JAVA BASIC PROGRAMS

CLASS AND OBJECTS:

```
class Rectangle
{
   int length,width;

   void  getDetails(int x,int y){
      length=x;
      width=y;
   }
   int area(){
      int a=length*width;
      return a;
   }
}
public class Main
{
        public static void main(String[] args) {
           Rectangle o1=new Rectangle();
           o1.length=15;
           o1.width=20;
           System.out.println(o1.area());
```

```
        }
}
// FACTORIAL:
import java.util.Scanner;
public class Main
{
  public static void main (String[]args)
  {
    System.out.println("enter your number");
    Scanner sc=new Scanner(System.in);
    int n,fact=1;
    n=sc.nextInt();
    for(int i=1;i<=n;i++)
    {
        fact=fact*i;

    }
    System.out.println(fact);

  }
}
//PROGRAMS USING METHODS IN JAVA:
/POWER:
class Sakthi{
    public static int power(int base,int power){
        int result=1;
        for(int i=1;i<=power;i++)
```

```
        {
            result=result*base;
        }
        return result;
    }
}
public class Main
{
        public static void main(String[] args) {
                System.out.println("power: " +Sakthi.power(2,4));
        }
}

//CONVERT DECIMAL TO BINARY:
import java.util.Scanner;
public class Main {
    public static void D2B(int n){
        int [] binarynum=new int[100];
        int i=0;
        while(n>0) //12>0  6>0 3>0 1>0
        {
            binarynum[i]=n%2; //i=0  i=0 i=1 i=1
            n=n/2;// 6 3 1 0
            i++;// 1 2 3 4
        }
        for(int j=i-1;j>=0;j--)
        System.out.print(binarynum[j]);
```

```
    }

public static void main(String[] args)
{
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter the Decimal Number:");
    int n=sc.nextInt(); //12
    System.out.println("Decimal is:"+n); //12
    System.out.print("Binary is:" ); //
    D2B(n);
}
}

//CONVERT BINARY TO DECIMAL:
public class Main {
    public static int  B2D(int binary){
        int dec=0,power=0;
        while(binary!=0)
        {
            int rem=binary%10;
            dec +=rem*Math.pow(2,power);
            binary=binary/10;
            power++;
        }
        return dec;
    }
    public static void main(String[] args){
```

```
        System.out.println("decimal is: " +Main.B2D(1100));


}
}
```