

EXP No: 16

Write a Program to Convert Decimal number Equivalent to Binary number and octal number. The output values should verify using white box testing?

AIM:- To Convert the decimal numbers to its equivalent binary number and octal number and the output value verified.

```
Import Static org.junit.Assert.*; true;
```

```
Import java.util.*; Scanner;
```

```
class binary
```

```
{
```

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

```
    { Scanner in = new Scanner(System.in);
```

```
      int decimal = in.nextInt();
```

```
      String binary = Integer.toBinaryString(decimal);
```

```
      System.out.println("Binary is " + binary);
```

```
      System.out.print("Octal is ");
```

```
      System.out.println(Integer.toOctalString(decimal));
```

```
      Assert.assertTrue(decimal == decimal);
```

```
    }
```

```
}
```

EXP NO: 17

write a java program to convert a given number of days in terms of years, weeks & days. The output values should verify using white box testing:

```
import static org.junit.Assert.assertTrue;
```

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

```
public class : year
```

```
{
```

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

```
    {
        int m, year, week, day;
```

```
        Scanner s = new Scanner (System.in);
```

```
        System.out.print ("Enter the number of days:");
```

```
        m = s.nextInt();
```

```
        year = m / 365;
```

```
        assertTrue (2 == year);
```

```
        m = m % 365;
```

```
        System.out.println ("No. of years: " + year);
```

```
        week = m / 7;
```

```
        m = m % 7;
```

```
        System.out.println ("No. of weeks: " + week);
```

```
        day = m;
```

```
        System.out.println ("No. of days: " + day);
    }
```

```
}
```


Find the factorial of n ? The output values should verify using white box testing?

```

import static org.junit.Assert.*;
import java.util.Scanner;

class factorial
{
    public static void main(String[] args)
    {
        int i, j, pr = 1;
        try
        {
            Scanner s = new Scanner(System.in);
            System.out.println("Enter the number to find the factorial");
            int n = s.nextInt();
            if (n < 0)
            {
                System.out.println("invalid");
            }
            else if (n == 0)
            {
                System.out.println("1");
            }
            else
            {
                for (i = n; i > 0; i--)
                {
                    pr = pr * i;
                }
                System.out.println("The answer is: " + pr);
                Assert.assertTrue(120 == pr);
            }
        }
        catch (Exception e)
        {
            System.out.println("Invalid");
        }
    }
}

```

Find the year of the given date is leap year or not. The output values should verify using white box testing?

```
import static org.junit.Assert.*;
import java.util.Scanner;
```

```
class leap year
```

```
{
```

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

```
    {
        int i = 0;
```

```
        System.out.println("Enter the date /month/year");
```

```
        Scanner s = new Scanner (System.in);
```

```
        String re = s.next ();
```

```
        String [] r = re.split ("/", 3);
```

```
        int x = Integer.parseInt (r[2]);
```

```
        assert True (x == 2000);
```

```
        if (x % 4 == 0)
```

```
        {
            System.out.println("It is an leap year");
```

```
        }
        else {
```

```
            System.out.println("It is not a leap year");
```

```
        }
    }
}
```


Write a program to find the Square, cube of the given decimal number. The output values should verify.

```

import static org.junit.Assert.*;
import java.util.Scanner;

public class Cube Square {

    public static void main (String[] args) {
        try {
            Scanner S = new Scanner (System.in);
            System.out.println("Enter a number");
            double n = S.nextDouble();
            double a = 0, b = 0;
            a = n * n;
            b = n * n * n;
            System.out.println("The Square of number = " + a);
            System.out.println("The Cube of number = " + b);
        } catch (Exception e) {
            System.out.println("Invalid");
        }
        Assert.True (expected output == a);
        Assert.True (expected output == b);
    }
}

```