

Introduction to Computer Science

Lesson 13

BSc in Computer Science
University of New York, Tirana

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Lab session: programming in Java

Nested loops

- Exercise 1
 - Fill a two dimensional matrix with 10 rows and 10 columns, with numbers increased by 1.
 - Print the matrix.
 - Print one diagonal of the matrix

Nested loops

- Exercise 2
 - In a do while
 - Fill a two dimensional matrix with N rows and N columns, with numbers increased by X , where N and X are specified by the user.
 - Make the user enter a number until it is a multiple of the sum of the numbers on the diagonal of the matrix!

Nested Loops

- Exercise 3
 - Compute the transpose of a matrix

Nested Loops

- Exercise 4
 - Compute the sum of two matrices.

Nested loops

- Exercise 5
 - For numbers $a, b, c: 1 \dots 1000$, find the triples $a * b = c$.

Nested loops

- Exercise 6
 - For numbers $a, b, c=1 \dots 1000$, find the triples
 $a = \text{SQRT}(b^3 + c^3)$

Nested loops

- Exercise 7
 - For numbers $a, b, c, d = 1 \dots 100$, find the quadruples
$$a + b = c^2 + d^2$$

Random events

- Exercise 8
 - Roll two dice ten times

Random events

- Exercise 9
 - Roll two dice 1000 times and count the frequencies of the sums.

Random events

- Exercise 10
 - Roll two dice 1000 times and count the frequencies of the combinations.

End of Lesson 13

- Readings
 - Chapter 5

End of course

- I hope you have enjoyed the course!
- Get prepared for the final exam!

Good luck!