EXP: NO: 16

Write program to convert decimal number equivalent to binary number and octal numbers. the out put values should verify using white box testing?

AIM: TO convert the decimal number to its equivalent binary number and octal number and output.

```
import static org.junit.Assat.assertTrue;
import java.util.Scanna;
Class binary{
  {
    public static void main(String[]args)
    {Scanner in = new Scanner(System.in);
    int decimal = in.nextline();
    String binary = Integer.toBinaryString(decimal);
    system.out.println("Binary is "+binary);
    System.out.println(Integer.toOctalString(decimal));
    assertTrue(14 = decimal);
    }
  }
```

output:

```
14
Binary is 1110
Octal is 16
```

Exp no:14.

Write Java program to convert a given number of days in terms of years, weeks, days.

Aim:

```
import static org.junit.Assert.assertTrue;
import java.util.Scanner;
public class year
{
    public static void main(String args[])
    int n, year, week, day;
    Scanner s = new Scanner(System.in);
    System.out.println("Enter no of days");
    n = s.nextline();
    year = n / 365;
    assertTrue(2 == year);
    n = n % 365;
    System.out.println("No of weeks:"+week);
    }
```

output:

Enter the number of days : 800

No. of years : 2

no. of weeks : 10

no. of days : 0.

EXP NO: 18

Find factorial of n and verify using white box testing.

```
import static org.junit.Assert.assertTrue;
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 a number to find factorial");
 int n=s.nextInt();
 if (n<0)
 {
  System.out.println("invalid");
 }
  else if (n==0)
 {
  System.out.print(1);
 }
  else
  {
   for(i=n; i>0; i--)
   {
   pr = pr *i;
  assertTrue(120 ==pr);
  }
  }
  Catch (Exception e)
  {
    System.out.println("invalid");
  }
  }
  }
```

EXP.NO:19.

Find year of given date is leap year or not.

```
import static org.junit.Assert.assertTrue;
import java.util.Scanner;
class leapyear;
{
  public static void main(String[] args)
  {
   int i=0;
  System.out.println("Enter date/mat/year");
  Scanner s=new Scanner(System.in);
  String rc =s.next();
   int x=Integer.parseInt(rc);
   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 years");
   }
  }
  }
```

EXP. NO: 20

write a program to find the square, cube of the given decimal number.

```
import static org.junit.Assert.assertTrue;
import java.util.Scanner;
public Class Cube Square {
public static void main(String[] args)
{
 public static void main ()
 {
 try {
Scanner sqrcu= Scanner (System.in);
System.out.println("Enter a number");
double  a=0; b=0;
 a = n*n;
 b = n*n*n;
System.out.println("The square of number :"+a);
}
 Catch (Exception e)
 {
System.out.println("invalid");
}
}
 assertTrue (expected output : a);
 assertTrue (expected output = b);
}
```