LRA 12-12-23

Page No.
Date 12 | 12 | 23

OOJ:-

1)
```
import java.util.*
class demo
{
    public static void main (String args[])
    {
        System.out.println("Hello World\n");
    }
}
```

Output:-
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 of rectangle =" + length);
System.out.println("breath of rectangle =" + breadth);
System.out.println("area of rectangle =" + area);
System.out.println("Ranisha 1BM22CS218");
}
}
```

Output:-
javac RectangleArea.java
java RectangleArea 10 5
length of rectangle = 10
breadth of rectangle = 5
area of rectangle = 50
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3) Factorial:-

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

Output:-

Enter a number:
6
The factorial is:
720.
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4) Palindrome:-

```
import java.util.*;
class palyndrome {
public static void main (String args[])
{
    int n, t, rem, rev=0;
    Scanner sc = new Scanner (System.in)
```

Page No.
Date

```
System.out.println("Enter a 5 digits number:");
n=sc.nextInt();
t=n;
while(t>0){
rem=t%10;
rev=rev*10+rem;
t=t/10;
}
if(rev==n){
System.out.println("Palindrome");
}
else{
system.out.println("not palindrome");
}
}
}
```

Output :-

Enter a 5 digit number:
12345
not palindrome.

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5) Quadratic :-

```
import java.util.Scanner;
class Quadratic
{
    int a, b, c;
    double r1, r2, d;
    void getcd ()
    {
        Scanner s = new Scanner (System.in);
        System.out.println ("Enter the coefficients of a, b, c ");
        a = s.nextInt ();
        b = s.nextInt ();
        c = s.nextInt ();
    }
void compute ()
    {
    while (a == 0)
    {
        System.out.println ("Not a quadratic equation ");
        System.out.println ("Enter a non zero value for a :");
        Scanner s = new Scanner (System.in );
        a = s.nextInt ();
    }
d = b * b - 4 * a * c;
if (d == 0)
{
    r1 = (-b) / (2 * a);
    System.out.println ("Roots are real and equal ");
    System.out.println ("Root 1 = Root 2 = " + r1);
}
```

```
else if (d > 0)
{
    r1 = ((-b) + (Math.sqrt(d))) / (double)(2*a);
    r2 = ((-b) - (Math.sqrt(d))) / (double)(2*a);
    System.out.println("Roots are real and distinct");
    System.out.println("Root 1 = " + r1 + " Root 2 = " + r2);
}

else if(d < 0)
{
    System.out.println("Roots are imaginary");
    r1 = (-b) / (2*a);
    r2 = Math.sqrt(-d) / (2*a);
    System.out.println("Root1" = +r1+ "+i" +r2);
    System.out.println("Root1" = +r1+ "-i" +r2);
}

}
}

class QuadraticMain
{
    public static void main(String args[])
    {
        Quadratic q = new Quadratic();
        q.getd();
        q.compute();
    }
}
```

Page No.
Date

Output :- Ramsha 1BM22CS218

Enter coefficient of a, b, c
1 5 6

Roots are imaginary
Root 1 = 0.0 + i 1.053268721
Root 2 = 0.0 - i 1.053268721

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Enter coefficient of a, b, c
1 -2 1

Roots are real and equal
Root 1 = Root 2 = 1.0

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Enter coefficient of a, b, c
1 -3 2

Root are real and distinct
Root 1 = 2.0 Root 2 = 1.0