SCHOOL OF PHYSICAL SCIENCES AND NANOTECHNOLOGY

Pseudo-code and python in a nutshell

Introduction to computational physics

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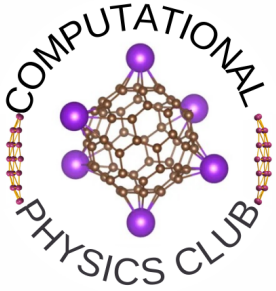
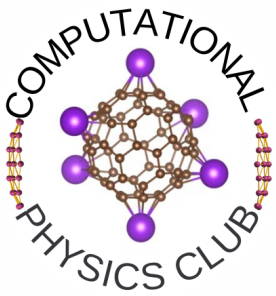


1. How CPU work?
2. Pseudocode
3. Python



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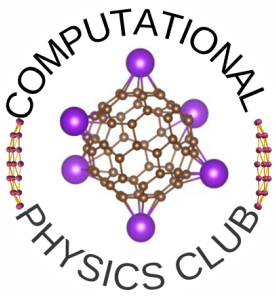
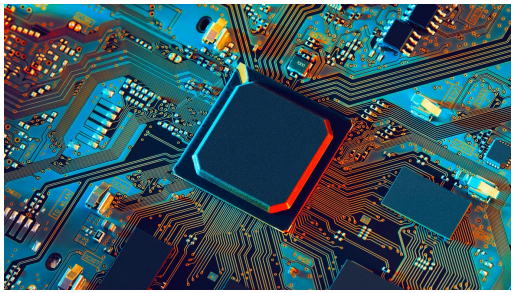


How computers work?

- Transistors (semiconductors)
- Binary system



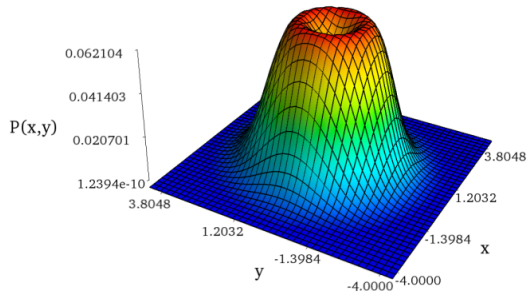
Binary system

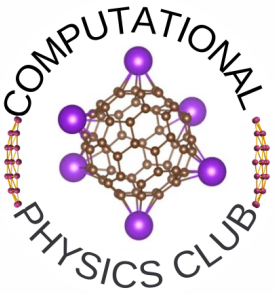
- Uses 2^4 hexadecimal system
- Allows us to create an input to the computer, which is the language the computer understands.

Decimal	Binario	Hexa
0	0000	0
1	0001	1
2	0010	2
3	0011	3
4	0100	4
5	0101	5
6	0110	6
7	0111	7
8	1000	8
9	1001	9
10	1010	A
11	1011	B
12	1100	C
13	1101	D
14	1110	E
15	1111	F

CPU

- Moore's Law
- Transistors





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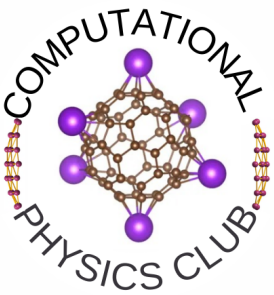

Pseudocode?

In computer science, pseudocode is a plain language used for describing steps in an algorithm.

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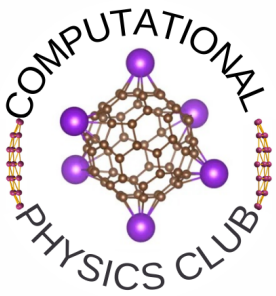

Why python?

- Python community
- Data science (most used language)
- Python or C++, FORTRAN?
- Interpreted language

Python

- Variables
- RAM?
- Operators
- Functions
- Boolean expressions
- functions

Thanks so much!