

q-1 Write a program to replace a substring inside a string with other string ?

```
public class demo1 {  
    public static void main(String[] args) {  
        String abc=new String("Hello World Java");  
        String pqr=abc.replace("World","Siddharth");  
        System.out.println(""+pqr);  
    }  
}
```

```
.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production  
Hello Siddharth Java  
  
Process finished with exit code 0
```

q-2 Write a program to find the number of occurrences of the duplicate words in a string and print them ?

```
public class q2 {  
    public static void main(String[] args) {  
        String abc="Hello World this is Java";  
        abc = abc.replaceAll("\\s","");  
        String xyz=abc.toLowerCase();  
        int arr[]=new int[50];  
        int arr2[]=new int[50];  
        for(int i=0;i<xyz.length();i++)  
        {  
            char a = xyz.charAt(i);  
            int asscii = (int) a;  
            arr[i] = asscii;  
        }  
        for(int i=0;i<xyz.length();i++)  
        {  
            int count=0;  
            for(int j=i;j<xyz.length();j++)  
            {  
                if(arr[i]!=-1) {  
                    if (arr[i] == arr[j]) {  
                        count = count + 1;  
                        arr2[i] = count;  
                    }  
                }  
            }  
            int x=arr[i];  
            for(int k=0;k<xyz.length();k++)  
            {  
                if(x==arr[k])  
                {  
                    arr[k]=-1;  
                }  
            }  
        }  
        for(int i=0;i<xyz.length();i++)  
        {  
            if(arr2[i]>1)  
            {  
                System.out.println("Character: "+xyz.charAt(i)+" Occurrence: "+arr2[i]);  
            }  
        }  
    }  
}
```

```

}

.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out
Character: h Occurrence: 2
Character: l Occurrence: 3
Character: o Occurrence: 2
Character: i Occurrence: 2
Character: s Occurrence: 2
Character: a Occurrence: 2

Process finished with exit code 0

```

q-3 Write a program to find the number of occurrences of a character in a string without using loop?

```

public class q3 {
    static int count=0;
    static int len;
    public void fun1(String a, int i){
        if (a.charAt(i)=='h'){
            count++;
        }
        if(i<len-1){
            fun1(a,i+1);
        }
    }
    public static void main(String[] args) {
        String a = "hello hi how are you";
        len=a.length();
        q3 obj=new q3();
        obj.fun1(a,0);
        System.out.println(count);
    }
}

```

```

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/idea_rt.jar=38973:/snap/intellij-idea-community/208/bin -Dfile
.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production/jvm_assignment q3
3

Process finished with exit code 0

```

q-4 Calculate the number & Percentage Of Lowercase Letters, Uppercase Letters, Digits And Other Special Characters In A String

```

import java.sql.SQLOutput;
public class q4 {
    public static void main(String[] args) {
        int number=0, upper_words=0, spec_char=0, lower_word=0, count=0;
        float parc_nam, parc_upwards, callower, parc_spec_char;
        String str="Hello this is $iddh@rth123";
        str=str.replaceAll("\\s", "");
        int arr[]=new int [50];
        for(int i=0;i<str.length();i++)
        {
            char a=str.charAt(i);
            int ascii=(int) a;
            arr[i]=ascii;
            count++;
        }
    }
}

```

```

    }
    System.out.println(""+count);
    for(int i=0;i<str.length();i++)
    {
        if(arr[i]>=65 && arr[i]<90)
        {
            upper_words++;
            arr[i]=-1;
        }
        else if(arr[i]>=97 && arr[i]<=122)
        {
            lower_word++;
            arr[i]=-1;
        }
        else if(arr[i]>=48 && arr[i]<=57) {
            number++;
            arr[i] = -1;
        }
    }
    for(int i=0;i<str.length();i++)
    {
        if(arr[i]>0)
        {
            spec_char++;
        }
    }
    parc_upwards=((float)upper_words/(float)count)*100;
    callower=((float)lower_word/(float)count)*100;
    parc_nam=((float)number/(float)count)*100;
    parc_spec_char=((float)spec_char/(float)count)*100;
    System.out.println("Upper Case Letters are: "+upper_words+" Percentage is:
"+parc_upwards);
    System.out.println("Lower Case Letters are: "+lower_word+" Percentage is:
"+callower);
    System.out.println("Numbers are: "+number+" Percentage is: "+parc_nam);
    System.out.println("Special Characters are: "+spec_char+" Percentage is:
"+parc_spec_char);
    }
}

```

23

```

Upper Case Letters are: 2 Percentage is: 8.695652
Lower Case Letters are: 16 Percentage is: 69.565216
Numbers are: 3 Percentage is: 13.043478
Special Characters are: 2 Percentage is: 8.695652

```

q-5 Find common elements between two arrays.

```

public class q5 {
    public static void main(String[] args) {
        int arr[]={2,3,4,5,6,7};
        int arr2[]={1,2,4,8,3,9};
        for(int i=0;i<arr.length;i++)
        {
            for(int j=0;j<arr2.length;j++)
            {
                if( arr[i]==arr[j]){
                    System.out.println(arr[i]);
                    break;
                }
            }
        }
    }
}

```

```

    }
}
}

```

```

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/idea_rt.jar=36789
.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production/jvm_assignment q5
2
3
4
5
6
7

```

q-6 There is an array with every element repeated twice except one. Find that element

```

package Demo;
public class q6 {
    public static void main(String[] args) {
        int arr[] = {2, 3, 4, 5, 1, 5, 4, 3, 2};
        int arr2[] = new int[10];
        int temp;
        int pass = 0;
        for (int i = 0; i < arr.length; i++) {
            for (int j = i + 1; j < arr.length; j++)
            {
                if(arr[i] > arr[j])
                {
                    temp = arr[i];
                    arr[i] = arr[j];
                    arr[j] = temp;
                }
            }
        }
        for (int i = 0; i < arr.length; i++) {
            System.out.print(" "+arr[i]);
        }
        int loc=arr[0];
        for(int i=1;i<arr.length;i++)
        {
            loc=loc^arr[i];
        }
        System.out.println();
        System.out.println("Value not in group is: "+loc);
    }
}

```

```

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/idea_rt.jar=34771:/snap/intellij-idea-com
.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production/jvm_assignment Demo.q6
1 1 2 3 3 4 4 5 5
Value not in group is: 2

Process finished with exit code 0

```

q-7 Write a program to print your Firstname,LastName & age using static block,static method & static variable respectively

```

public class q7 {
    static
    {
        String first_name = "Siddharth";
        String Last_name = "Bhatia";
    }
}

```

```

        int age = 23;
        System.out.print("First name: "+first_name);
        System.out.println("");
        System.out.print("Last name: "+Last_name);
        System.out.println("");
        System.out.print("Age: "+age);
        System.out.println("");
    }
    static void Detail()
    {
        String first_name = "Prateek";
        String Last_name = "Narang";
        int age = 25;
        System.out.print("First name: "+first_name);
        System.out.println("");
        System.out.print("Last name: "+Last_name);
        System.out.println("");
        System.out.print("Age: "+age);
    }
    static String string1="Amitabh";
    static String string2="Bachchan";
    static int age2=77;
    public static void main(String args[])
    {
        System.out.print("First name: "+string1);
        System.out.println("");
        System.out.print("Last name: "+string2);
        System.out.println("");
        System.out.print("Age: "+age2);
        System.out.println("");
        Detail();
    }
}

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/idea_rt.jar=45371:/snap/intellij-idea-community/208/bin -Dfile.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production/jvm_assignment q7
First name: Siddharth
Last name: Bhatia
Age: 23
First name: Amitabh
Last name: Bachchan
Age: 77
First name: Prateek
Last name: Narang
Age: 25
Process finished with exit code 0

```

q-8 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 q8 {
    public static void main(String[] args) {
        StringBuffer str=new StringBuffer("This is Siddharth");
        str.delete(4,9);
        System.out.println(""+str.reverse());
    }
}

```

```

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/idea_rt.jar=41833:/snap/intellij-idea-community/208/bin -Dfile.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production/jvm_assignment q8
htrahddisihT
Process finished with exit code 0

```

q-9 Write a program to display values of enums using a constructor & getPrice() method (Example display house & their prices)

```

enum houses
{

```

```

        h1,h2,h3,h4;
    }
    public class q9
    {
        static houses house;
        q9(houses house)
        {
            this.house=house;
        }
        public void getprice()
        {
            switch (house)
            {
                case h1:
                {
                    System.out.println("price is 1000");
                }
                break;
                case h2:
                {
                    System.out.println("price is 2000");
                }
                break;
                case h3:
                {
                    System.out.println("price is 3000");
                }
                break;
                case h4:
                {
                    System.out.println("price is 4000");
                }
                break;
                default:
                {
                    System.out.println("CHOOSE CORRECT HOUSE NAME");
                }
            }
        }
    }
    public static void main(String args[])
    {
        String s="h4";
        q9 e=new q9(house.valueOf(s));
        e.getprice();
    }
}

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/idea_rt.jar=37141:/snap/intell
.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production/jvm_assignment q9
price is 4000

Process finished with exit code 0

```

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

```
public class q10 {
```

```

void add(int a,int b)
{
    int c;
    c= a + b;
    System.out.println("Integer Addition "+c);
}
void add(double a,double b)
{
    double c = 0.0;
    c= a + b;
    System.out.println("Double AAddition "+c);
}
void mult(float a,float b)
{
    float c;
    c= a * b;
    System.out.println("Float Multiplication"+c);
}
void mult(int a,int b)
{
    int c;
    c= a * b;
    System.out.println("IntegerMultiplication"+c);
}
void concat(String a,String b)
{
    String c;
    c= a + b;
    System.out.println("2 String Concatination "+c);
}
void concat(String a,String b,String z)
{
    String c;
    c= a + b + z;
    System.out.println("3 String Concatination "+c);
}
public static void main(String args[])
{
    q10 o=new q10();
    o.add(10,20);
    o.add(2.24564,5.78975);
    o.mult(7,3);
    o.mult(3.12f,3.21f);
    o.concat("Siddharth","Bhatia");
    o.concat("Siddharth","Bhatia","Java");
}
}

```

```

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/idea_rt.jar=338
.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production/jvm_assignment q10
Integer Addition 30
Double AAddition 8.03539
IntegerMultiplication10
Float Multiplication6.33
2 String Concatination SiddharthBhatia
3 String Concatination SiddharthBhatiaJava

```

q-11 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

```

class bank {
    int accno ;
    String customer_name;
    int r_o_f;
}

```

```

}
class icici extends bank{
    icici(int a,String b,int c) {
        this.accno = a;
        this.customer_name = b;
        this.r_o_f = c;
    }
    void get_details()
    {
        System.out.println("Your ICICI account number is: "+accno);
        System.out.println("Your ICICI customer name is: "+customer_name);
        System.out.println("Your ICICI rate of interest is: "+r_o_f);
    }
}
class boi extends bank {
    boi(int a, String b, int c) {
        this.accno = a;
        this.customer_name = b;
        this.r_o_f = c;
    }
    void get_details ()
    {
        System.out.println("Your BOI account number is: " + accno);
        System.out.println("Your BOI customer name is: " + customer_name);
        System.out.println("Your BOI rate of interest is: " + r_o_f);
    }
}
class sbi extends bank {
    sbi(int a, String b, int c) {
        this.accno = a;
        this.customer_name = b;
        this.r_o_f = c;
    }
    void get_details()
    {
        System.out.println("Your SBI account number is: " + accno);
        System.out.println("Your SBI customer name is: " + customer_name);
        System.out.println("Your SBI rate of interest is: " + r_o_f);
    }
}
class abc{
    public static void main(String[] args) {
        sbi sb=new sbi(1,"Siddharth",12);
        sb.get_details();
        icici sb2=new icici(2,"Abhllesh",6);
        sb2.get_details();
        boi sb3=new boi(3,"Nirbhay",2);
        sb3.get_details();
    }
}

```

```

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/idea_rt.jar=45385:/snap/intellij-idea-community/208/bin -Dfile
.encoding=UTF-8 -classpath /home/siddharth/IdeaProjects/jvm_assignment/out/production/jvm_assignment abc
Your SBI account number is: 1
Your SBI customer name is: Siddharth
Your SBI rate of interest is: 12
Your ICICI account number is: 2
Your ICICI customer name is: Abhllesh
Your ICICI rate of interest is: 6
Your BOI account number is: 3
Your BOI customer name is: Nirbhay
Your BOI rate of interest is: 2

Process finished with exit code 0

```