

1) class helloworld {
 public static void main(String [] args) {
 System.out.println("Hello World!");
 }
}

O/P: Hello World!

2) class rectangleArea {
 public static void main(String [] args) {
 int length, Breadth;
 length = Integer.parseInt(args[0]);
 Breadth = Integer.parseInt(args[1]);
 int Area = length * Breadth;
 System.out.println("Length = " + length);
 System.out.println("Breadth = " + Breadth);
 System.out.println("Area = " + Area);
 }
}

O/P:
Length = 10
Breadth = 5
Area = 50

3) Enter the coefficients of a, b, c:

6. import java.util.*;

class palindrome

{

public static void main(String[] args)

{

int n, t, sum, rev = 0;

Scanner s = new Scanner(System.in);

System.out.println("Enter a 5 digit number");

n = s.nextInt();

t = n;

while (t > 0)

{

sum = t % 10;

rev = rev * 10 + sum;

t = t / 10;

}

if (rev == n)

{

System.out.println("It is a palindrome");

else

System.out.println("It is not a palindrome");

8

P: Enter a 5 digit number:

12321

It is a palindrome.

```
4) import java.util.*;  
  
class factorial  
{  
    public static void main (String [ ] args)  
    {  
        int fac = 1;  
        System.out.println ("Enter a number");  
        Scanner s = new Scanner (System.in);  
        int n = s.nextInt();  
        for (int i=1; i<=n; i++)  
        {  
            fac = fac * i;  
        }  
        System.out.println ("The factorial is " + fac);  
    }  
}
```

o/p: Enter a number.
5
The factorial is 120

```
5) class Array  
{  
    public static void main (String [ ] args)  
    {  
        int month [] = {31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31};  
        System.out.println ("April has " + month [3] + " days");  
    }  
}
```

o/p: April has 30 days.

LAB - 1 PROGRAM:

// Quadratic Equation.

```
import java.util.*;  
class Quadratic  
{  
    int a, b, c;  
    double m1, m2, d;  
    void getd()  
    {  
        Scanner s = new Scanner(System.in);  
        System.out.println("Enter the value of a, b & c");  
        a = s.nextInt();  
        b = s.nextInt();  
        c = s.nextInt();  
    }  
    void compute()  
    {  
        while(d == 0)  
        {  
            System.out.println("Not a quadratic function");  
            System.out.println("Enter a value of a > 0");  
            a = s.nextInt();  
        }  
        Scanner s = new Scanner(System.in);  
        a = s.nextInt();  
        d = b*b - 4*a*c;  
        if(d == 0)  
        {  
            m1 = (-b) / (2*a);  
            System.out.println("Roots are real & equal");  
            System.out.println("mroot1 = mroot2 = " + m1);  
        }  
        else if(d > 0)  
        {  
            // calculate m1 and m2  
        }  
    }  
}
```

```
n1 = ((-b)+(Math.sqrt(d)))/(double)(2*a);
```

```
n2 = ((-b)-(Math.sqrt(d)))/(double)(2*a);
```

```
System.out.println("roots are real & distinct");
```

```
System.out.println("root1=" + n1 + "root2=" + n2);
```

}

```
else if(d<0)
```

{

```
System.out.println("roots are imaginary");
```

```
n1 = (-b)/(2*a);
```

```
n2 = Math.sqrt(-d)/(2*a);
```

```
System.out.println("root1=" + n1 + "+i" + n2);
```

```
System.out.println("root2=" + n1 + "-i" + n2);
```

}

}

```
class QuadraticMain
```

{

```
public static void main(String[] args) {
```

{

```
Quadratic q = new Quadratic();
```

```
q.getd();
```

```
q.compute();
```

```
System.out.println("IBM22CS214, Raghavendra R");
```

}

}

Output:

Enter the coefficient of a,b,c:

1 2 1

roots are real & equal.

root1 = root2 = -1.0.

ii) Enter the values of a, b & c:

2 4 5.

roots are imaginary

$$\text{root}_1 = -1.0 + i1.224744871391589$$

$$\text{root}_2 = -1.0 - i1.224744871391589$$

iii) Enter the values of a, b & c:

-1 4 1

roots are real & distinct.

$$\text{root}_1 = -0.2679491924311228$$

$$\text{root}_2 = -3.732050807568877$$

iv) Enter the values of a, b & c:

0 2 1

Not a quadratic function

Enter a value of a ≠ 0.

1

roots are real & equal

$$\text{root}_1 = \text{root}_2 = -1.0$$

1BM22CS214, Raghavendra.R