

**CSEP**  
**Computer Science and Elements of Programming**

**Java Lab 5 –Iteration Statements**

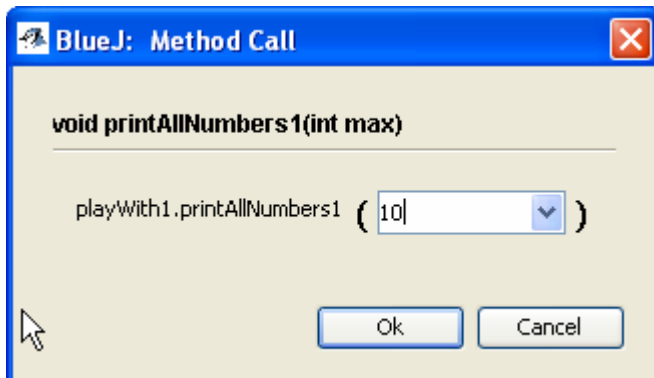
**1. Getting Started**

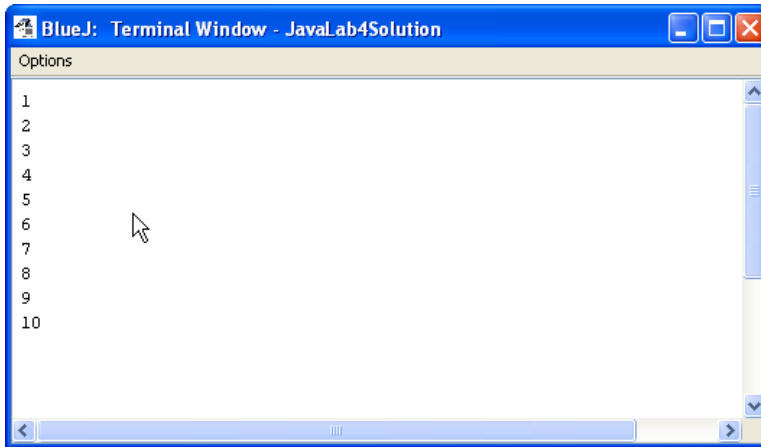
- Launch BlueJ  
**Start -> All Programs -> BlueJ -> BlueJ**
- Create a new project  
**Project -> New Project**  
Enter the name of the project: **JavaLab5**
- Press button **new Class ....**  
Enter the name of the class: **PlayWithLoop**
- Open Editor for PlayWithLoop class  
**right-click on PlayWithLoop class -> Open Editor**
- Add the **main()** method

**2. A Simple Loop with “for”**

- Add and define the following method:  

```
public static void printAllNumbers1(int max)
```
- This method prints all numbers between 1 and max on the terminal window. Use a “for” statement for realising this method.
- Invoke this method several times from the **main()** method using different input values.





### 3. A Simple Loop with “while”

- Add and define the following method:

```
public static void printAllNumbers2(int max)
```

- This method prints all numbers between 1 and max on the terminal window. Use a “while” statement for realising this method.
- Invoke this method several times from the **main()** method using different input values.

### 4. A Simple Loop with “do-while”

- Add and define the following method:

```
public static void printAllNumbers3(int max)
```

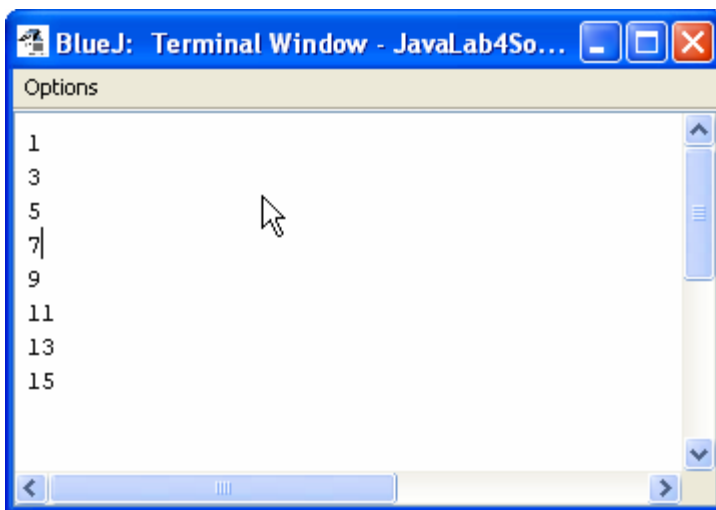
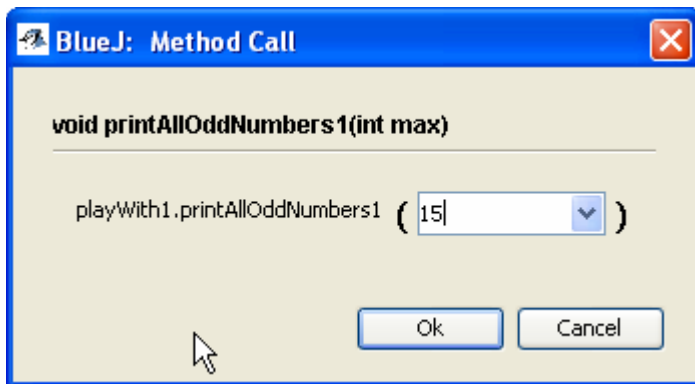
- This method prints all numbers between 1 and max on the terminal window. Use a “do-while” statement for realising this method.
- Invoke this method several times from the **main()** method using different input values.

### 5. Odd Numbers with “for”

- Add and define the following method:

```
public static void printAllOddNumbers1(int max)
```

- This method prints on the terminal window all odd numbers between 1 and max. Use a “for” for realising this method.
- Invoke this method several times from the **main()** method using different input values.



## 6. Odd Numbers with “while”

- Add and define the following method:  

```
public static void printAllOddNumbers2(int max)
```
- This method prints on the terminal window all odd numbers between 1 and max. Use a “while” for realising this method.

- Invoke this method several times from the **main()** method using different input values.

## 7. Odd Numbers with “do-while”

- Add and define the following method:

```
public static void printAllOddNumbers3(int max)
```

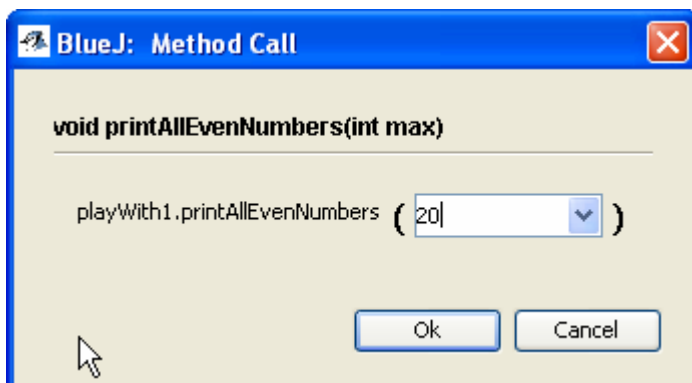
- This method prints on the terminal window all odd numbers between 1 and max. Use a “do-while” for realising this method.
- Invoke this method several times from the **main()** method using different input values.

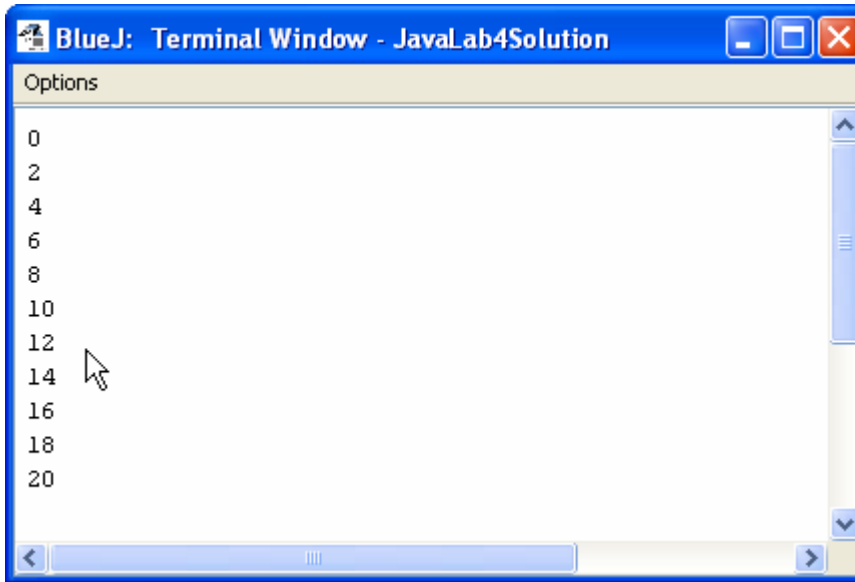
## 8. Even Numbers

- Add and define the following method:

```
public static void printAllEvenNumbers(int max)
```

- This method prints on the terminal window all even numbers between 0 and max.
- Invoke this method several times from the **main()** method using different input values.

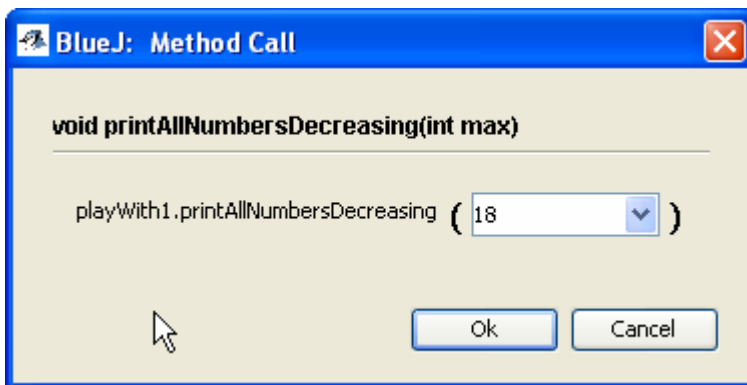


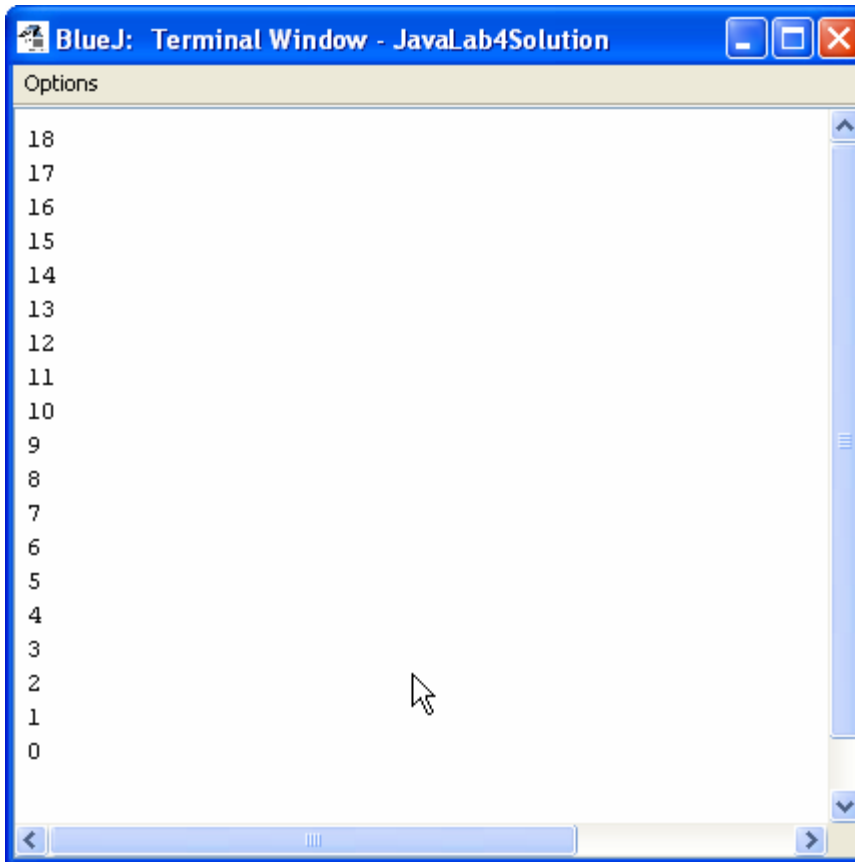


## 9. Numbers in decreasing order

- Add and define the following method:  

```
public static void printAllNumbersDecreasing(int max)
```
- This method prints on the terminal window all numbers from max to 0 (in decreasing order).
- Invoke this method several times from the **main()** method using different input values.





## 10. Fibonacci Series

- Add and define the following method:

```
public static void fibonacciNumbers(int max)
```

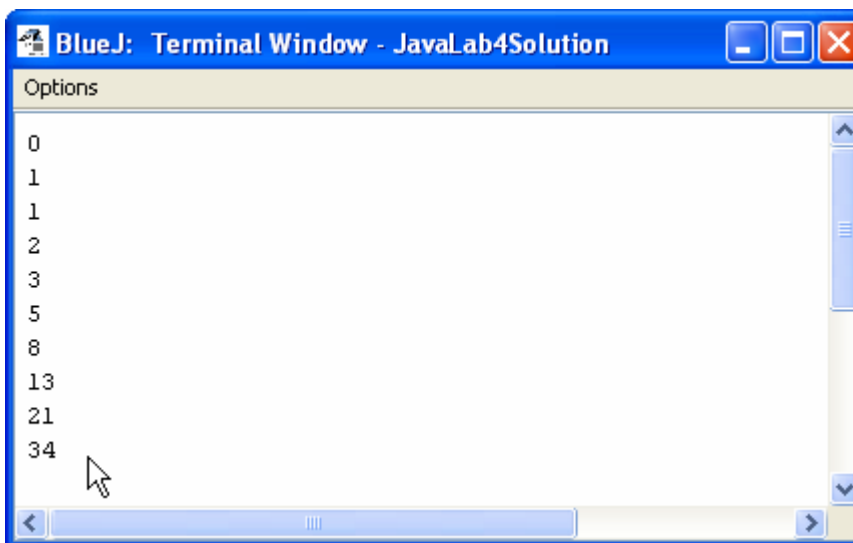
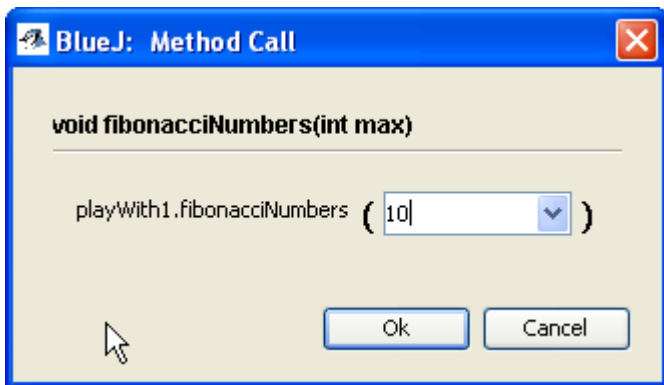
- This method prints on the terminal window the first max numbers of the Fibonacci series. This series of numbers is the following:

**0 1 1 2 3 5 8 13 21 34 45** etc.

The next number in the series is the sum of the previous two numbers:

**0 1 (0+1= 1) (1 + 1 = 2) (1 + 2 = 3) (2 + 3 = 5) (3 + 5 = 8)** etc.

- Invoke this method several times from the **main()** method using different input values.



## 11. Stars

- Add and define the following method:  

```
public static void stars(int max)
```
- This method prints on the terminal window a series of lines, each line is made of stars, the number of stars in each line is decreasing, the first line has **max** number of stars.  
**Hint:** you need a nested loop.
- Invoke this method several times from the **main()** method using different input values.

