Question: 1:
Write a program to replace a substring inside a string with other string ?

```java
import java.util.Scanner;

public class Ques1 {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        String str,sub,repl;
        System.out.println("Enter a string: ");
        str = in.nextLine();
        System.out.println("Enter a Sub string to be replace: ");
        sub = in.nextLine();
        System.out.println("Enter the replacement String: ");
        repl = in.nextLine();
        str = str.replace(sub,repl);
        System.out.println(str);
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Enter a string:
Hello World
Enter a Sub string to be replace:
ello
Enter the replacement String:
iii
Hiii World

Process finished with exit code 0
```

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

```java
import java.util.Scanner;

public class Ques2 {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        String str = in.nextLine();
        String[] strArray = str.split( regex: " ");
        for(int i=0;i<strArray.length; i++) {
            int count = 1;
            if(strArray[i]!="") {
                for (int j = i + 1; j < strArray.length; j++) {
                    if (strArray[i].equals(strArray[j])) {
                        strArray[j] = "";
                        count++;
                    }
                }
                System.out.println(strArray[i]+" : "+count);
            }
        }
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Hello World This World Contains Hello Hii
Hello : 2
World : 2
This : 1
Contains : 1
Hii : 1

Process finished with exit code 0
|
```

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

```java
import java.util.Scanner;

// Write a program to find the number of occurrences of a character in a string without using loop?
public class Ques3 {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        String str = in.nextLine();
        char ch = in.next().charAt(0);
        Ques3 ques3Obj = new Ques3();
        System.out.println(ques3Obj.occurrance(ch,str, idx: 0, count: 0));
    }

    int occurrance(char ch,String str,int idx,int count){
        if(idx==str.length()){
            return count;
        } else{
            count += str.charAt(idx) == ch ? 1 : 0;
            return occurrance(ch,str, idx: idx+1,count);
        }
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
abababaaaaca
b
3

Process finished with exit code 0
```

Question: 4:

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

```java
import java.util.Scanner;

// Calculate the number & Percentage Of Lowercase Letters,Uppercase Letters, Digits And Other Special Characters In A String
public class Ques4 {
    public static void main(String[] args) {
        String[] constants = {"UpperCase","Lowercase","Digits","SpecialChars"};
        int[] hash = {0,0,0,0};
        Scanner in =  new Scanner(System.in);
        String str = in.nextLine();
        int total;
        for (char c : str.toCharArray()) {
            hash[0] += Character.isUpperCase(c) ? 1:0;
            hash[1] += Character.isLowerCase(c) ? 1:0;
            hash[2] += Character.isDigit(c) ? 1:0;
            if(!Character.isDigit(c) && !Character.isUpperCase(c) && !Character.isLowerCase(c)){
                hash[3] += 1;
            }
        }
        for(int i=0;i<hash.length;i++){
            float percentage = ((float) hash[i]/str.length())*100;
            System.out.println("{" + constants[i]+" => Number: "+hash[i]+", Percentage => "+percentage+"}");
        }
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
HelloWorld1234$%*&
{UpperCase => Number: 2, Percentage => 11.111112}
{Lowercase => Number: 8, Percentage => 44.444447}
{Digits => Number: 4, Percentage => 22.222223}
{SpecialChars => Number: 4, Percentage => 22.222223}

Process finished with exit code 0
```

Question: 5:
Find common elements between two arrays.

```java
import java.util.Scanner;
import java.util.HashMap;
public class Ques5 {

    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        HashMap<String,Boolean> hash = new HashMap<>();
        HashMap<String,String> hashTwo = new HashMap<>();
        String[] listOne,listTwo;
        System.out.print("Enter Integer Elements for ListOne (Space Separated): ");
        listOne = in.nextLine().split( regex: " ");
        System.out.print("Enter Integer Elements for ListTwo (Space Separated): ");
        listTwo = in.nextLine().split( regex: " ");
        for (String s : listOne) {
            hash.put(s,true);
        }
        for (String s : listTwo) {
            if(hash.containsKey(s)){
                hashTwo.put(s,s);
            }
        }
        for (Object value : hashTwo.values()) {
            System.out.print(value+" ");
        }
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Enter Integer Elements for ListOne (Space Separated): 1 2 3 4 5 6 7 8 9
Enter Integer Elements for ListTwo (Space Separated): 2 12 4 19 0
2 4
Process finished with exit code 0
```

Question: 6:
There is an array with every element repeated twice except one. Find that element

```java
import java.util.HashMap;
import java.util.Scanner;

public class Ques6 {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        HashMap<String,Integer> hash= new HashMap<>();
        System.out.println("Enter Values Space Separated");
        String[] arr = in.nextLine().split( regex: " ");
        for (String s : arr) {
            if (hash.containsKey(s)) {
                hash.put(s,hash.get(s) + 1);
            } else {
                hash.put(s, 1);
            }
        }

        for (Object o : hash.keySet()) {
            int val = hash.get(o);
            if (val == 1) {
                System.out.println(o);
                break;
            }
        }
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Enter Values Space Separated
1 2 3 1 3 4 5 5 4
2

Process finished with exit code 0
```

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

```java
import java.util.Scanner;

public class Ques7 {
    static String Firstname = "Ankit";
    static String Lastname = "Kumar";
    static int age = 21;

    static{
        System.out.println("Using Static Block " + Firstname + " " + Lastname + " " + age);
    }

    static void printUsingStatic(){
        System.out.println("Using Static Method " + Firstname + " " + Lastname + " " + age);
    }

    public static void main(String[] args) {
        System.out.println("Using Static Variable " + Firstname + " " + Lastname + " " + age);
        printUsingStatic();
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Using Static Block Ankit Kumar 21
Using Static Variable Ankit Kumar 21
Using Static Method Ankit Kumar 21

Process finished with exit code 0
```

Question: 8:
Write a program to reverse a string and remove character from index 4 to index 9 from the reversed string using String Buffer

```java
import java.util.Scanner;

public class Ques8 {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        StringBuffer str = new StringBuffer(in.nextLine());
        System.out.println(str);
        str = str.reverse();
        System.out.println(str);
        try {
            str = str.delete(4, 9);
            System.out.println(str);
        } catch (Exception e){
            System.out.print(e);
        }
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
AnkitKumar3997
AnkitKumar3997
7993ramuKtiknA
7993tiknA

Process finished with exit code 0
```

Question: 9:

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

```java
class Ques9 {
    enum House {
        H1( value: 100000000),H2( value: 200000000),H3( value: 400000000);

        private int value;
        House(int value){
            this.value = value;
        }

        int getPrice(){
            return this.value;
        }
    }

    public static void main(String[] args) {
        for (House value : House.values()) {
            System.out.println(value.getPrice());
        }
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
100000000
200000000
400000000

Process finished with exit code 0
```

Question: 10:

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

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

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

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

    String concat(String a,String b) { return a+b; }

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

    public static void main(String[] args) {
        Ques10 obj = new Ques10();
        System.out.println(obj.add( a: 1, b: 2));
        System.out.println(obj.add( a: 1.5, b: 2.6));
        System.out.println(obj.mul( a: 5, b: 6));
        System.out.println(obj.mul( a: 5.5f, b: 4.5f));
        System.out.println(obj.concat( a: "Hello ", b: "World"));
        System.out.println(obj.concat( a: "J", b: "V", c: "M"));
    }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
3
4.1
30
24.75
Hello World
JVM

Process finished with exit code 0
```

Question: 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

```java
public class Ques11 {
    public static void main(String[] args) {
        Bank bank = new Bank();
        SBI sbi = new SBI();
        BOI boi = new BOI();
        ICICI icici = new ICICI();
        bank.getDetails();
        sbi.getDetails();
        boi.getDetails();
        icici.getDetails();
    }
}

class Bank {
    void getDetails() { System.out.println("Rate of Intrest: 7%"); }
}

class SBI extends Bank{
    void getDetails() { System.out.println("SBI Rate of Intrest: 8%"); }
}

class BOI extends Bank{
    void getDetails() { System.out.println("BOI Rate of Intrest: 9%"); }
}

class ICICI extends Bank{
    void getDetails() { System.out.println("ICICI Rate of Intrest: 10%"); }
}
```

```
/home/ankit/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Rate of Intrest: 7%
SBI Rate of Intrest: 8%
BOI Rate of Intrest: 9%
ICICI Rate of Intrest: 10%

Process finished with exit code 0
```