

## TASK 1

### Part 1

Create a function that returns bigger number of two biggerNumber(a, b)

#### Examples

biggerNumber(1, 3) → 3

biggerNumber(6, 3) → 6

Notes! -> Input is a positive integer.

### Part 2

Create a function that calculates the number of different squares in an  $n * n$  square grid.

#### Examples

numberSquares(2) → 5

numberSquares(4) → 30

numberSquares(5) → 55

#### Explanation

\* If  $n = 0$  then the number of squares is 0 If  $n = 1$  then the number of squares is  $1 + 0 = 1$

\* If  $n = 2$  then the number of squares is  $2^2 + 1 = 4 + 1 = 5$

\* If  $n = 3$  then the number of squares is  $3^2 + 5 = 9 + 5 = 14$

*As you can see, for each value of  $n$  the number of squares is  $n$  squared + the number of squares from the previous value of  $n$ .*

Notes! -> Input is a positive integer.

## TASK 2

Export module functions numberSquares(n), biggerNumber(a, b)

### TASK 3

In a separate file import(require) previously created functions. Create user input sequence asking user to provide values for functions. Print result in console output.

*Example*

Please enter numbers two numbers to be compared (separated by enter)

1

2

Result : 2 is bigger number.

Please enter a number N to see how many squares can fit in N \* N square grid

3

Result is 14 squares

*Optional* User can select witch function to execute

### TASK 4

In same file as TASK 3 save the results that were calculated.

*Example results.txt*

biggerNumber(1, 2) = 2

numberSquares(3) = 14

*Note*

In case if Optional point from previous task (TASK 3) results.txt will contain one result by default.

### TASK 5

Add tests for numberSquares(n), biggerNumber(a, b) Number of tests is free of choice