

## Bonus exercises week 2

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### Bonus 1 - Inverted fibonacci sequence:

Write a program that reads two integers f and g, separated by a space. The program should output all Fibonacci numbers in the range (f; g>, ordered in descending order. The output should also include the total count of Fibonacci numbers in that range.

**Example input:** 5 100

**Example output:**

Sequence: 89 55 34 21 13 Count: 5

### Bonus 2 - Compare numbers:

Write a program that includes a void function to compare two integers and print the larger number. If they are equal, print "Numbers are equal."

**Example input:** 4 9

**Example output:** Larger number: 9

### Bonus 3 - Even or odd:

Write a program that includes a function that returns true (1) if a number is even and false (0) if it is odd. The program should use a void function to print whether the number is even or odd based on the returned value. (In total there will be 2 functions apart from main())

**Example input:** 8

**Example output:** 8 is even number

### Bonus 4 - Convert temperature:

Write a function that converts a temperature from Celsius to Fahrenheit and returns the result. Use a void function to display the result.

Formula:  $F = \frac{9}{5} * C + 32$

**Example input:** 25

**Example output:** 25.00 degrees celsius = 77.00 degrees fahrenheit

### Bonus 5 - Squares into a file:

Write a function that writes the squares of the numbers from 1 to N (user inputted number) into a file called squares.txt. Each line should contain the number and its square. Use a void function to display a message when the task is done. If file is not opened successfully write "Error opening file" and end the program

**Example input:** 5

**Example output:** Squares have been calculated and saved in file.

**Example output of squares.txt:**

```
1 1
2 4
3 9
4 16
5 25
```