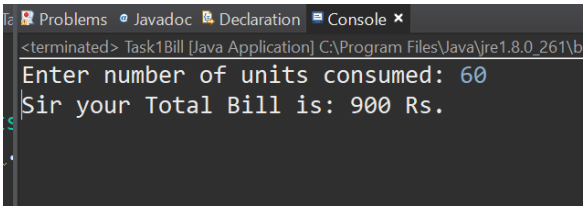
Task 1: Develop a java program for calculating the total electricity bill when a user enters the number of units consumed. For the calculations of the total bill consider the following tariff:

Number of Units	Price PER unit in Rupees
Initial 50 units	10
50-100	15
101-200	20
201-300	25
301-onwards	30

```
import java.util.Scanner;

public class Task1Bill {

    public static void main(String[] args) {
        int numberOfUnits, totalBill;
        System.out.print("Enter number of units consumed:
");
        numberOfUnits = new Scanner(System.in).nextInt();

        if (numberOfUnits < 50)
            totalBill = numberOfUnits * 10;
        else if (numberOfUnits>= 50 && numberOfUnits <=
100)
            totalBill = numberOfUnits * 15;
        else if (numberOfUnits>= 101 && numberOfUnits <=
200)
            totalBill = numberOfUnits * 20;
        else if (numberOfUnits>= 201 && numberOfUnits <=
300)
            totalBill = numberOfUnits * 25;
        else
```

```
            totalBill = numberOfUnits * 30;

        System.out.println("Sir your Total Bill is:
"+totalBill+" Rs.");
    }

}
```



Task 2: Develop java code that prints following.

```
            *
          * * *
        * * * * *
      * * * * * * *
    * * * * * * * * *
          1
        2 3 2
      3 4 5 4 3
    4 5 6 7 6 5 4
  5 6 7 8 9 8 7 6 5
          *****
          ****
          ***
          **
          *
```

```java
public class Task2Patterns {

    public static void main(String[] args) {
        int n = 5;

        // pattern#1
        for (int i = 0; i < n; i++) {
            for (int j = 0; j <= 2*n-1; j++) {
                if (j>=(n-i)  && j<=(n+i))
                    System.out.print("*");
                else
                    System.out.print(" ");
            }
            System.out.println();
        }
        System.out.println();
        int count=1;  //variable to help in printing
pattern
        // Pattern#2
        for (int i = 0; i < n; i++) {

            for (int j = 0; j <=2*n-1; j++) {
                if (j >= (n - i) && j<=n){
                    System.out.print(" "+(i+count));
                    count++;
                    if (j==n) {  //in last iteration it
is also incremented
                        count--;   //that we don't want
                    }
                }
                else if (j <= (n + i) && j>n){
                    System.out.print(" "+(i+count-1));
                    count--;
                }
                else
                    System.out.print("  ");
            }
            count=1;
            System.out.println();
```

```
            }

            System.out.println();
            ///Pattern#3
            for (int i = n; i >=0; i--) {
                 for (int j = i; j >0; j--) {

                            System.out.print("*");
                 }
                 System.out.println();
            }
       }

}
```

```
<terminated> Task2Patterns [Java Applica
       *
      ***
     *****
    *******
   *********

            1
          2 3 2
        3 4 5 4 3
      4 5 6 7 6 5 4
    5 6 7 8 9 8 7 6 5

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

Task 3: Write a java program that takes the table, starting and ending point of the table and prints the output in the following way:

5x5 = 25

5x6 = 30

5x7 = 35

5x8 = 40

5x9 = 45

5x10 = 50

```
import java.util.Scanner;

public class Task3Table {

    public static void main(String[] args) {
        int startPoint,endPoint;
        System.out.print("Enter starting point of table:
");
        startPoint=new Scanner(System.in).nextInt();

        System.out.print("Enter ending point of table: ");
        endPoint=new Scanner(System.in).nextInt();

        for (int i = startPoint; i <= endPoint; i++) {
            System.out.print("\n"+5+"x"+i+" = "+(5*i));
        }

    }

}
```

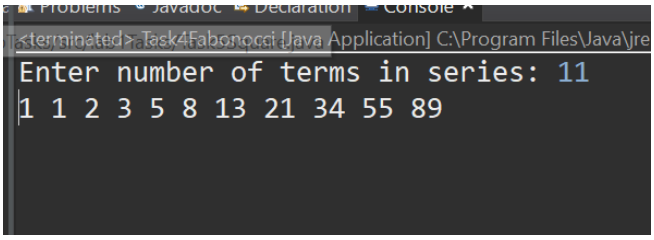
```
<terminated> Task3Table [Java Application] C:\Program Files\Java\jre1.8.0
Enter starting point of table: 6
Enter ending point of table: 11

5x6 = 30
5x7 = 35
5x8 = 40
5x9 = 45
5x10 = 50
5x11 = 55
```

Task 4: Write a program to display first n terms of a Fibonacci series.
Sample Output:

Input number of terms to display : 10
Fibonacci Series: 1 1 2 3 5 8 13 21 34

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

```java
public class Task4Fabonocci {

    public static void main(String[] args) {
        int previousterm = 0, nextTerm = 1, sum = 0;
        int numberOfTerms;
        System.out.print("Enter number of terms in series:
");
        numberOfTerms = new Scanner(System.in).nextInt();

        for (int i = 0; i < numberOfTerms; i++) {
            System.out.print(nextTerm+" ");
            sum=previousterm+nextTerm;
            previousterm=nextTerm;
            nextTerm=sum;
        }
    }

}
```



Task 5: Write a program that calculates the square of a number provided by the user without using any built-in function or the * operator.

```java
import java.util.Scanner;

public class Task5Square {

    public static void main(String[] args) {
        int number,squareOfNumber=0;
        System.out.print("Enter a number to find its
square: ");
        number= new Scanner(System.in).nextInt();
```

```
        if (number<0)  //if number is negative
            number=-number;
        for (int i = 0; i < number; i++) {
            squareOfNumber+=number;
        }
        System.out.println("("+number+")^2 =
"+squareOfNumber);

    }
}
```

```
<terminated> Task5Square [Java Application] C:\Program Files\Java\jre1.8.0_261
Enter a number to find its square: 7
(7)^2 = 49
```