5);

  }

}
```

Output:




File Edit Selection View Go Run Terminal Help
java - Visual Studio Code
PROBLEMS 15 OUTPUT DEBUG CONSOLE TERMINAL
Code
OPEN EDITORS
JAVA
LowerTriangular.java
Multi.java 2
MultiTable.class
MultiTable.java
Name.docx
Operations.class
Operations.java
Patterb.class
Patterb.java
Prime.class
Prime.java
Rearrange.class
Rearrange.java
SearchNum.class
SearchNum.java 1
Secondsinyear.class
Secondsinyear.java
SortArr.class
SortArr.java
Switch.class
Switch.java
Telephone.class
TelephoneIndex.class
PS C:\Users\anany\Desktop\VIT\semester 4\assignments\java> cd "c:\Users\anany\Desktop\VIT\semester 4\assignments\java\" ; if ($?) { javac TelephoneQuestion.java } ; if ($?) { java TelephoneQuestion }
Enter the values for 5 people
For customer1
Name:
Ananya
Number:
9163036951
For customer2
Name:
Diya
Number:
8777345690
For customer3
Name:
Rajarshi
Number:
8019787898
For customer4
Name:
Abishek
Number:
7890234578
For customer5
Name:
Hemanth
Number:
9062111145
1.Search for a Customer
2.Change Customer Name
3.Change Customer Number
4.Display
5.Exit

a)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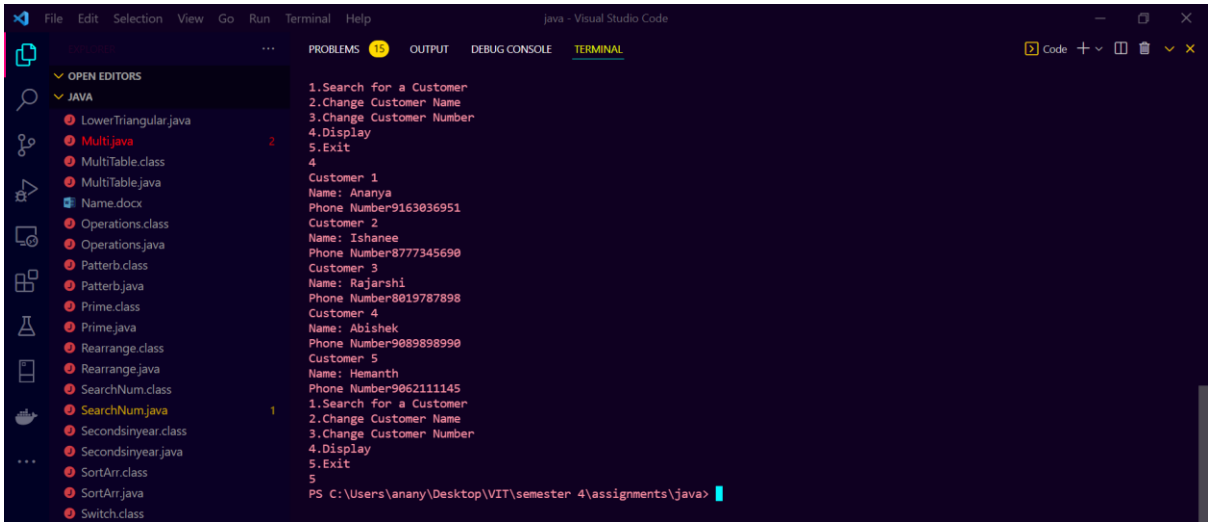
Code
OPEN EDITORS
JAVA
LowerTriangular.java
Multi.java 2
MultiTable.class
MultiTable.java
Name.docx
Operations.class
1
Enter name or the first few characters
Hem
Name: Hemanth
Phone Number9062111145
1.Search for a Customer
2.Change Customer Name
3.Change Customer Number
4.Display
5.Exit

b)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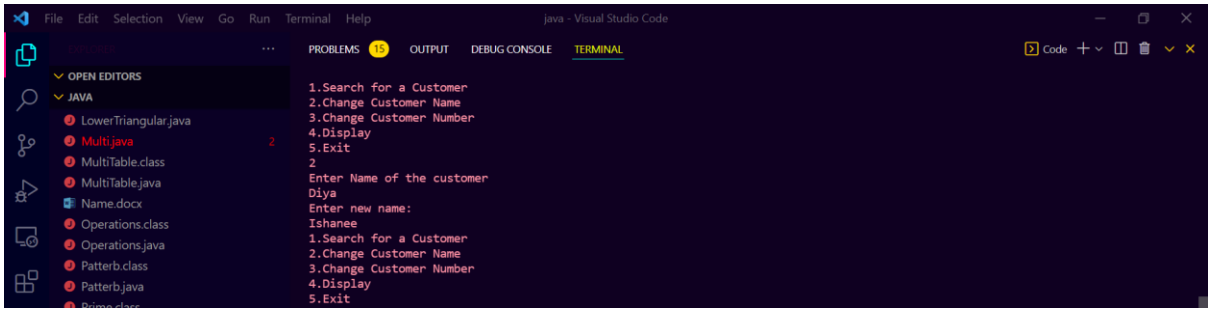
SearchNum.class
SearchNum.java 1
Secondsinyear.class
Secondsinyear.java
SortArr.class
SortArr.java
Switch.class
1.Search for a Customer
2.Change Customer Name
3.Change Customer Number
4.Display
5.Exit
4
Customer 1
Name: Ananya
Phone Number9163036951
Customer 2
Name: Ishanee
Phone Number8777345690
Customer 3
Name: Rajarshi
Phone Number8019787898
Customer 4
Name: Abishek
Phone Number9089898990
Customer 5
Name: Hemanth
Phone Number9062111145
1.Search for a Customer
2.Change Customer Name
3.Change Customer Number
4.Display
5.Exit
5
PS C:\Users\anany\Desktop\VIT\semester 4\assignments\java>

c)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MultiTable.java
Name.docx
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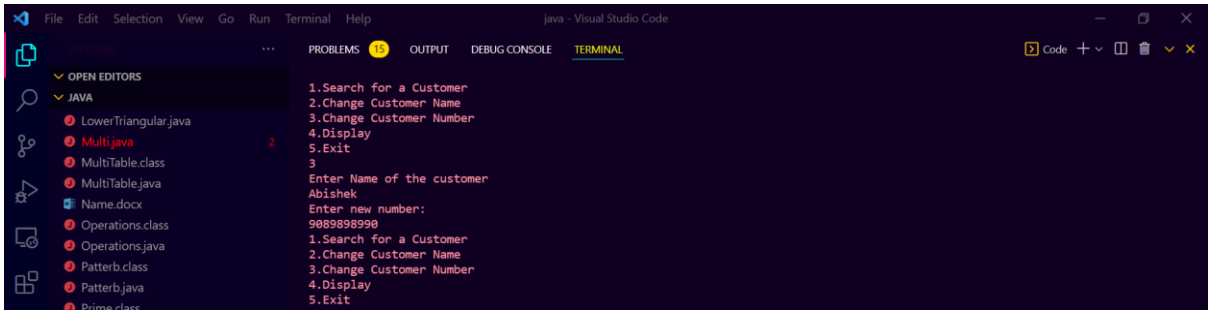
Operations.java
Patterb.class
Patterb.java
1.Search for a Customer
2.Change Customer Name
3.Change Customer Number
4.Display
5.Exit
2
Enter Name of the customer
Diya
Enter new name:
Ishanee
1.Search for a Customer
2.Change Customer Name
3.Change Customer Number
4.Display
5.Exit

d)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2.Change Customer Name
3.Change Customer Number
4.Display
5.Exit
3
Enter Name of the customer
Abishek
Enter new number:
9089898990
1.Search for a Customer
2.Change Customer Name
3.Change Customer Number
4.Display
5.Exit