JAVA-1

YUKTI SHARMA

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

Ques1.java × Ques2.java ×

```
import java.util.Scanner;

public class Ques1 {

    public static void main(String[] args) {

        Scanner sc= new Scanner(System.in);
         System.out.println("Enter the string ");
         String input =sc.nextLine();

         System.out.println("Enter the substring to be replaced");
         String input1 =sc.nextLine();

         System.out.println("Enter the new substring");
         String input2 =sc.nextLine();

         System.out.println("The Original String was: "+input);

         System.out.println("The new string is "+input.replace(input1,input2));

    }
}
```

OUTPUT-

```
/home/yukti/.sdkman/candidates/java/8.0.202-amzn/bin/java ...
Enter the string
yukti hey sharma how yukti
Enter the substring to be replaced
yukti
Enter the new substring
Priya
The Original String was: yukti hey sharma how yukti
The new string is Priya hey sharma how Priya

Process finished with exit code 0
```

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

Ques1.java | Ques2.java

```
import java.util.*;
public class Ques2 {

    public static void main(String[] args) {

        Scanner sc= new Scanner(System.in);

        System.out.println("Enter the string");
        String input= sc.nextLine();

        String[] words=input.split( regex: " ");
        int wrc=1;

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

                if(words[i].equals(words[j]))
                {
                    wrc=wrc+1;
                    words[j]="0";
                }
            }
            if(words[i]!="0"&& wrc!=1)
                System.out.println(words[i]+" is repeated "+wrc+ " times ");
            wrc=1;

        }
    }
}
```

OUTPUT-

-1 Assignment > src > Ques2

Main | Ques2 | Ques2

```
/home/yukti/.sdkman/candidates/java/8.0.202-amzn/bin/java ...
Enter the string
hello hello are you good here here here
hello is repeated 2 times
here is repeated 3 times

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?

Ques1.java | Ques2.java | Ques3.java

```
import java.util.*;
public class Ques3 {
    public static void main(String[] args) {
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter the string: ");
        String input= sc.nextLine();

        System.out.println("Enter the character : ");
        String character= sc.nextLine();

        if(character.length()>1)
            System.out.println("enter only one character");
        else
            {

            int length = input.length();
            String input2 = input.replace(character,  replacement: "");
            int length_of_char = length - input2.length();

            System.out.println("occurance of character is " + length_of_char);
            }


    }
}
```

OUTPUT-

```
/home/yukti/.sdkman/candidates/java/8.0.202-amzn/bin
Enter the string:
yuktiyuktyukyyuyyu
Enter the character :
y
occurance of character is 7

Process finished with exit code 0
```

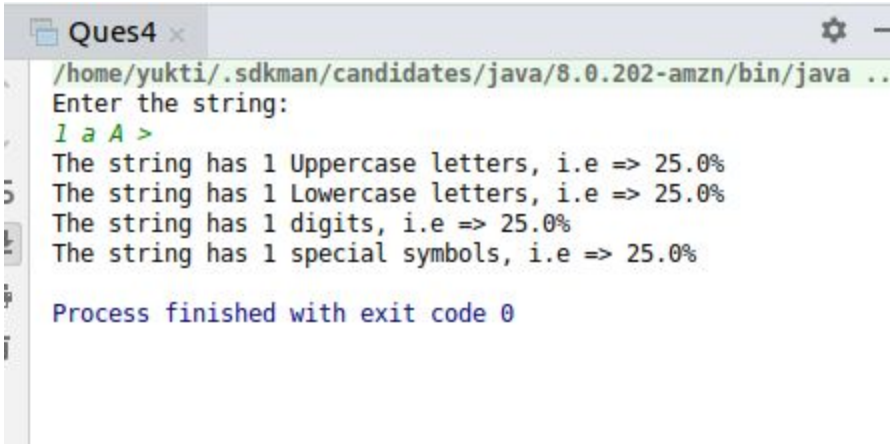
Q4. Calculate the number & Percentage Of Lowercase Letters,Uppercase Letters, Digits And Other Special Characters In A String

```java
import java.util.Scanner;

public class Ques4 {

    static int Uppercase=0;
    static  int Lowercase=0;
    static int digits=0;
    static int others=0;

    public static void main(String[] args) {
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter the string: ");
        String input1= sc.nextLine();
        String input= input1.replace( target: " ", replacement: "");
         int total_length = input.length();

        Ques4 o = new Ques4();
        o.Occurance(input);
        o.CalculatePercentage(total_length,input);
    }
```

```java
  void Occurance(String input) {

     for (int i = 0; i < input.length(); i++) {
         char value = input.charAt(i);
         if (Character.isUpperCase(value)) {
             Uppercase++;
         } else if (Character.isLowerCase(value)) {
             Lowercase++;
         } else if (Character.isDigit(value)) {
             digits++;
         } else
             others++;
     }
  }
```

```java
    void CalculatePercentage(int length, String input) {
        double upper_percent = ((Uppercase * 100.0) / length);
        double lower_percent = (Lowercase * 100.0) / length;
        double digits_percent = (digits * 100.0) / length;
        double other_percent = (others * 100.0) / length;
        System.out.println("The string has " + Uppercase + " Uppercase letters, i.e => " + upper_percent + "% ");
        System.out.println("The string has " + Lowercase + " Lowercase letters, i.e => " + lower_percent + "% ");
        System.out.println("The string has " + digits + " digits, i.e => " + digits_percent + "% ");
        System.out.println("The string has " + others + " special symbols, i.e => " + other_percent + "% ");
    }
}
```

OUTPUT-



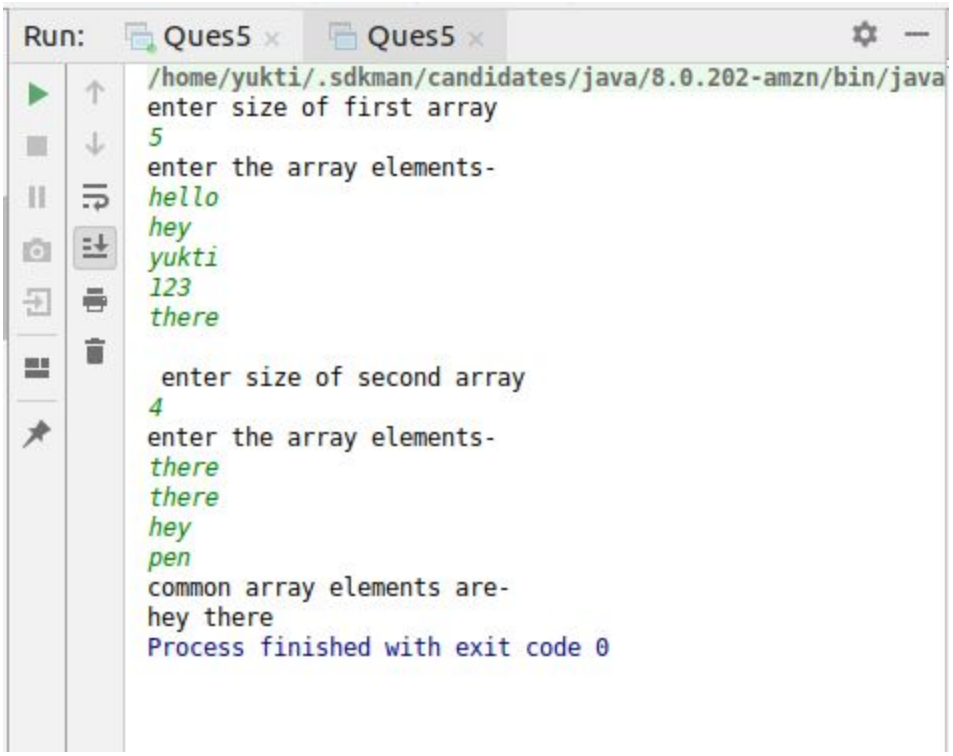
Q5. Find common elements between two arrays.

```
import java.util.Scanner;

public class Ques5 {
    static int k = 0;

    public static void main(String[] args) {

        Scanner sc=new Scanner(System.in);

        System.out.println("enter size of first array");
        int n1= sc.nextInt();
        String[] array1= new String[n1];
        System.out.println("enter the array elements-");
        for(int i=0;i<n1;i++)
        {
            array1[i]= sc.next();
        }


        System.out.println("\n enter size of second array");
        int n2= sc.nextInt();
        String[] array2= new String[n1];
        System.out.println("enter the array elements-");
        for(int i=0;i<n2;i++)
        {
            array2[i]= sc.next();
        }
        Ques5 obj = new Ques5();
        System.out.println("common array elements are- ");
        obj.findCommonElement(array1, array2);
    }
```

```
    public void findCommonElement(String[] a, String[] b) {

        String temp = "";

        String[] common = new String[10];
        int tempCounter = 0;
        for (int i = 0; i < a.length; i++) {
            temp = a[i];
            tempCounter = 0;
            for (int j = 0; j < b.length; j++) {
                if (temp.equals(b[j])) {
                    tempCounter++;
                }
            }
            if (tempCounter >= 1) {
                common[k++] = temp;


            }
        }
                printDistinct(common,k);
    }
```

```
    static void printDistinct(String arr[], int n)
    {

        for (int i = 0; i < n; i++)
        {

            int j;
            for (j = 0; j < i; j++)
                if (arr[i].equals(arr[j]))
                    break;

            if (i == j)
                System.out.print( arr[i] + " ");
        }
    }
}
```

OUTPUT-



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

```
import java.util.*;
public class Ques6 {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter size of array");
        int n= sc.nextInt();
        String[] input= new String[n];
        System.out.println("enter the array with all elements twice except one-");
        for(int i=0;i<n;i++)
        {
            input[i]= sc.next();
        }
        count_elements(input);
    }
```

```
    static void count_elements(String[] words)
    {
    int wrc=1;

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

            if(words[i].equals(words[j]))
            {
                wrc=wrc+1;
                words[j]="0";
            }
        }
        if(words[i]!="0"&& wrc!=2)
            System.out.println(words[i]+" is repeated "+wrc+ " times ");
        wrc=1;
    }

    }
}
```

```
/home/yukti/.sdkman/candidates/java/8.0.202-amzn/bin/java ...
enter size of array
7
enter the array with all elements twice except one-
India
here
India
there
here
where
where
there is repeated 1 times

Process finished with exit code 0
```

Second way -

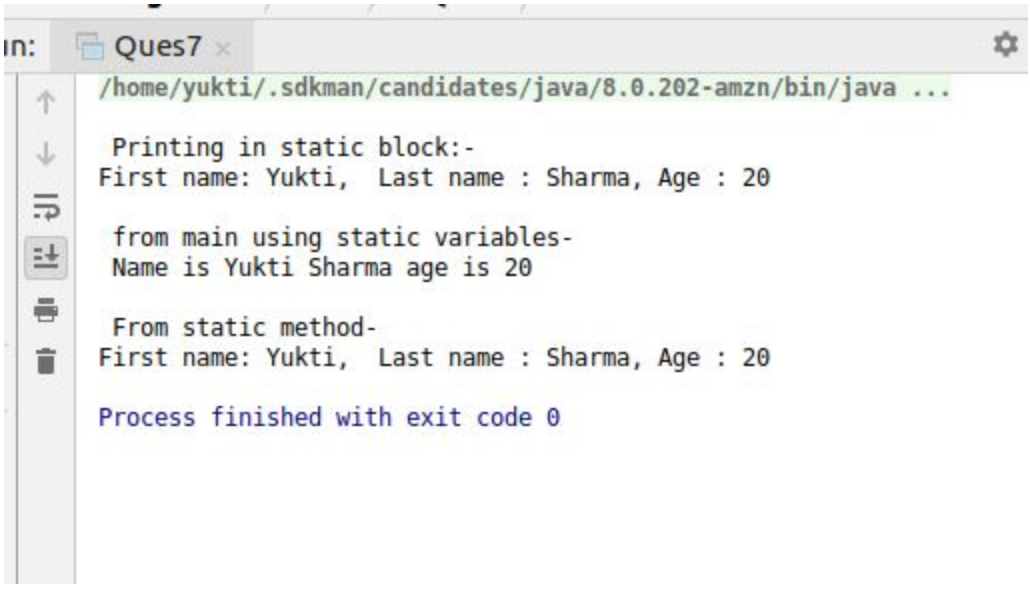
```java
import java.util.Scanner;

public class Ques6b {


    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter size of array");
        int n= sc.nextInt();
        int[] arr1= new int[n];
        System.out.println("enter the array with all elements twice except one-");
        for(int i=0;i<n;i++)
        {
            arr1[i]= sc.nextInt();
        }
        int c=arr1[0];
        for (int i = 1; i < arr1.length;i++)
        {
            c=c^arr1[i];
        }

        System.out.println("The non repeated element is:"+c);
    }


}
```

```
/home/yukti/.sdkman/candidates/java/8.0.202-amzn/bin/java ...
enter size of array
7
enter the array with all elements twice except one-
2
32
2
32
3
45
3
The non repeated element is:45

Process finished with exit code 0
```

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

```java
public class Ques7 {
    static String FirstName="Yukti";
    static String LastName="Sharma";
    static int age=20;


    public static void main(String[] args) {
        System.out.println("\n from main using static variables-");
        System.out.println(" Name is "+FirstName+" "+ LastName+" age is "+age);
        printName();
    }

    static {
        System.out.println("\n Printing in static block:-");
        System.out.println("First name: Yukti,  Last name : Sharma, Age : 20");
    }

    static void printName()
    {
        System.out.println("\n From static method-");
        System.out.println("First name: Yukti,  Last name : Sharma, Age : 20");

    }

}
```

OUTPUT-



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

```java
public class Ques8 {
    public static void main(String[] args) {
        StringBuffer str = new StringBuffer("Hello, This is a String...");
        System.out.println("Original String: " + str);
        str.reverse();
        System.out.println("Reverse String: " + str);
        str.delete(4, 10);
        System.out.println("After Deleting: " + str);
    }
}
```

OUTPUT-

```
/home/yukti/.sdkman/candidates/java/8.0.202-amzn/bin/java ...
Original String: Hello, This is a String...
Reverse String: ...gnirtS a si sihT ,olleH
After Deleting: ...ga si sihT ,olleH

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)

```java
public class Ques9 {
    enum Houses {
        ABC_Villa(9000), ANtilia(9999), XYZ_house(500), flat(150),flat2(129);

        private long price;

        Houses(long p) {
            price = p;
        }
        long getPrice() {
            return price;
        }
    }

    public static void main(String args[]){
        System.out.println("All houses prices:");
        for (Houses c : Houses.values())
        {
            System.out.println(c + " costs " + c.getPrice() + " lakh rupees.");
        }

    }

}
```

OUTPUT-

```
Ques9
/home/yukti/.sdkman/candidates/java/8.0.202-a
All houses prices:
ABC_Villa costs 9000 lakh rupees.
ANtilia costs 9999 lakh rupees.
XYZ_house costs 500 lakh rupees.
flat costs 150 lakh rupees.
flat2 costs 129 lakh rupees.

Process finished with exit code 0
```

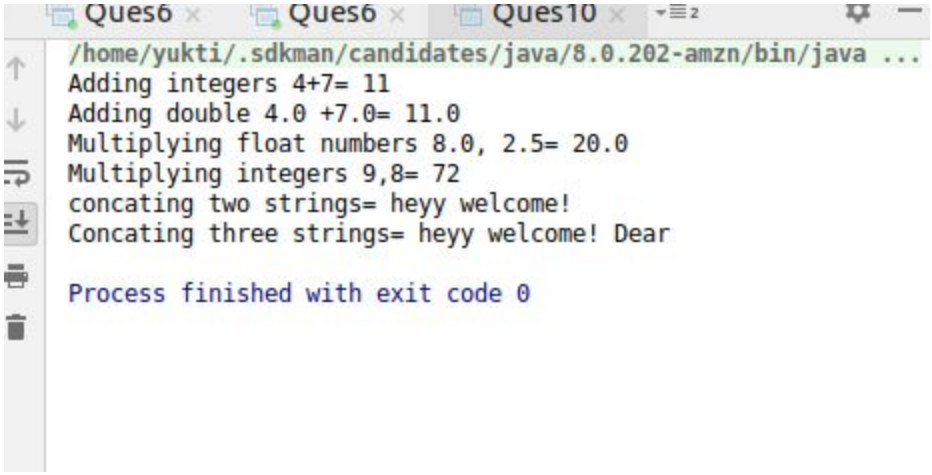
Q10.Write a single program for following operation using overloading

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

```java
public class Ques10 {
    public static void main(String[] args) {
        Ques10 obj= new Ques10();
        System.out.println("Adding integers 4+7= "+obj.addition( a: 4, b: 7));
        System.out.println("Adding double 4.0 +7.0= "+obj.addition( a: 4.0, b: 7.0));
        System.out.println("Multiplying float numbers 8.0, 2.5= "+obj.multiply( a: 8.0f, b: 2.5f));
        System.out.println("Multiplying integers 9,8= "+obj.multiply( a: 9, b: 8));
        System.out.println("concating two strings= "+obj.concat( a: "heyy ", b: "welcome!"));
        System.out.println("Concating three strings= "+obj.concat( a: "heyy ", b: "welcome!", c: " Dear"));
    }
```

```java
    public double addition(double a, double b)
    {
         return a+b;
    }
    public int addition(int a,int b)
    {
        return a+b;
    }

    public double multiply(float a,float b)
    {
        return a*b;
    }
    public int multiply(int a,int b)
    {
        return a*b;
    }
    public String concat(String a,String b)
    {
        return a.concat(b);
    }

    public String concat(String a,String b,String c)
    {
        return a.concat(b.concat(c));
    }
}
```

OUTPUT-



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

```
class Bank {

        double rate_of_interest;
        String branch_name;
        String Bank_name;
        public Bank(double rate_of_interest, String branch_name, String Bank_name)
        {
            this.rate_of_interest = rate_of_interest;
            this.branch_name=branch_name;
            this.Bank_name=Bank_name;
        }

        public void getDetails(){
            System.out.println("Bank name is: "+Bank_name);
            System.out.println("Branch name is "+ branch_name);
            System.out.println("Rate of interest is "+ rate_of_interest+"% per annum");
        }


}
```

```
public class Main{

    public static void main(String[] args) {
        SBI sbi= new SBI( rate_of_interest: 2.7, branch_name: "Noida 127", Bank_name: "State Bank of India");
        ICICI icici= new ICICI( rate_of_interest: 2.5, branch_name: "Noida 43", Bank_name: "ICICI");
        BOB bob= new BOB( rate_of_interest: 2.4, branch_name: "Delho 32", Bank_name: "Bank of Baroda");
        System.out.println("Details of SBI:");
        sbi.getDetails();
        System.out.println("\nDetails of ICICI:");
        icici.getDetails();
        System.out.println("\nDetails of BOB:");
        bob.getDetails();
    }
}
```

```java
class SBI extends Bank{
    public SBI(double rate_of_interest, String branch_name, String Bank_name) {
        super(rate_of_interest, branch_name, Bank_name);
    }

}
class BOB extends Bank{
    public BOB(double rate_of_interest, String branch_name, String Bank_name) {
        super(rate_of_interest, branch_name, Bank_name);
    }
}
class ICICI extends Bank{
    public ICICI(double rate_of_interest, String branch_name, String Bank_name) {
        super(rate_of_interest, branch_name, Bank_name);
    }
}
```

Output-

```
/home/yukti/.sdkman/candidates/java/8.0.202-amzn
Details of SBI:
Bank name is: State Bank of India
Branch name is Noida 127
Rate of interest is 2.7% per annum

Details of ICICI:
Bank name is: ICICI
Branch name is Noida 43
Rate of interest is 2.5% per annum

Details of BOB:
Bank name is: Bank of Baroda
Branch name is Delho 32
Rate of interest is 2.4% per annum

Process finished with exit code 0
```