Practical-1

Aim: **Write a program to convert rupees to dollar. 60 rupees=1 dollar.**

```java
class r2d {
        float rs,dollar;
        void convert(float rs){
                dollar = rs/60;
                System.out.println("Dollar is " +dollar);
}
}
class d2r {
        float rs,dollar;
        void convert(float dollar){
                rs = dollar * 60;
                System.out.println("Rs is " +rs);
}
}

class conversion {
        public static void main(String args[]){
                r2d r = new r2d();
                d2r d = new d2r();
                r.convert(120);
                d.convert(2);
                }
}
```

```
E:\160410116133\2150704-java-practicals-master\practical 1>javac conversion.java

E:\160410116133\2150704-java-practicals-master\practical 1>java conversion
Dollar is 2.0
Rs is 120.0
```

Aim: Write a program that calculates percentage marks of the student if marks of 6 subjects are given.

```java
import java.util.*;
class inpt
{
        float s1[]= new float [6];
        float n,sum=0;
        void inp()
{

        Scanner value= new Scanner(System.in);
        System.out.println("No of Subjects you want to enter marks for:");
        n=value.nextFloat();
        if(n!=6)
        {
        System.out.println("ERROR");
        }
        else
        {
        System.out.println("Enter Marks of Subjects:");
        for(int i=0;i<n;i++)
        {
        s1[i]=value.nextFloat();
        }
        }
}
        void marks()
        {
        float sum=0,per;
        for(int i=0;i<6;i++)
        {
        sum=sum+s1[i];
        }
        per=sum/6;
        System.out.println("Percent=" +per);
        }
}
class abc
{
        public static void main(String args[])
        {
        float a;
        inpt ABC= new inpt();
        ABC.inp();
```

```
        ABC.marks();
}
}
```

```
E:\160410116133\2150704-java-practicals-master\practical 1>javac abc.java

E:\160410116133\2150704-java-practicals-master\practical 1>java abc
No of Subjects you want to enter marks for:
6
Enter Marks of Subjects:
89
78
67
90
81
60
Percent=77.5
```

Practical-2

Aim: Write a program to find length of string and print second half of the string

```java
import java.util.*;
class input{
        public static void main(String args[]){
                int i;
                String a;
                Scanner AB = new Scanner(System.in);
                a = AB.nextLine();
                int l = a.length();
                char def[] = new char[a.length()];
                System.out.println("Length is = " +l);
                System.out.println("Half of string is :" +a.substring(l/2));
                a.getChars(0, a.length(),def,0);
                for(i=a.length()/2;i<a.length();i++){
                System.out.print(" "+def[i]);
}
char x[] = a.toCharArray();
for(i=x.length/2;i<x.length;i++){
                System.out.println(" "+x[i]);
}
}
}
```

```
E:\160410116133\2150704-java-practicals-master\practical 2>javac input.java

E:\160410116133\2150704-java-practicals-master\practical 2>java input
Hello World
 Hello World
 Hello World
Length is = 11
Half of string is : World
   W o r l d
W
o
r
l
d
```

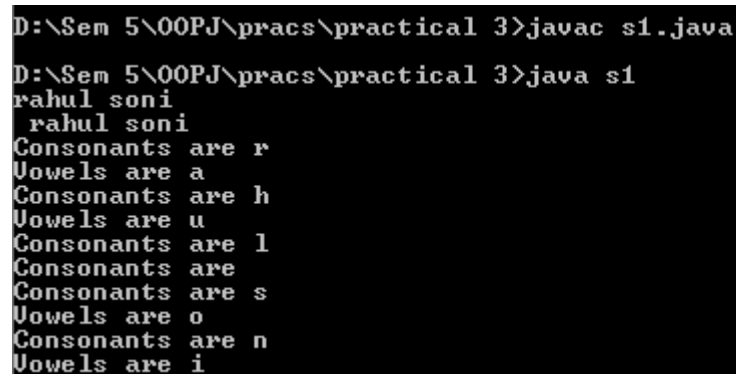**Aim: Write a program to enter two numbers and perform mathematical operations on them.**

```java
import java.util.*;
public class Cla
{
public static void main(String[] args)
{
int a,b;
float res;
Scanner scan=new Scanner(System.in);
System.out.print("enter the value of a");
a=scan.nextInt();
System.out.println("enter the value of b");
b=scan.nextInt();
res=a+b;
System.out.println("addition=="+res);
res=a-b;
System.out.println("subtraction=="+res);
res=a*b;
System.out.println("multiplication=="+res);
res=(float)a/(float)b;
System.out.println("division=="+res);
}
}
```

```
E:\160410116133\2150704-java-practicals-master\practical 2>javac Cla.java

E:\160410116133\2150704-java-practicals-master\practical 2>java Cla
enter the value of a20
enter the value of b
10
addition==30.0
subtraction==10.0
multiplication==200.0
division==2.0
```

Practical-3

Aim: Write a program to accept a line and check how many consonants and vowels are there in line

```
import java.util.*;
class s1{
        public static void main(String args[]){
                int i;
                String a;
                Scanner AB = new Scanner(System.in);
                a = AB.nextLine();
                System.out.println(" " +a);
                for(i=0;i<a.length();i++){
                if(a.charAt(i)=='a' || a.charAt(i) == 'e'|| a.charAt(i) == 'i'|| a.charAt(i) == 'o'||
a.charAt(i) == 'u'|| a.charAt(i) == 'A'|| a.charAt(i) == 'E'|| a.charAt(i) == 'I'|| a.charAt(i) ==
'O'|| a.charAt(i) == 'U'){
                        System.out.println("Vowels are " +a.charAt(i));
}
                else{
                        System.out.println("Consonants are " +a.charAt(i));
}
}
}
}
```

```
D:\Sem 5\OOPJ\pracs\practical 3>javac s1.java

D:\Sem 5\OOPJ\pracs\practical 3>java s1
rahul soni
 rahul soni
Consonants are r
Vowels are a
Consonants are h
Vowels are u
Consonants are l
Consonants are
Consonants are s
Vowels are o
Consonants are n
Vowels are i
```

Aim: Write a program to count the number of words that start with capital letters

```
import java.util.*;
class r1{
        public static void main(String args[]){
                int i,word=0,space=0;
                String a;
                Scanner AB = new Scanner(System.in);
                a = AB.nextLine();
                System.out.println(" " +a);
                for(i=0;i<a.length();i++){
                        char ch = a.charAt(i);
                                if(ch == 32){
                                        space++;
}

                                if (Character.isUpperCase(ch)
            && (i == 0 || Character.isWhitespace(a.charAt(i - 1)))) {
        word++;
}

                        }
                System.out.println("Total capital words" +word);
                System.out.println("Total spaces" +space);
}
}
```

```
D:\Sem 5\OOPJ\pracs\practical 3>javac r1.java

D:\Sem 5\OOPJ\pracs\practical 3>java r1
hEllo This iS a New WOrld
 hEllo This iS a New WOrld
Total capital words3
Total spaces5
```

Practical-4

Aim: Write a program to find that given number or string is palindrome or not.

```java
import java.util.*;
class input{
        String name = "";
        void set(String a){
                name = a;
        }
        void get(){
                System.out.println(" " +name);
        }
}
class palindrome {
                public static void main(String args[]){
                String s1,s2;
                int i;
                input a1 = new input();
                Scanner AB = new Scanner(System.in);
                s1 = AB.nextLine();
                a1.set(s1);
                a1.get();
                s2 = "";
                for(i=s1.length()-1;i>=0;i--){
                        s2 = s2+s1.charAt(i);
        }
                if(s2.equalsIgnoreCase(s1)){
                        System.out.println("Palindrome");
        }
                else{
                        System.out.println("Not Palindrome");
        }
        }
}
```

```
E:\160410116133\2150704-java-practicals-master\practical 4>javac palindrome.java

E:\160410116133\2150704-java-practicals-master\practical 4>java palindrome
hannah
 hannah
Palindrome

E:\160410116133\2150704-java-practicals-master\practical 4>java palindrome
rahul
 rahul
Not Palindrome
```

Aim: Create a class which asks the user to enter a sentence, and it should display count of each vowel type in the sentence. The program should continue till user enters a word "quit". Display the total count of each vowel for all sentences.

```java
import java.util.*;
class quit{
        public static void main(String args[]){
                String s1,s2;
                int i,count=0;
                Scanner AB = new Scanner(System.in);
                s1 = AB.nextLine();
                while(AB.hasNext()){
                        s2 = AB.nextLine();
                if(s2.equalsIgnoreCase("quit"))
                break;
                s1 = s1+s2;
}

                System.out.println("Ans: " +s1);
                for(i=0;i<s1.length();i++){
                if(s1.charAt(i)=='a' || s1.charAt(i) == 'e'|| s1.charAt(i) == 'i'|| s1.charAt(i) ==
'o'|| s1.charAt(i) == 'u'|| s1.charAt(i) == 'A'|| s1.charAt(i) == 'E'|| s1.charAt(i) == 'I'||
s1.charAt(i) == 'O'|| s1.charAt(i) == 'U'){
                        count++;
}
}
                System.out.println("Number of vowels " +count);
}
}
```

```
E:\160410116133\2150704-java-practicals-master\practical 4>javac quit.java

E:\160410116133\2150704-java-practicals-master\practical 4>java quit
hello this a new world
quit
Ans: hello this a new world
Number of vowels 6

E:\160410116133\2150704-java-practicals-master\practical 4>java quit
hello this is a new world
quit
Ans: hello this is a new world
Number of vowels 7
```

Practical-5

Aim: Write an interactive program to print a string entered in a pyramid form. For instance, the string "stream" has to be displayed as follows:

<div align="center">

S

S t

S t r

S t r e

S t r e a

S t r e a m

</div>

```
import java.util.*;
class pattern{
        public static void main(String args[]){
                String s1,s2="";
                int i,j,k=50;
                Scanner AB = new Scanner(System.in);
                s1 = AB.nextLine();
                for(i=0;i<s1.length();i++){
                        for(j=0;j<k;j++){
                                System.out.print(" ");
}

                        k=k-1;
                        for(j=0;j!=i+1;j++){
                                System.out.print(" "+s1.charAt(j));
}

                        System.out.println();
}
}
}
```

```
E:\160410116133\2150704-java-practicals-master\practical 5>javac pattern.java

E:\160410116133\2150704-java-practicals-master\practical 5>java pattern
stream
                              s
                             s t
                            s t r
                           s t r e
                          s t r e a
                         s t r e a m
```

Aim: **Write an interactive program to print a diamond shape. For example, if user enters the number 3, the diamond will be as follows:**

```
          *
        *  *
      *  *  *
        *  *
          *
```

```java
import java.util.*;
class pattern2{
        public static void main(String args[]){
                String s1,s2="";
                int i,j,k=50;
                Scanner AB = new Scanner(System.in);
                s1 = AB.nextLine();
                for(i=0;i<s1.length();i++){
                        for(j=0;j<k;j++){
                                System.out.print(" ");
}

                        k=k-1;
                        for(j=0;j!=i+1;j++){
                                System.out.print(" "+s1.charAt(j));
}

                        System.out.println();
}
k=52-s1.length();
                for(i=s1.length();i!=0;i--){
                        for(j=0;j!=k;j++){
                                System.out.print(" ");
}

                        k=k+1;
                        for(j=i-1;j!=0;j--){
                                System.out.print(" "+s1.charAt(j));
}

                        System.out.println();
}
}
}
```

```
E:\160410116133\2150704-java-practicals-master\practical 5>javac pattern2.java

E:\160410116133\2150704-java-practicals-master\practical 5>java pattern2
***
                                                        *
                                                      *  *
                                                    *  *  *
                                                      *  *
                                                        *
```