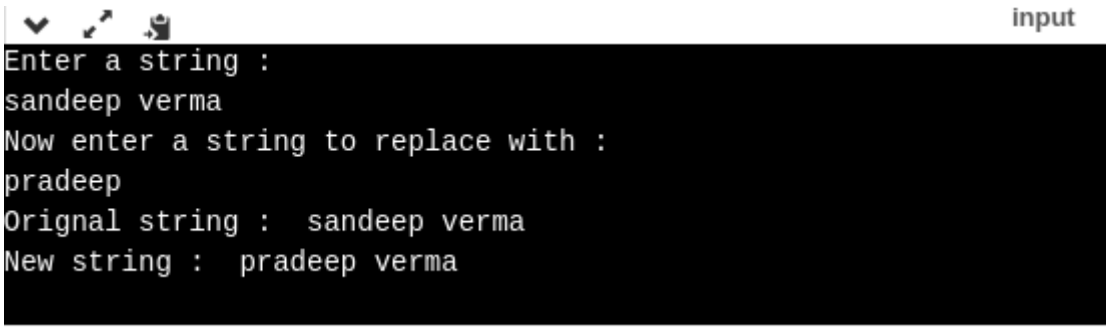
Q.1 Write a program to replace a substring inside a string with other string ?

```
import java.util.Scanner;

public class Main
{
  public static void main (String[]args)
  {
    String sentance, al_string;
    Scanner e = new Scanner (System.in);


      System.out.println ("Enter a string : ");
      sentance = e.nextLine ();

      System.out.println ("Now enter a string to replace with : ");
      al_string = e.nextLine ();

 System.out.println ("Orignal string :  " + sentance);
      System.out.println ("New string :  " +
                          sentance.replace("sandeep",al_string));
  }
}
```

Output:

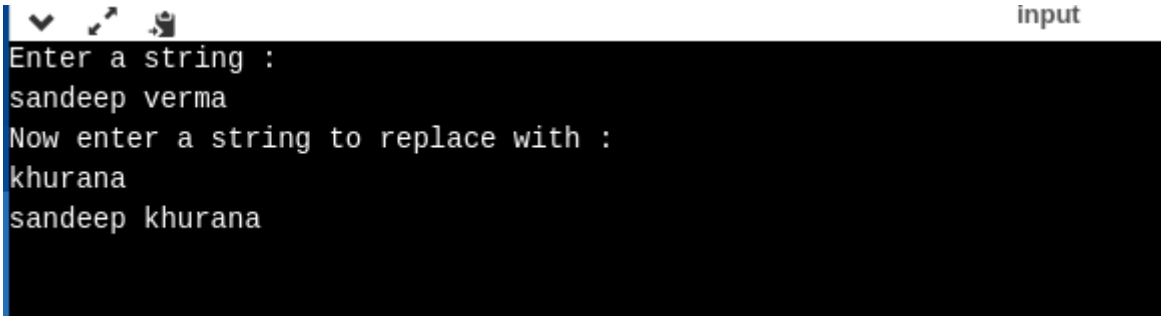


Without inbuilt function:

```
import java.util.Scanner;

public class Main
{
  public static void main (String[]args)
  {
    String sentance, new_string,replace_with;
    String match_with = "verma";
    Scanner e = new Scanner (System.in);

      System.out.println ("Enter a string : ");
      sentance = e.nextLine ();

      System.out.println ("Now enter a string to replace with : ");
      replace_with = e.nextLine ();


    int position =sentance.indexOf(match_with);
    int len = match_with.length();
```

```
      new_string = sentance.substring(0, position) + replace_with +
sentance.substring(position+len);
    System.out.println(new_string);

  }
}
```

Output:

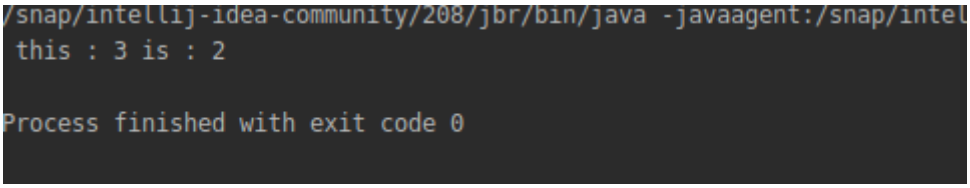


Q2. Write a program to find the number of occurrences of the duplicate words in a string and print them ?

```
package com.company;

public class Main {

    public static void main(String[] args) {
        String str = " this is is the word this is this";
        int count;
        String duplicates="";
        String[] words = str.toLowerCase().trim().split(" ");
        for(int i=0;i<words.length;i++)
        {
            count=1;
            for(int j=i+1;j<words.length;j++)
            {

                if(words[i].equals(words[j]))
                {

                    count++;
                }
            }

            if(count>1)
            {
                if(duplicates.isEmpty()) {

                    duplicates +=" "+ words[i] + " : "+ count ;
                }
                else if(!duplicates.matches("(.*) "+words[i]+" (.*)"))
                {
```

```
                duplicates +=" "+ words[i] + " : "+ count;
            }

        }
    }
    System.out.println(duplicates);
}
}
```

Output:



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

```
class A {
    String str;
    int len;
    int count;
    char c;
    char ch[];
    A()
    {
        count = 0;
        str = "sandeep";
        c = 'e';
        ch = str.toCharArray();
        len = str.length();
    }
    int call_me(int len) {

        if (len < 1) // base case
        {
            return count;
        }
        else if(ch[len] == c)
        {
            ++count;
        }

            return call_me(len-1);
    }
}
public class Main {

    public static void main(String[] args) {
    A obj = new A();
System.out.println(obj.c+" occurred in "+obj.str+ " :"+obj.call_me(obj.len-1));
```

```
    }
}
```

Output:

```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-ide
e occurred in sandeep :2

Process finished with exit code 0
```

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

```
public class Main {

    public static void main(String[] args) {
            String str = "tH@";

            int count_lower=0,count_upper=0,count_special=0;
            char[] ch = str.toCharArray();
        int len = ch.length;
            for(int i=0;i<ch.length;i++)
        {
           if( Character.isLowerCase(ch[i]))
           {
              ++count_lower;

           }
           else if(Character.isUpperCase(ch[i]))
           {
              ++count_upper;

           }
           else if(!Character.isDigit(ch[i])){
              ++count_special;
           }

        }

            System.out.println("In string "+ str+" \n Percentage of lowercase : "+
((count_lower*100)/len) +
             "%\n Percentage of Uppercase : "+((count_upper*100)/len)+
             "%\nPercentage of Special Charactor : "+((count_special*100)/len)+"%");

    }
}
```

Output:

```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/in
In string tH@
 Percentage of lowercase : 33%
 Percentage of Uppercase : 33%
Percentage of Special Charactor : 33%

Process finished with exit code 0
```

Q5. Find common elements between two arrays.

```
package com.company;

public class Main {

    public static void main(String[] args) {
        int[] arr = new int[]{12,1,2,3,1,2};
        int[] arr2 = new int[]{1,2,4,5,3};
        String c;
        int len_arr1 = arr.length;
        String common_elements ="";
        boolean flag;
        int len_arr2 = arr2.length;
        for(int i = 0; i<len_arr1;i++)
    {
                flag =false;
       for(int j=0;j<len_arr2;j++){
          if(arr[i]==arr2[j])
          {

         flag =true;
             break;
          }

       }
if(flag)
{
          c = " "+arr[i]+" ";
          if(common_elements.isEmpty())
          common_elements += " "+arr[i]+" ";
          else if (!common_elements.matches("(.*)"+c+"(.*)"))
          {
                common_elements += " "+arr[i]+" ";

          }


}
    }

                System.out.println("These are repeated values in both arrays : "+common_elements);

    }
}
```

Output:

```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-commu
These are repeated values in both arrays :  1  2  3

Process finished with exit code 0
```

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

```
public class Main {

    public static void main(String[] args) {
        int[] arr = new int[]{6,6,3,7,2,3,2};
        int count;
        boolean flag = false;
        for(int i=0;i<arr.length;i++)
        {
            count =  1;
            for(int j=0;j<arr.length;j++)
            {
                if(arr[i] == arr[j] && (i !=j))
                {
                    ++count;
                    break;
                }
            }
            if(count==1) {
                flag = true;

                System.out.println(arr[i]);
            }

        }
        if(flag == false)
            System.out.println("Nothing is unqiue");

    }

}
```

Output

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

```
class person {
    static String FirstName ;
    static String LastName;
    static int age;
    int x;
    static{
FirstName = "Sandeep";
LastName = "Verma";
age = 22;


    }
    static void display()
    {

System.out.println("First Name : "+FirstName+"\n Last Name : "+LastName+"\n
Age :"+age);
    }
}
public class Main {

    public static void main(String[] args) {
          person obj = new person();
    obj.display();
    }
}
```

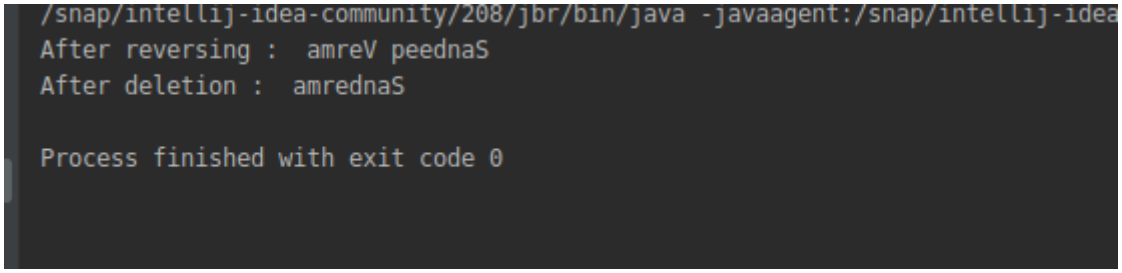
Output:

```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/
First Name : Sandeep
 Last Name : Verma
 Age :22

Process finished with exit code 0
```

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

```
public class Main {

    public static void main(String[] args) {
        StringBuffer str = new StringBuffer("Sandeep Verma ");
        str.reverse();
        System.out.println("After reversing : "+ str);
        str.delete(4,9);
        System.out.println("After deletion : "+ str);
    }
}
```

Output:



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

```
package com.company;

enum house_info{
    HOUSE1("House 1", "Rs. 8lakh "),
    HOUSE2("House 2", "Rs. 7lakh "),
    HOUSE3("House 3", "Rs. 10lakh ");
    private final  String HOUSE_NAME;
    private final  String HOUSE_PRICE;

house_info (String house, String price)
{
this.HOUSE_NAME = house;
this.HOUSE_PRICE = price;

}

String getHouse()
{
    return this.HOUSE_NAME;
}
    String getPice()
    {
        return this.HOUSE_PRICE;
    }
```

```
}

public class Main {

    public static void main(String[] args) {

System.out.println("Name of House : "+house_info.HOUSE1.getHouse()+" \n Price of House :
"+house_info.HOUSE1.getPice());



    }
}
```

Output:

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

```
package com.company;

public class Main {

    int add (int a,int b)
    {
        return a+b;
    }
    float add (float a,float b)
    {
        return a+b;
    }
    int multiply(int a,int b)
    {
        return a*b;
    }
    float multiply(float a,float b)
    {
        return a*b;
    }

    String concate(String a,String b)
    {
        return a+b;
    }
    String concate(String a,String b,String c)
    {
        return a+b+c;
    }


    public static void main(String[] args) {
Main obj = new Main();
     System.out.println( "Add Int : "+obj.add(6,10));
        System.out.println( "Add Float : " +obj.add(6.6f,10.5f));
        System.out.println( "Multiply Int : "+obj.multiply(6,10));
        System.out.println( "Multiply Float : "+ obj.multiply(6.6f,10.5f));
        System.out.println( "Concate two : "+obj.concate("Sandeep"," Verma"));
        System.out.println( "Concate Three :"+ obj.concate("Sandeep"," Verma", "\n JUst on
another line"));

    }
}
```

Output:

```
Add Int : 16
Add Float : 17.1
Multiply Int : 60
Multiply Float : 69.299995
Concate two : Sandeep Verma
Concate Three :Sandeep Verma
 JUst on another line
```

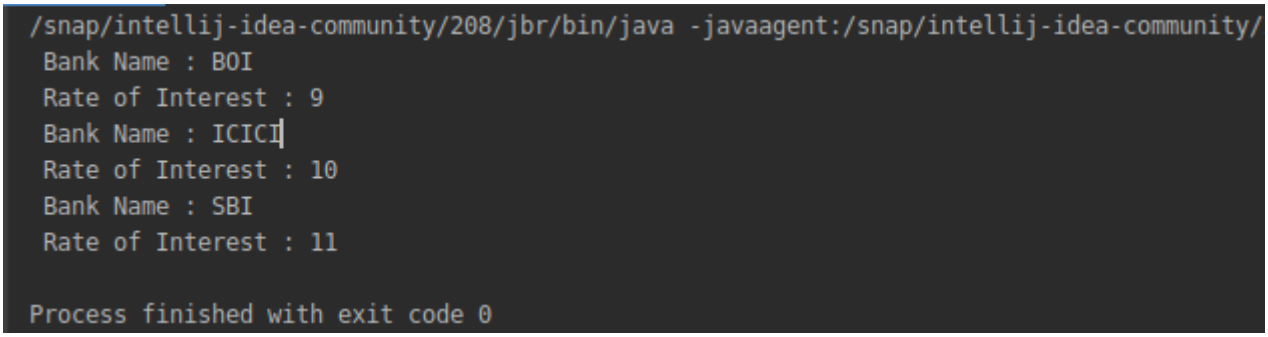
Q11.Create 3 sub class of bank SBI,BOI,ICICI all 4 should have method called getDetails which provide there specific details like rateofinterest etc,print details of every banks

```
package com.company;

class Banks {



    class ICICI {
        int rateofinterest;
        String name;
        ICICI()
        {
            rateofinterest = 10;
            name = "ICICI";
        }

int getDetailsIneterest()
{
    return this.rateofinterest;
}
String getDetailsName()
        {
            return this.name;
        }
        void print(int rate, String name)
        {


            System.out.println(" Bank Name : "+name+"\n Rate of Interest : "+rate);

        }

    }

    class SBI {
        int rateofinterest;
        String name;
        SBI()
        {
```

```
            rateofinterest = 11;
            name = "SBI";
        }
        int getDetailsIneterest()
        {
            return this.rateofinterest;
        }
        String getDetailsName()
        {
            return this.name;
        }

        void print(int rate, String name)
        {


            System.out.println(" Bank Name : "+name+"\n Rate of Interest : "+rate);

        }

    }

    class BOI {
        int rateofinterest;
        String name;
        BOI()
        {
            rateofinterest = 9;
            name = "BOI";
        }
        int getDetailsIneterest()
        {
            return this.rateofinterest;
        }
        String getDetailsName()
        {
            return this.name;
        }
        void print(int rate, String name)
        {


            System.out.println(" Bank Name : "+name+"\n Rate of Interest : "+rate);

        }

    }
}
public class Main {

    public static void main(String[] args) {
            Banks.BOI boi = new Banks().new BOI();
        Banks.ICICI icici = new Banks().new ICICI();
        Banks.SBI sbi = new Banks().new SBI();
        boi.print(boi.getDetailsIneterest(),boi.getDetailsName());
        icici.print(icici.getDetailsIneterest(),icici.getDetailsName());
        sbi.print(sbi.getDetailsIneterest(),sbi.getDetailsName());
```

```
    }
}
```

Output:


/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/
Bank Name : BOI
Rate of Interest : 9
Bank Name : ICICI
Rate of Interest : 10
Bank Name : SBI
Rate of Interest : 11
Process finished with exit code 0