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

Code

```
C MyClass.java ×
1 ▶    public class MyClass {
2
3 ▶        public static void main(String[] args)
4          {
5              String naresh = "tushar";
6              System.out.println(naresh.replace( target: "tu" ,   replacement: "ab"));
7          }
8      }
9
```

Output

```
Run:     MyClass ×
▶    ↑    /home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
          abshar
■    ↓
○    ⇆    Process finished with exit code 0

ntelliJ IDEA Community Edition
     📷
```

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

Code

```java
import java.io.*;
public class q2 {
    public static void main(String[] args)
    {
        String mystr = "i am ashish i am ashish jha";
        String words[] = mystr.split( regex: " ");
        int count = 1;
        for(int i=0;i<words.length;i++)
        {
            for(int j=i+1;j<words.length;j++)
            {
                if(words[i].equals(words[j]))
                {
                    count=count+1;
                    words[j]="0";
                }
            }
            if(words[i]!="0")
                System.out.println(words[i]+"--"+count);
            count=1;
        }
    }
}
```

Output

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

Code

```java
public class q3
{
        public static void main(String args[])
        {
            String var="Tushar is rich";
            int abc=var.length()-var.replace( target: "h", replacement: "").length();
            System.out.println("Count of i is:"+abc);
        }
}
```

Output

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Count of i is: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.

Code

```java
import java.io.*;
public class q4
{
    public static void main(String args[])
    {
        String str = "#tusharisaGood@Boy$#5421";
        int upper = 0, lower = 0, number = 0, special = 0;

        for (int i = 0; i < str.length(); i++)
        {
            char ch = str.charAt(i);
            if (ch >= 'A' && ch <= 'Z')
                upper++;
            else if (ch >= 'a' && ch <= 'z')
                lower++;
            else if (ch >= '0' && ch <= '9')
                number++;
            else
                special++;
        }

        System.out.println("Lower case letters : " + lower);
        System.out.println("Upper case letters : " + upper);
        System.out.println("Number : " + number);
        System.out.println("Special characters : " + special);
    }
}
```

Output

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Lower case letters : 14
Upper case letters : 2
Number : 4
Special characters : 4

Process finished with exit code 0
```
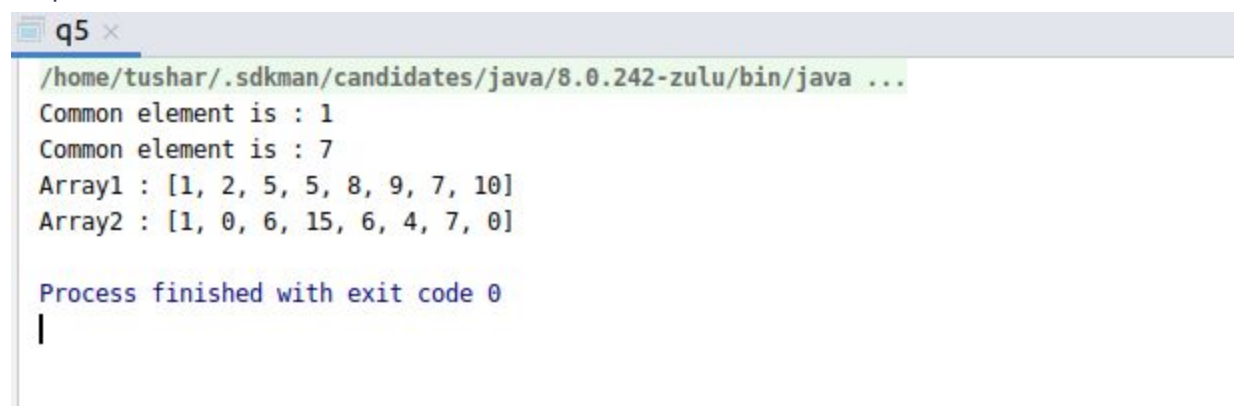
Q5 Find common elements between two arrays.

Code

```java
import java.util.Arrays;
public class q5
{
    public static void main(String args[])
    {
        int[] array1 = {1, 2, 5, 5, 8, 9, 7, 10};
        int[] array2 = {1, 0, 6, 15, 6, 4, 7, 0};

        for (int i = 0; i < array1.length; i++)
        {
            for (int j = 0; j < array2.length; j++)
            {
                if (array1[i] == (array2[j]))
                {
                    System.out.println("Common element is : " + (array1[i]));
                }
            }
        }
        System.out.println("Array1 : " + Arrays.toString(array1));
        System.out.println("Array2 : " + Arrays.toString(array2));
    }
}
```

Output

q5 ×

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Common element is : 1
Common element is : 7
Array1 : [1, 2, 5, 5, 8, 9, 7, 10]
Array2 : [1, 0, 6, 15, 6, 4, 7, 0]

Process finished with exit code 0
```

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

Code

```java
public class q6 {
    public static void main(String[] args)
    {
        int ar[] = {2, 3, 5, 4, 5, 3, 4};
        for (int i = 0; i < ar.length; i++)
        {
            int count = 0;
            for (int j = 0; j < ar.length; j++)
            {
                if (i != j && ar[i] == ar[j])
                {
                    count = 1;
                    break;
                }
            }
            if (count == 0) {
                System.out.println(ar[i]);
            }
        }
    }
}
```

Output

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
2

Process finished with exit code 0
```

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

Code

```java
public class q7{
    static String var="Tushar Garg";
    static  int age=22;
    static {
        System.out.println("Inside Static block:"+" Name is :"+var+" age is :"+age);
    }
    public static void main(String args[]){
        System.out.println("Inside  Main :"+" Name is:"+var+" Age is:"+age);
    }
}
```

Output

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Inside Static block: Name is :Tushar Garg age is :22
Inside  Main : Name is:Tushar Garg Age is: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.

Code

```java
public class q8 {
    public static void main(String[] args) {
        StringBuffer str = new StringBuffer(" This is Tushar Garg");
        System.out.println("Original String=" + str);
        str.reverse();
        System.out.println("String after Reversing=" + str);
        str.delete(4, 9);
        System.out.println("String after deleting from index 4 to index 9=" + str);
    }
}
```

Ouput

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Original String= This is Tushar Garg
String after Reversing=graG rahsuT si sihT
String after deleting from index 4 to index 9=graGuT si sihT

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).

Code

```java
public class Enum_check
{
        public static void main(String args[])
        {
                House house[] = House.values();
                for(int i=0;i<house.length;i++)
                {
                        System.out.println(house[i]);
                }


        }
}
enum House {
    New_Delhi,Kanpur,Lucknow;
    private House(){
        System.out.println("Constructor Enum:"+this.toString());
    }
}

}
```

Output

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Constructor Enum:New_Delhi
Constructor Enum:Kanpur
Constructor Enum:Lucknow
New_Delhi
Kanpur
Lucknow

Process finished with exit code 0
```

Q10 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

Code

```java
public class q10 {
    public int add(int a, int b) {
        return a + b;
    }

    public double add(double a, double b) {
        return a + b;
    }

    public float mul(float a, float b) {
        return a * b;
    }

    public int mul(int a, int b) {
        return a * b;
    }

    public String fun(String a, String b) {
        return a + b;
    }

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

    public static void main(String args[]) {
        q10 ovr = new q10();
        System.out.println(ovr.add( a: 5,  b: 6));
        System.out.println(ovr.add( a: 5.4   b: 6.5));
```

```java
        System.out.println(ovr.add( a: 5.4,   b: 6.5));
        System.out.println(ovr.mul( a: 2,   b: 4));
        System.out.println(ovr.mul( a: 5,   b: 6));
        System.out.println(ovr.fun( a: "Tushar",   b: "Garg"));
        System.out.println(ovr.fun( a: "Tushar",   b: "Garg",   c: "Is"));

    }
}
```

Output

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
11
11.9
8
30
TusharGarg
TusharGargIs

Process finished with exit code 0
```

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.

Code

```java
public class Bank{
    double rate_of_interest;
    String branch;

    public double getRate_of_interest() {
        return rate_of_interest;
    }
    public void setRate_of_interest(double rate_of_interest) {
        this.rate_of_interest = rate_of_interest;
    }
    public String getBranch() {
        return branch;
    }
    public void setBranch(String branch) {
        this.branch = branch;
    }

    public static void main(String args[]) {
        Bank bank = new Bank();
        SBI sbi = new SBI();
        ICICI icici = new ICICI();
        BOI boi = new BOI();
        bank.setBranch("Main Branch");
        bank.setRate_of_interest(6.5);
        sbi.setBranch("New Delhi");
        sbi.setRate_of_interest(7.6);
        icici.setBranch("Kolkata");
        icici.setRate_of_interest(8.9);
        boi.setBranch("Indore");
```

```java
        boi.setRate_of_interest(6.9);
        System.out.println("Bank Details Of Bank:");
        System.out.println("Branch Name:" + bank.getBranch() + " Rate of Interest:" + bank.getRate_of_interest());
        System.out.println("Bank Details Of SBI:");
        System.out.println("Branch Name:" + sbi.getBranch() + " Rate of Interest:" + sbi.getRate_of_interest());
        System.out.println("Bank Details Of ICICI:");
        System.out.println("Branch name:" + icici.getBranch() + " Rate of Interest:" + icici.getRate_of_interest());
        System.out.println("Bank Details Of BOI:");
        System.out.println("Branch Name:" + boi.getBranch() + " Rate of Interest:" + boi.getRate_of_interest());
    }

    static class SBI {
        double rate_of_interest;
        String branch;

        public double getRate_of_interest() { return rate_of_interest; }

        public void setRate_of_interest(double rate_of_interest) { this.rate_of_interest = rate_of_interest; }

        public String getBranch() { return branch; }

        public void setBranch(String branch) { this.branch = branch; }
    }
        static class ICICI
        {
            double rate_of_interest;
            String branch;


            public double getRate_of_interest() { return rate_of_interest; }

            public void setRate_of_interest(double rate_of_interest) { this.rate_of_interest = rate_of_interest; }

            public String getBranch() { return branch; }

            public void setBranch(String branch) { this.branch = branch; }
        }
        static class BOI
        {
            public double getRate_of_interest() { return rate_of_interest; }

            public void setRate_of_interest(double rate_of_interest) { this.rate_of_interest = rate_of_interest; }

            public String getBranch() { return branch; }

            public void setBranch(String branch) {
                this.branch = branch;
            }

            double rate_of_interest;
            String branch;
        }
}
```

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Bank Details Of Bank:
Branch Name:Main Branch Rate of Interest:6.5
Bank Details Of SBI:
Branch Name:New Delhi Rate of Interest:7.6
Bank Details Of ICICI:
Branch name:Kolkata Rate of Interest:8.9
Bank Details Of BOI:
Branch Name:Indore Rate of Interest:6.9

Process finished with exit code 0
```