JVM EXERCISE :

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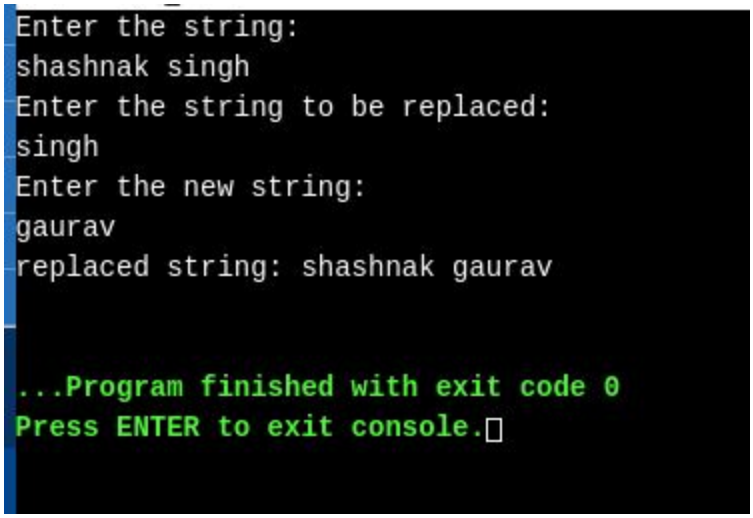
Q1. Write a program to replace a substring inside a string with other string ?

```
import java.util.Scanner;
import java.util.*;
public class Main
{
public static void main(String args[])
{
Scanner sc = new Scanner(System.in);
System.out.println("Enter the string: ");
String str = sc.nextLine();
System.out.println("Enter the string to be replaced: ");
String old_str = sc.nextLine();
System.out.println("Enter the new string: ");
String new_str = sc.nextLine();
String replaced = str.replace(old_str, new_str);
System.out.println("replaced string: " + replaced);
}
}
```



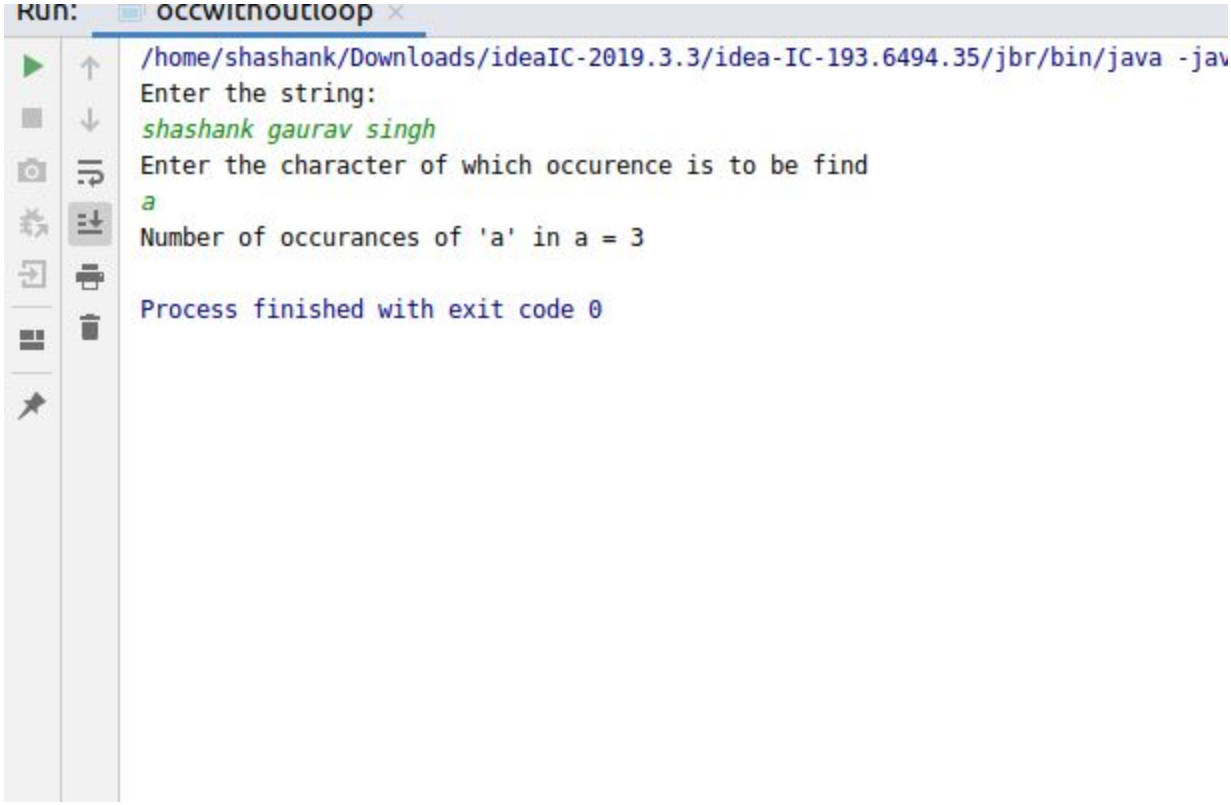
Q2. Write a program to find the number of occurrences of the duplicate words in a string and print them ?

```
import java.util.Scanner;
import java.util.*;


public class occurence
{

  public static void main(String[] args)
  {   Scanner sc = new Scanner(System.in);
      System.out.println("Enter the string: ");
      String str1 = sc.nextLine();

      String[] words=str1.split(" ");
      int c=1;

      for(int i=0;i<words.length;i++)
      {
         for(int j=i+1;j<words.length;j++)
         {

            if(words[i].equals(words[j]))
            {
               c=c+1;
               words[j]="0";
            }
         }
         if(words[i]!="0")
            System.out.println(words[i]+"--"+c);
         c=1;

      }

  }

}
```

```
/home/shashank/Downloads/ideaIC-2019.3.3/idea-IC-193.6494.35/jbr/bin,
Enter the string:
shashank singh shashank gaurav singh gaurav
shashank--2
singh--2
gaurav--2

Process finished with exit code 0
```

Q3. Write a program to find the number of occurrences of a character in a string without using loop?

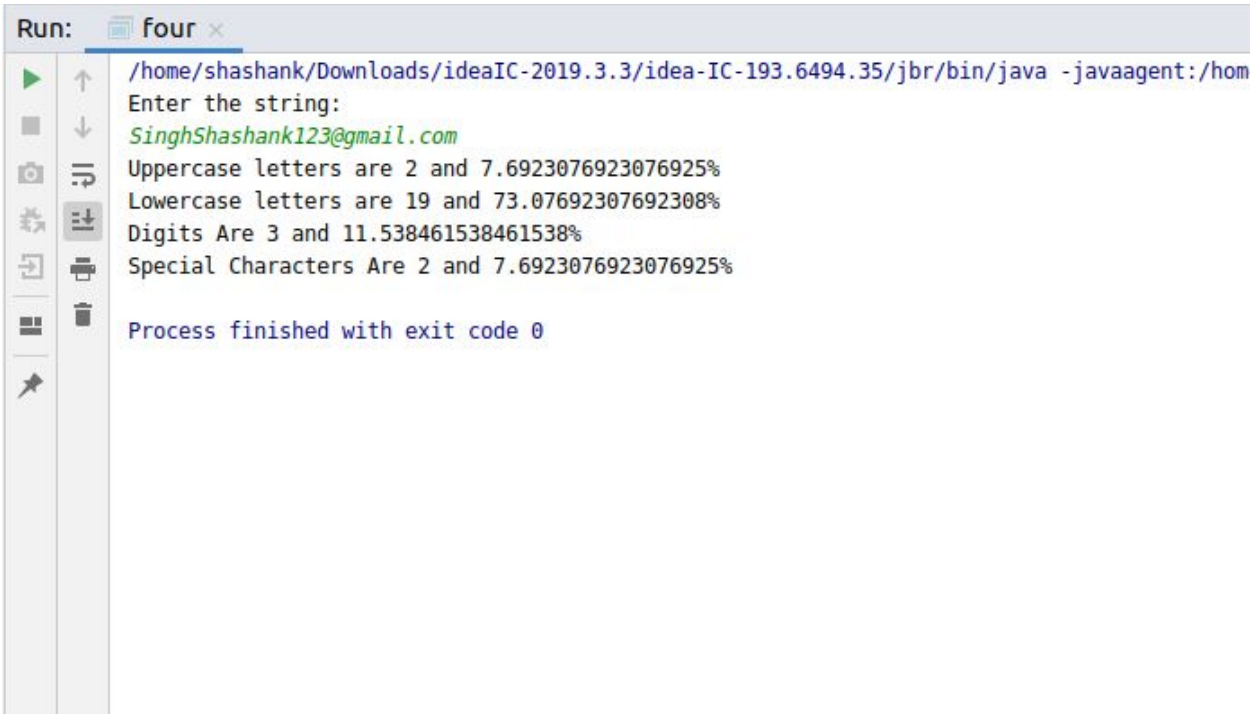
```
import java.util.Scanner;

public class occwithoutloop {

   public static void main(String[] args)
   {  Scanner sc = new Scanner(System.in);
      System.out.println("Enter the string: ");
      String str = sc.nextLine();
      System.out.println("Enter the character of which occurence is to be find  ");
      String s = sc.nextLine();

      int count = str.length() - str.replace("s", "").length();
      System.out.println("Number of occurances of 'a' in "+s+" = "+count);
   }
}
```



Q4. Calculate the number & Percentage Of Lowercase Letters,Uppercase Letters, Digits And Other Special Characters In A String

```
import java.text.DecimalFormat;
import java.util.Scanner;

public class four {
    static void charPerc(String str)
    {
        int tc = str.length();
        int ucl = 0,lcl = 0,d= 0, spc = 0;
        for (int i = 0; i <str.length(); i++)
        {
            char ch = str.charAt(i);
            if(Character.isUpperCase(ch))
            {
                ucl++;
            }
            else if(Character.isLowerCase(ch))
            {
```

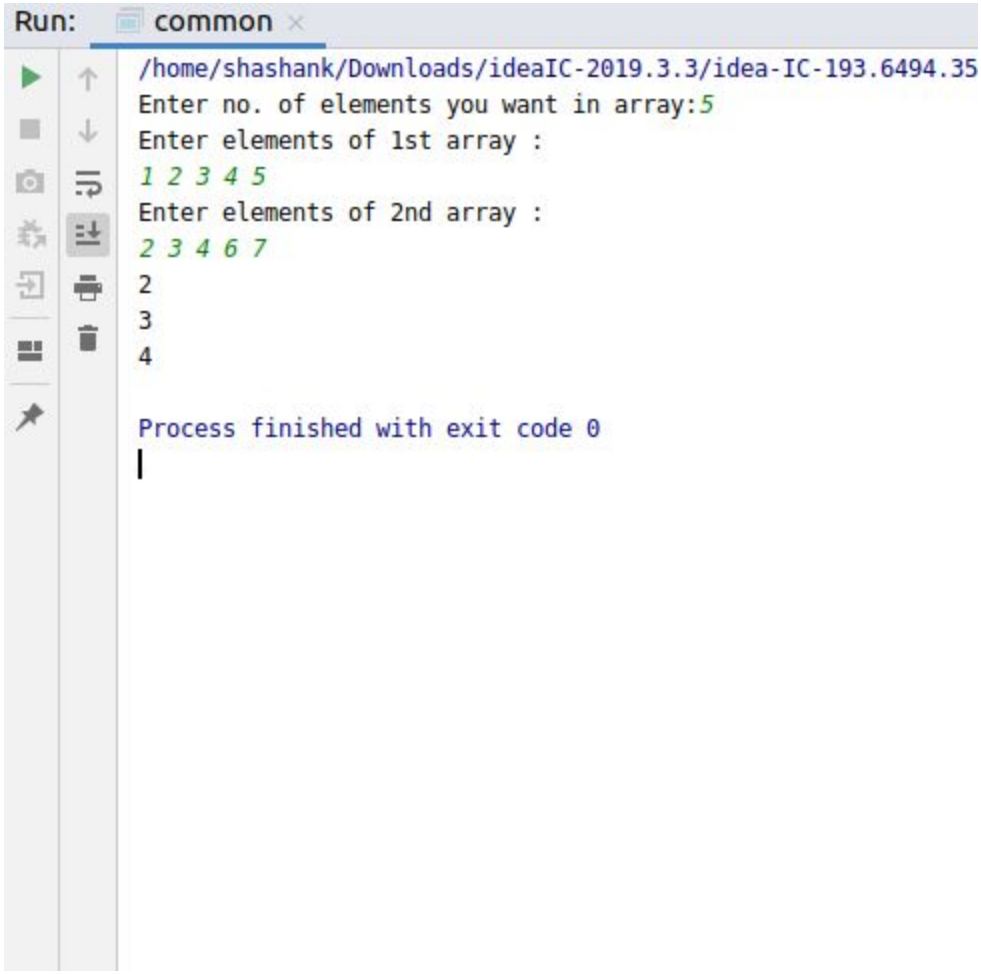
```
            lcl++;
        }
        else if (Character.isDigit(ch))
        {
            d++;
        }
        else
        {
            spc++;
        }
    }
    double ucp=(ucl*100.0)/tc;
    double lcp=(lcl*100.0)/tc;
    double dp=(d*100.0)/tc;
    double spcp=(spc*100.0)/tc;

    System.out.println("Uppercase letters are "+ucl+" and "+ucp+"% ");
    System.out.println("Lowercase letters are "+lcl+" and "+lcp+"%");
    System.out.println("Digits Are "+d+" and "+dp+"%");
    System.out.println("Special Characters Are "+spc+" and "+spcp+"%");


}

public static void main(String[] args)
{
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter the string: ");
    String str = sc.nextLine();
    charPerc(str);
}
}
```



Q5. Find common elements between two arrays.

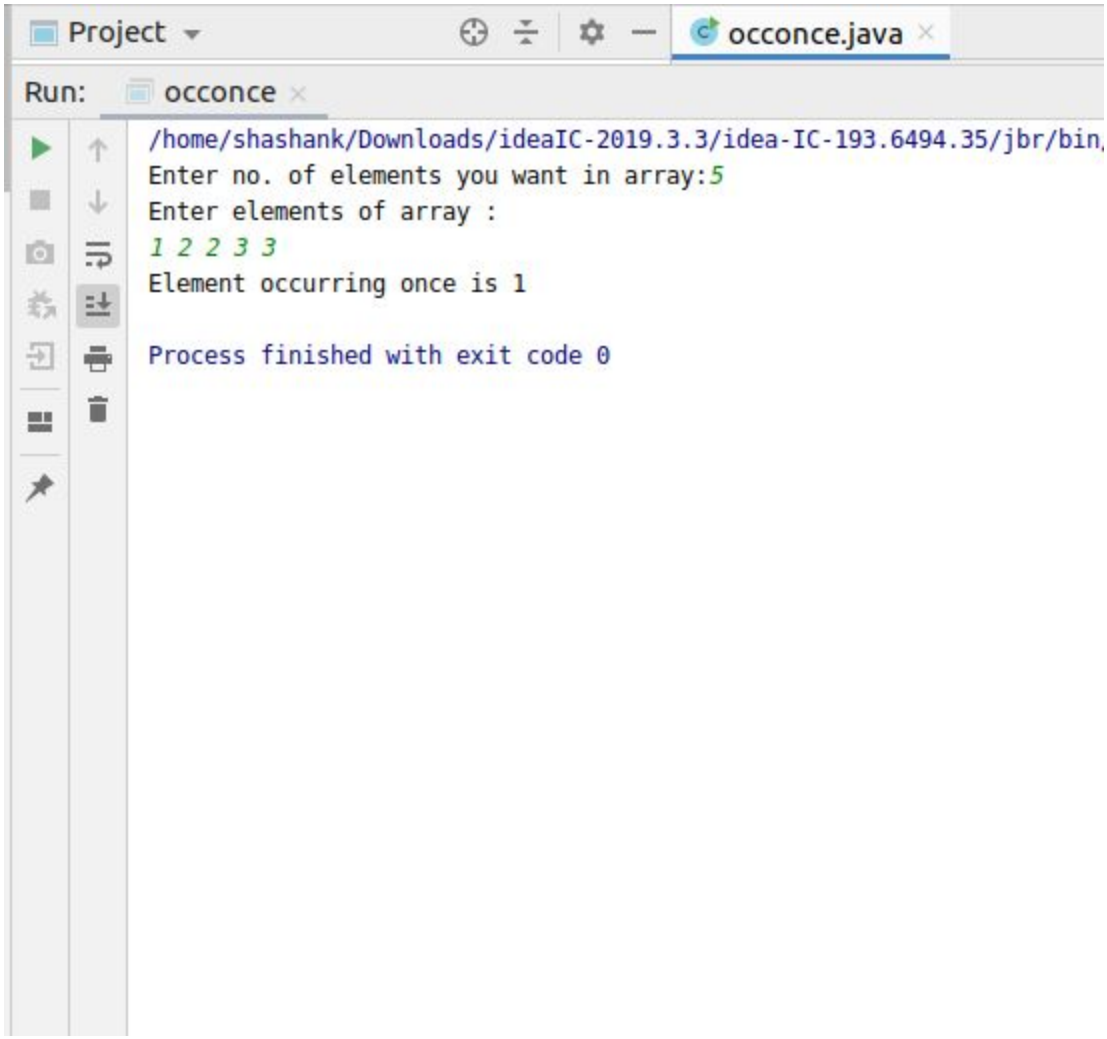
```
import java.util.Scanner;
public class common {
    public static void main(String a[]){
        Scanner s = new Scanner(System.in);
        int n;
        System.out.print("Enter no. of elements you want in array:");
        n = s.nextInt();
        int a1[] = new int[n];
        int a2[]=new int[n];
        System.out.println("Enter elements of 1st array : ");
        for(int i = 0; i < n; i++)
        {
            a1[i] = s.nextInt();

        }
        System.out.println("Enter elements of 2nd array : ");
        for(int i = 0; i < n; i++)
        {
            a2[i] = s.nextInt();

        }
        for(int i=0;i<a1.length;i++){
```

```
            for(int j=0;j<a2.length;j++){
                if(a1[i]==a2[j]){
                    System.out.println(a1[i]);
                }
            }
        }
    }
}
```



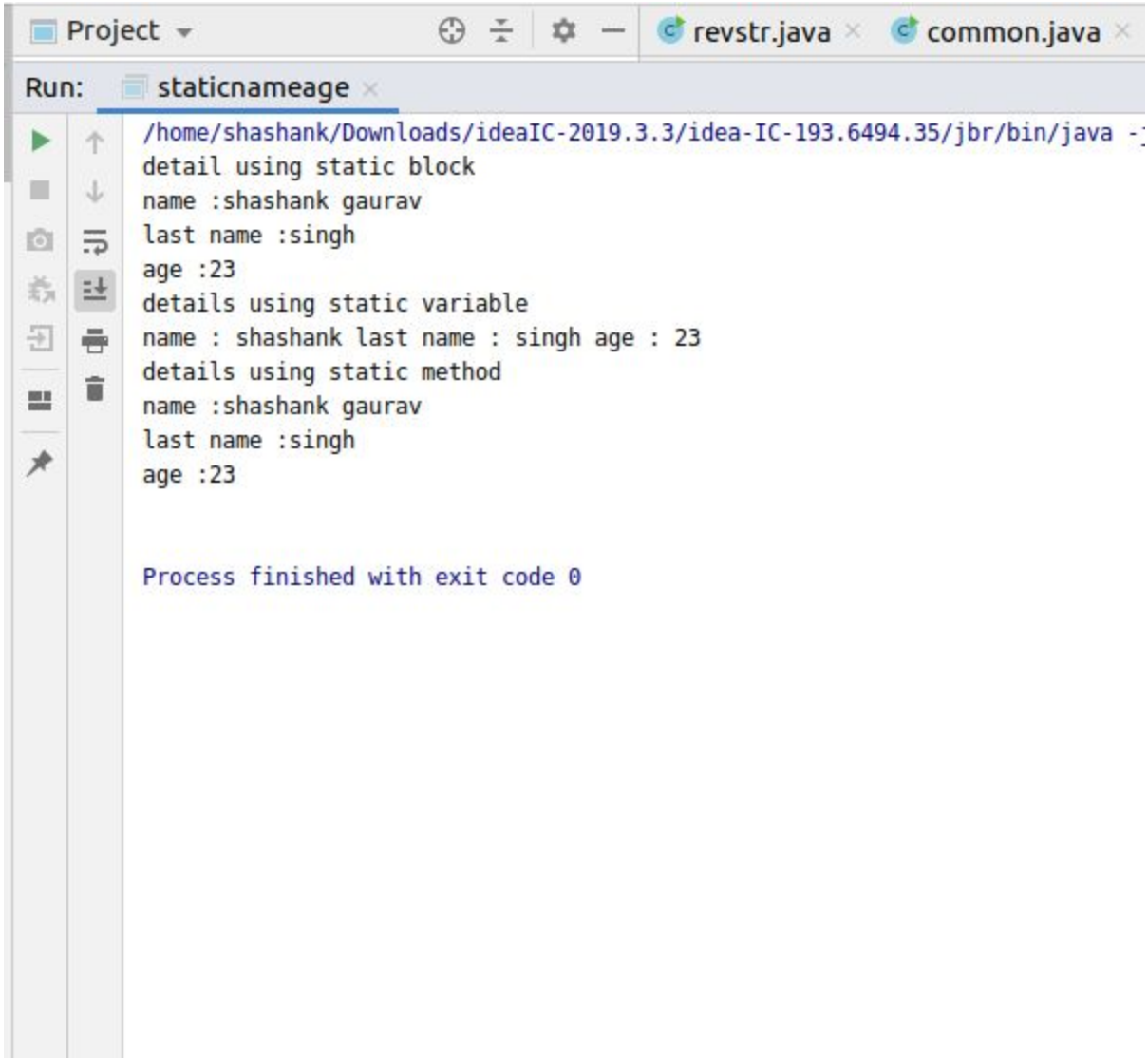
Q6. There is an array with every element repeated twice except one. Find that element

```
import java.util.Scanner;

public class occonce {
  static int once(int a[],int s)
  {
     int r=a[0];
     for(int i=1;i<s;i++)
        r=r^a[i];
     return r;
  }
  public static void main (String[] args)
  {
     Scanner s = new Scanner(System.in);
     int n;
     System.out.print("Enter no. of elements you want in array:");
     n = s.nextInt();
     int a[] = new int[n];
     System.out.println("Enter elements of array : ");
     for(int i = 0; i < n; i++)
     {
        a[i] = s.nextInt();

     }
     System.out.println("Element occurring once is " +once(a,n) + " ");
  }
}
```


Project
occonce.java
Run:
occonce
/home/shashank/Downloads/ideaIC-2019.3.3/idea-IC-193.6494.35/jbr/bin
Enter no. of elements you want in array:5
Enter elements of array :
1 2 2 3 3
Element occurring once is 1
Process finished with exit code 0

Q7. Write a program to print your Firstname,LastName & age using static block,static method & static variable respectively

```
public class staticnameage {
static {
   System.out.println("detail using static block  ");
   String s="shashank gaurav";
   String s1="singh";
   int age=23;
   System.out.println("name :"+s);
   System.out.println("last name :"+s1);
   System.out.println("age :" +age);
}
public static void meth(){
   System.out.println("details using static method  ");
   String s="shashank gaurav";
   String s1="singh";
   int age=23;
   System.out.println("name :"+s);
   System.out.println("last name :"+s1);
   System.out.println("age :" +age);
   System.out.println();}
   static String name="shashank";
   static String lname="singh";
   static int age1=23;
public static void main(String[] args)
{

   System.out.println("details using static variable ");
   System.out.println("name : "+name+" last name : "+lname+" age : "+age1);
   meth();
}



}
```



Q8. Write a program to reverse a string and remove character from index 4 to index 9 from the reversed string using String Buffer

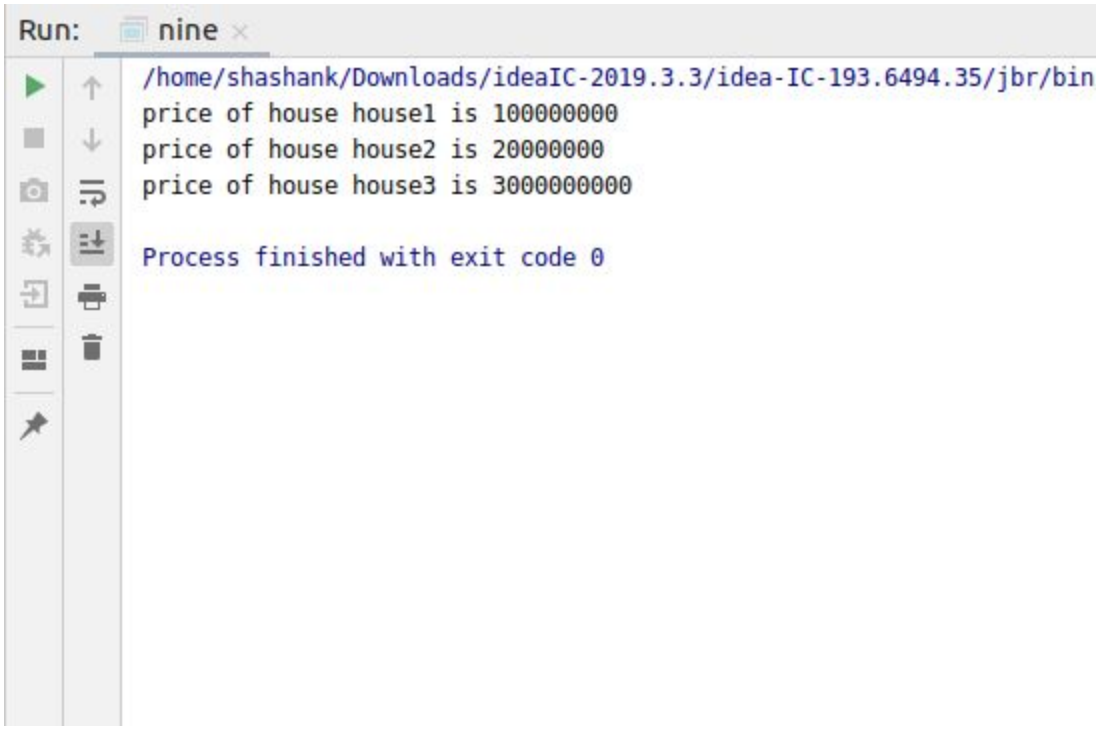
```
import java.util.Scanner;
public class revstr {
  public static void main(String args[]) {

    Scanner sc = new Scanner(System.in);
    System.out.println("Enter the string: ");
    String str = sc.nextLine();
    StringBuffer rev= new StringBuffer(str);
    rev.reverse();
    System.out.printf(" original String : %s , reversed String %s  %n ", str, rev);
```

```
        System.out.print(" after removal of character from index 4 to index 9 from the
reversed string using String Buffer\n");
        rev.delete(4,9);
        System.out.println("After removal of string buffer is = " +rev);
    }
}
```

Q9.Write a program to display values of enums using a constructor & getPrice() method (Example display house & their prices)

```
public class nine {
    public static void main(String[] args)
    {
        for(SampleEnum sampleEnum : SampleEnum.values()){
            System.out.println("price of house "+sampleEnum+" is "+sampleEnum.getPrice());
        }
    }
}
enum SampleEnum{
    house1("100000000"),house2("20000000"),house3("3000000000");
    String price;
    SampleEnum(String price){
        this.price=price;
    }
```

```
    public String getPrice()
    {
        return price;
    }
}
```



Q10.Write a single program for following operation using overloading

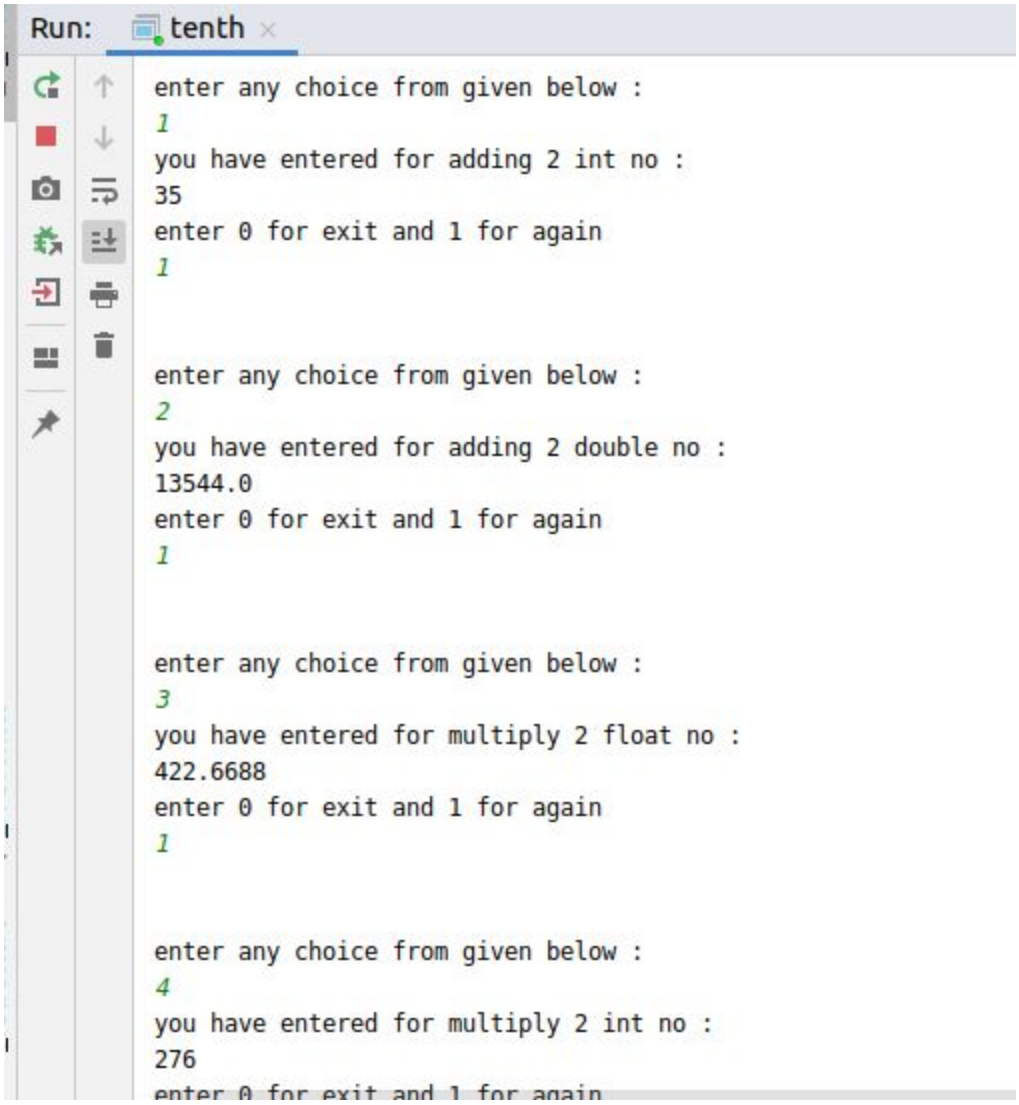
A) Adding 2 integer number
B) Adding 2 double
C) multiplying 2 float
D) multiplying 2 int
E) concate 2 string
F) Concate 3 String

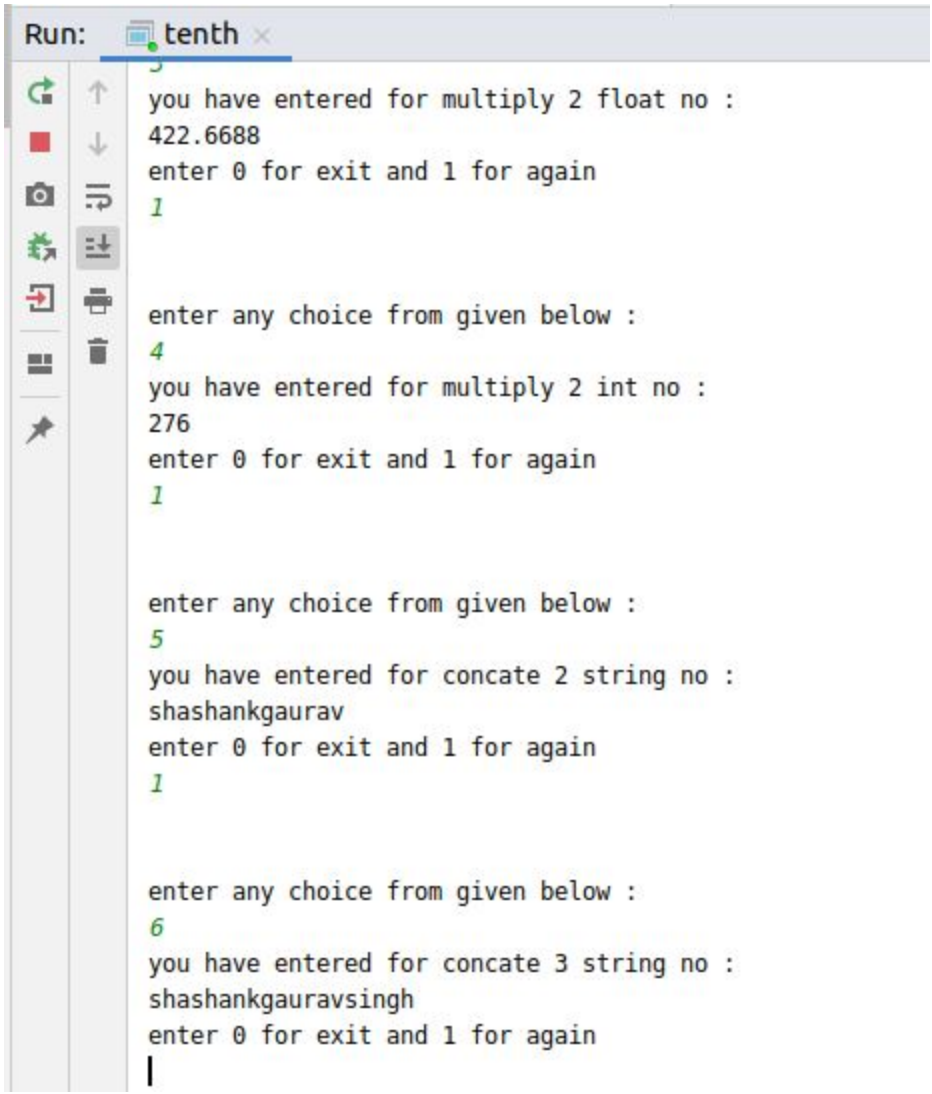
```
import java.util.Scanner;
public class tenth {
   public static Scanner sc = new Scanner(System.in);
   public static void add(int a, int b) {
      System.out.println(a + b);
   }

   public static void add(double a, double b) {
      System.out.println(a + b);
   }

   public static void mul(float a, float b) {
      System.out.println(a * b);
   }

   public static void mul(int a, int b) {
      System.out.println(a * b);
   }

   public static void con(String s1, String s2){
      System.out.println(s1+s2);
   }
   public static void con(String s1, String s2, String s3) {
      System.out.println(s1+s2+s3);



   }
   public static void main(String[] args) {
      System.out.println("Enter the integer value 1 : ");
      int a1 = sc.nextInt();
      System.out.println("Enter the integer value 2 : ");
      int b1 = sc.nextInt();
      System.out.println("Enter the float value 1 :");
      float a2 = sc.nextFloat();
      System.out.println("Enter the float value 2 :");
```

```
float b2 = sc.nextFloat();
System.out.println("Enter the double value 1 :");
double a3 = sc.nextDouble();
System.out.println("Enter the double value 2 : ");
double b3 = sc.nextDouble();
System.out.println("Enter the string 1: ");
String ch1 = sc.next();
System.out.println("Enter the string 2: ");
String ch2 = sc.next();
System.out.println("Enter the string: 3");
String ch3 = sc.next();
System.out.println("\n1) Adding 2 integer number\n" +
        "  2) Adding 2 double\n" +
        "  3) multiplying 2 float\n" +
        "  4) multiplying 2 int\n" +
        "  5) concate 2 string\n" +
        "  6) Concate 3 String\n ");

int d;
do {  System.out.println("\n\nenter any choice from given below : ");
    int c = sc.nextInt();
    switch (c) {
        case 1:
            System.out.println("you have entered for adding 2 int no :");
            add(a1, b1);
            break;
        case 2:
            System.out.println("you have entered for adding 2 double no :");
            add(a3, b3);
            break;
        case 3:
            System.out.println("you have entered for multiply 2 float no :");
            mul(a2, b2);
            break;
        case 4:
            System.out.println("you have entered for multiply 2 int no :");
            mul(a1, b1);
            break;
        case 5:
            System.out.println("you have entered for concate 2 string no :");
            con(ch1, ch2);
            break;
        case 6:
```

```
                System.out.println("you have entered for concate 3 string no :");
                con(ch1, ch2, ch3);
                break;

            default:
                System.out.println("you have entered wrong choice");
        }
        System.out.println("enter 0 for exit and 1 for again ");
         d = sc.nextInt();

    } while (d != 0);

  }
}
```


Run:
tenth
/home/shashank/Downloads/ideaIC-2019.3.3/idea-IC-193.6494.35/jbr/bin/java -javaagent
Enter the integer value 1 :
12
Enter the integer value 2 :
23
Enter the float value 1 :
12.23
Enter the float value 2 :
34.56
Enter the double value 1 :
1223
Enter the double value 2 :
12321
Enter the string 1:
shashank
Enter the string 2:
gaurav
Enter the string: 3
singh
1) Adding 2 integer number
2) Adding 2 double
3) multiplying 2 float
4) multiplying 2 int
5) concate 2 string
6) Concate 3 String

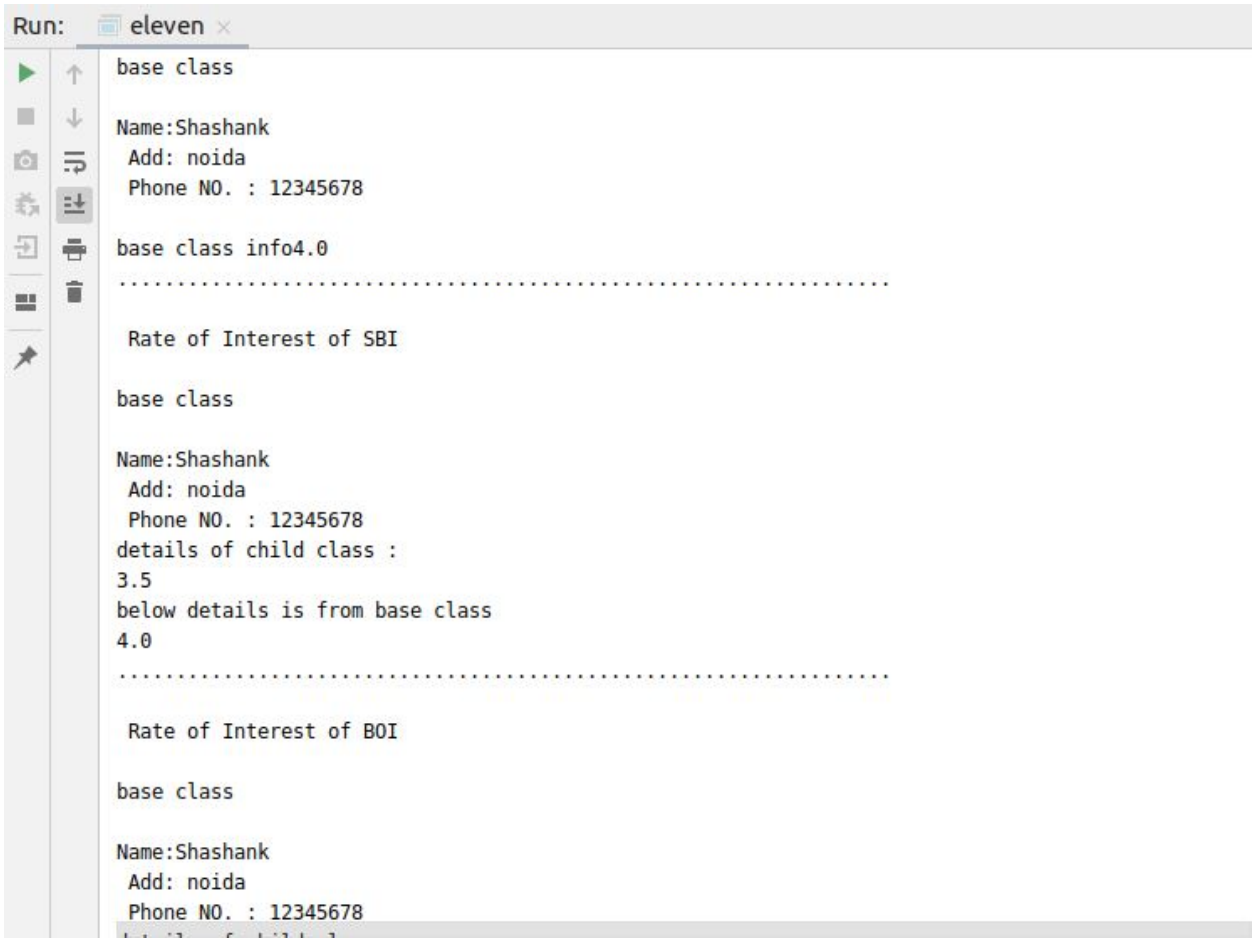

Run:
tenth
enter any choice from given below :
1
you have entered for adding 2 int no :
35
enter 0 for exit and 1 for again
1
enter any choice from given below :
2
you have entered for adding 2 double no :
13544.0
enter 0 for exit and 1 for again
1
enter any choice from given below :
3
you have entered for multiply 2 float no :
422.6688
enter 0 for exit and 1 for again
1
enter any choice from given below :
4
you have entered for multiply 2 int no :
276
enter 0 for exit and 1 for again

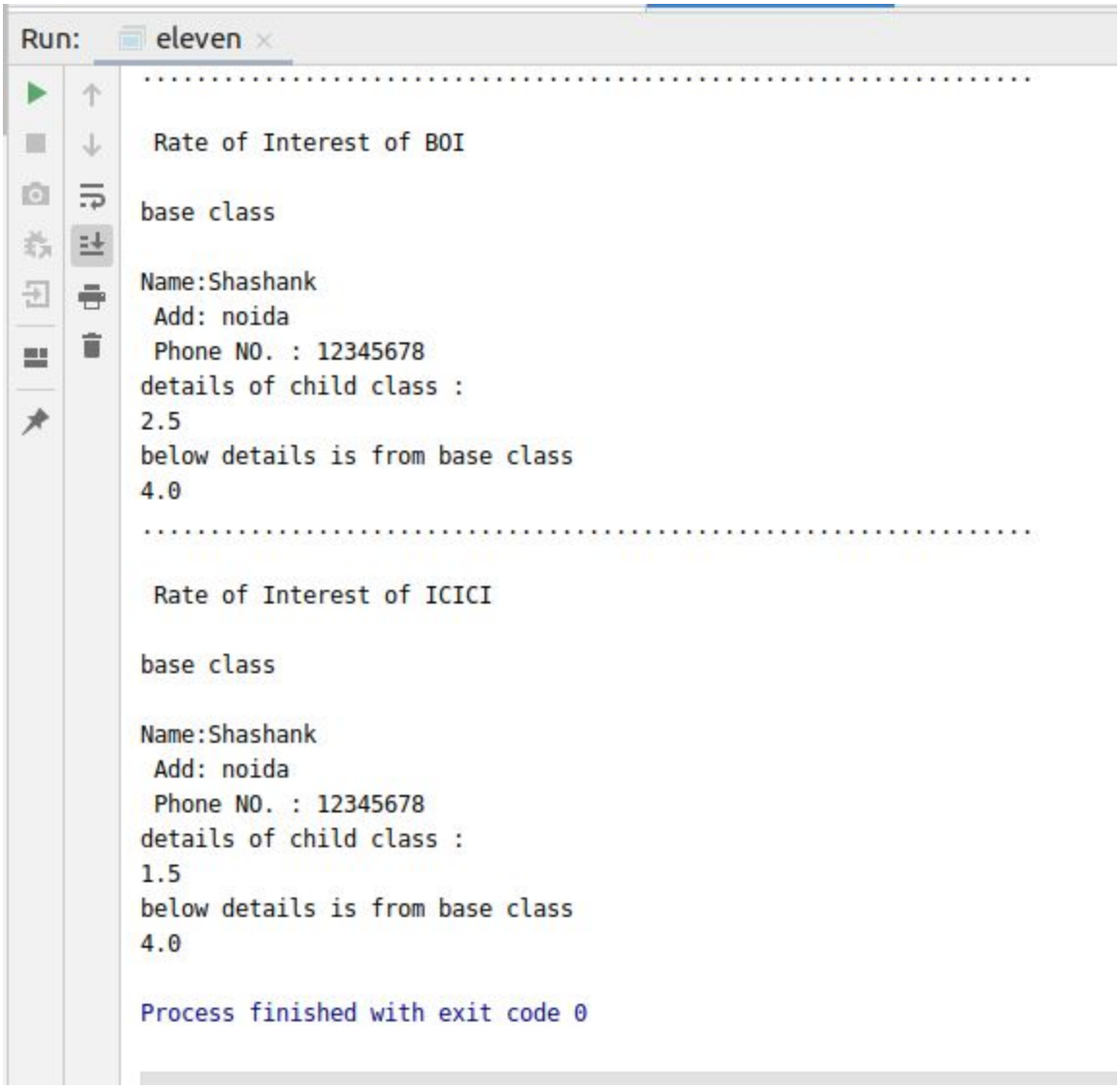


Q11.Create 3 sub class of bank SBI,BOI,ICICI all 4 should have method called getDetails which provide there specific details like rateofinterest etc,print details of every banks

```
public class eleven {
  public static void main(String[] args)
  {
     Bank ba= new Bank();
     System.out.println("\nbase class info"+ba.getd());
     SBI s=new SBI();
     System.out.println(".....");
     System.out.println("details of child class :\n"+s.getds()+"\nbelow details is from base class \n"+s.getd());
     BOI b=new BOI();
     System.out.println(".....");
```

```
        System.out.println("details of child class :\n"+b.getdb()+"\nbelow details is from base
class \n"+s.getd());
        ICICI i=new ICICI();
        System.out.println(".....");
        System.out.println("details of child class :\n"+i.getdi()+"\nbelow details is from base
class \n"+s.getd());


    }
}
class Bank{
    float roi=4f;

    public float getd()
    {
        System.out.println("\nbase class ");
        System.out.println("\nName:Shashank \n Add: noida \n Phone NO. : 12345678");
        return roi;
    }
}
class BOI extends Bank{
    float roiboi=2.5f;
    public float getdb(){
        System.out.println("\n Rate of Interest of BOI ");
    return roiboi;}

}
class SBI extends Bank{
    float roisbi=3.5f;
    public float getds(){
        System.out.println("\n Rate of Interest of SBI");
        return roisbi;
    }
}
class ICICI extends Bank{
    float roiicici=1.5f;
    public float getdi(){
        System.out.println("\n Rate of Interest of ICICI ");
        return roiicici;
    }
}
```


Run:
eleven
base class
Name:Shashank
Add: noida
Phone NO. : 12345678
base class info4.0
.....
Rate of Interest of SBI
base class
Name:Shashank
Add: noida
Phone NO. : 12345678
details of child class :
3.5
below details is from base class
4.0
.....
Rate of Interest of BOI
base class
Name:Shashank
Add: noida
Phone NO. : 12345678


Run:
eleven
.....
Rate of Interest of BOI
base class
Name:Shashank
Add: noida
Phone NO. : 12345678
details of child class :
2.5
below details is from base class
4.0
.....
Rate of Interest of ICICI
base class
Name:Shashank
Add: noida
Phone NO. : 12345678
details of child class :
1.5
below details is from base class
4.0
Process finished with exit code 0