1.BUTTERFULY STAR

```
package task1;
import java.util.*;
public class Butterfly {

        public static void main(String[] args) {
         int i,j;
         int n=5;
    for (i = 3; i <n; i++) {
          for (j = 1; j <= i; j++) {
                System.out.print("*"); }
               int spaces = 2 * (n - i);
          for (j = 1; j <= spaces; j++) {
                 System.out.print(" "); }
          for (j = 1; j <= i; j++) {
                  System.out.print("*");}
                  System.out.println();
                }
          for (i = n; i >=1; i--) {
                for (j = 1; j <= i; j++) {
                   System.out.print("*");  }
                int spaces = 2 * (n - i);
          for (j = 1; j <= spaces; j++) {
                   System.out.print(" "); }
          for (j = 1; j <= i; j++) {
                   System.out.print("*");}
                   System.out.println();
                  }
        }
}
```

OUTPUT:

```
***      ***
****    ****
**********
****    ****
***      ***
**        **
*          *
```

2.PRONIC NUMBER

```
package task1;
import java.util.Scanner;
public class Pronic {
        public static void pronic() {
                int n;
       boolean flag=false;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter number:");
        n = sc.nextInt();
        for(int i=0; i < n; i++)
        {
           if(i*(i+1) == n)//0*(0+1)==6,1*(1+1)==6
           {
              flag =true;
              break;
           }
        }
        if(flag)
        {
           System.out.println("Pronic Number");

        }
        else if(!flag)
        {
           System.out.println("Not Pronic Number");
```

```
    }
    }


     public static void main(String[] args) {
            Pronic.pronic();

     }

}
```

OUTPUT:

Enter number:20
Pronic Number