

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

```
import java.util.Scanner;

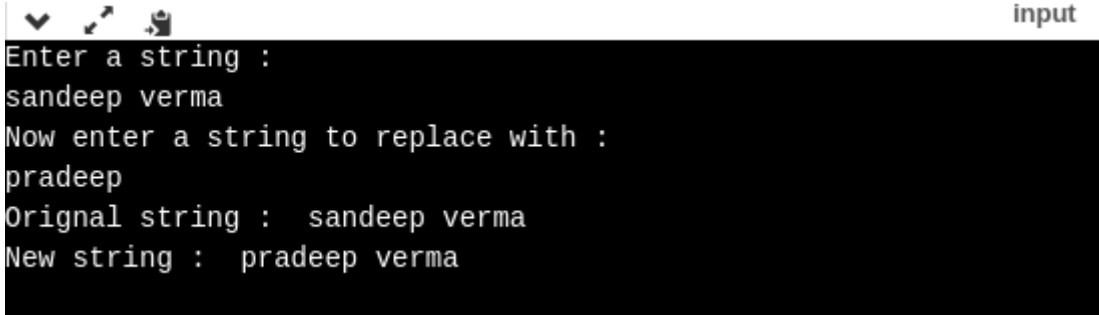
public class Main
{
    public static void main (String[]args)
    {
        String sentence, al_string;
        Scanner e = new Scanner (System.in);

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

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

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

Output:



```
Enter a string :
sandeep verma
Now enter a string to replace with :
pradeep
Original string : sandeep verma
New string : pradeep verma
```

Without inbuilt function:

```
import java.util.Scanner;

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

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

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

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

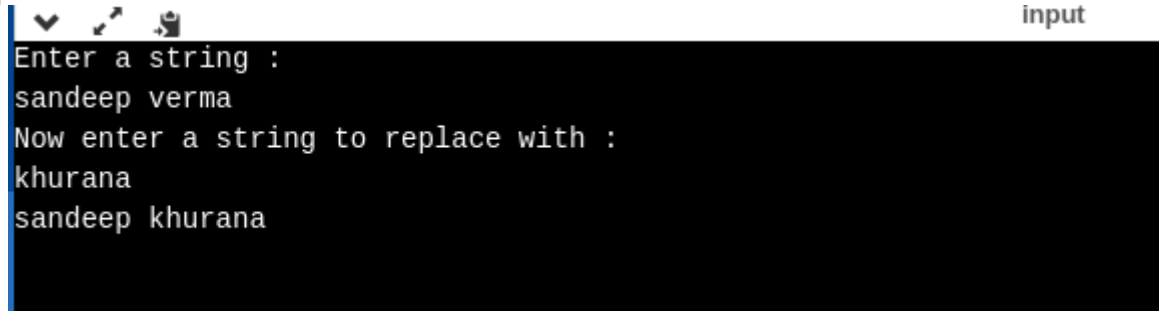
```

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

    }
}

```

Output:



```

input
Enter a string :
sandeep verma
Now enter a string to replace with :
khurana
sandeep khurana

```

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]+" (.*)"))
                {

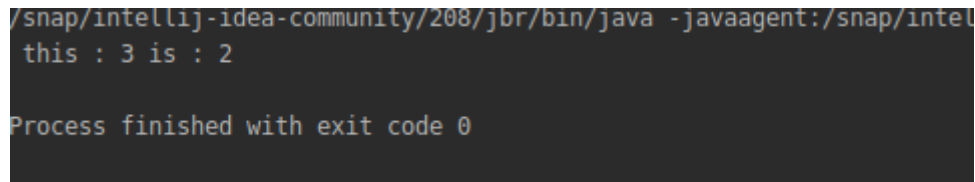
```

```

        duplicates += " " + words[i] + " : " + count;
    }
}
}
System.out.println(duplicates);
}
}

```

Output:



```

/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intel
this : 3 is : 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?

```

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-idea-community/208/jbr/bin/javaagent.jar -jar /snap/intellij-idea-community/208/jbr/bin/javaagent.jar
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:

```

/shap/IntelliJ-Idea-community/208/jbr/bin/java -javaagent:/shap/IntelliJ-Idea-community/208/jbr/bin/javaagent.jar -jar /shap/IntelliJ-Idea-community/208/jbr/bin/javaagent.jar
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[]{6,6,3,7,2,3,2,1};
    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 unique");
}
```

}
Output

```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-commu
7
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

```
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:

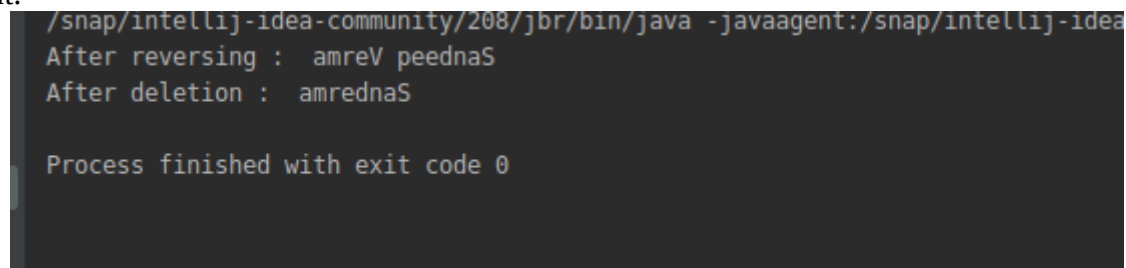
```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/lib/
First Name : Sandeep
Last Name : Verma
Age :22

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:



```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea  
After reversing : amreV peednaS  
After deletion : amrednaS  
  
Process finished with exit code 0
```

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;
```

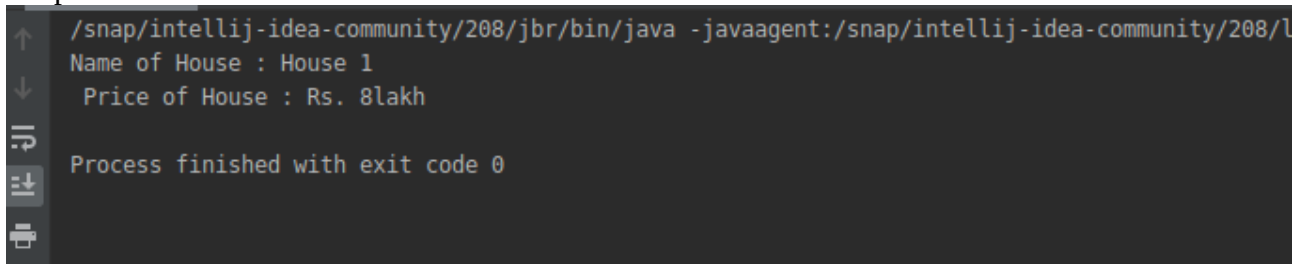
```
house_info (String house, String price)  
{  
    this.HOUSE_NAME = house;  
    this.HOUSE_PRICE = price;  
  
}
```

```
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:

A screenshot of a terminal window with a dark background. The command line at the top shows the path to the Java executable: /snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/l. The output of the program is displayed in two lines: "Name of House : House 1" followed by "Price of House : Rs. 8lakh" on the next line. At the bottom, a status message reads "Process finished with exit code 0". On the left side of the terminal, there is a vertical toolbar with icons for navigation and execution.

```
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap/intellij-idea-community/208/l  
Name of House : House 1  
Price of House : Rs. 8lakh  
  
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) concatenate 2 string
- F) Concatenate 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 concatenate(String a,String b)
```

```
    {  
        return a+b;  
    }
```

```
    String concatenate(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( "Concatenate two : "+obj.concatenate("Sandeep"," Verma"));
```

```
        System.out.println( "Concatenate Three :"+ obj.concatenate("Sandeep"," Verma", "\n Just on  
another line"));
```

```
    }
```

```
}
```

Output:

```
Add Int : 16
Add Float : 17.1
Multiply Int : 60
Multiply Float : 69.299995
Concat two : Sandeep Verma
Concat 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
```