Practical-1

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

```
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.

```
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();
}
}
```

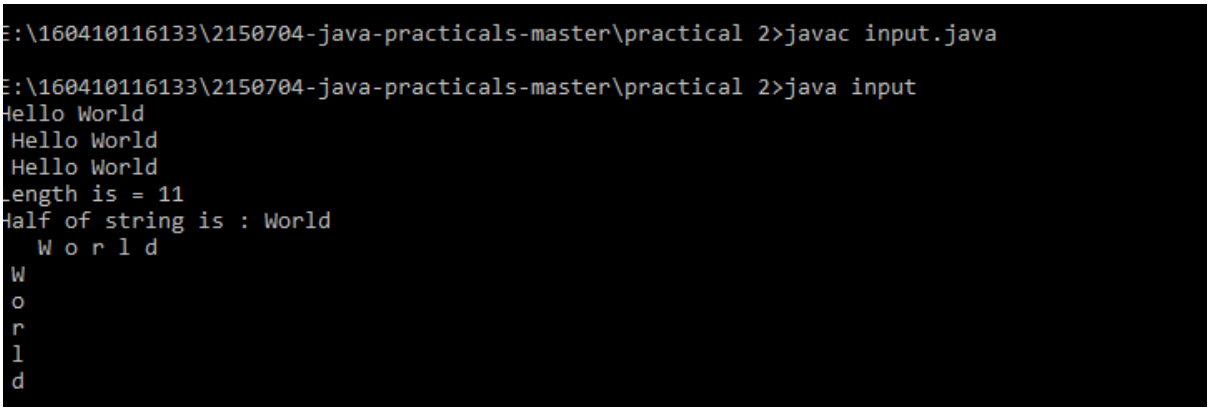
```
E:\160410116133\2150704-java-practicals-master\practical 1>javac abc.java

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 enter two numbers and perform mathematical operations on them.

```
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]);
}
}
}
```



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

```
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.

```
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.

```
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:

S
S t
S t r
S t r e
S t r e a
S t r e a m

```
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:

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

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