



PROGRAMMING WITH PYTHON

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SYLLABUS

- Computer programming and history(Theoretical)
 - Computer Programming(Variables,Algorithms,Arithmetic Operations)
 - Computer Programming(If/Elif/Else,Practices)
 - Computer Programming(Loops,Practices)
 - Computer Programming(Data Structures,Practices)
 - Computer Programming(Functions,Practices)
 - Computer Programming(Object Oriented Programming,Practices)
 - Computer Programming(GUI,Practices)
 - Computer Programming(Complex Practices)
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QUESTIONS

- What is a computer ?
 - What is a software ?
 - What is a programming language ?
 - What is a computer program ?
 - What is a python ?
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HISTORY

- Charles Babbage / Ada Lovelace
 - Alan Turing
 - ENIAC
 - Von Neumann Architecture
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PROGRAMMING LANGUAGES

- Programming Paradigms
 - Programming History
 - Programming on Desktop/Web/Mobile/AI
 - Low/Medium/High level languages
 - More languages More Advantage ?
 - IDE
 - EDITOR
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COMPILER & INTERPRETER

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- **Compiler:** A compiler is a software program that transforms high-level source code that is written by a developer in a high-level programming language into a low level object code (binary code) in machine language, which can be understood by the processor.
 - **Interpreter:** An interpreter is a computer program that is used to directly execute program instructions written using one of the many high-level programming languages. The interpreter transforms the high-level program into an intermediate language that it then executes, or it could parse the high-level source code and then performs the commands directly, which is done line by line or statement by statement.
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WHAT IS DIFFERENCE?

- **Interpreter**

- Translates program one statement at a time.
- It takes less amount of time to analyze the source code but the overall execution time is slower.
- Programming language like Python, Ruby use interpreters.

- **Compiler**

- Scans the entire program and translates it as a whole into machine code.
 - It takes large amount of time to analyze the source code but the overall execution time is comparatively faster.
 - Programming language like C, C++ use compilers.
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PYTHON PROGRAMMING LANGAUGE

- High-Level programming language
 - Open Source
 - Easy to create GUI/Web/AI applications
 - Easy to find resources
 - Easy to learn for beginners
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IDE

- Anaconda
 - <https://www.youtube.com/watch?v=T8wK5loXkXg>
 - <https://www.udemy.com/complete-python-bootcamp/>
 - Python Setup Content Second Video
 - Jupyter Notebook, Pycharm, Spyder, Online Interpreter ?
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You can find all source code, materials, helper links,
community film and book recommendations on github
[https://github.com/okanvk/2018-2019-ADU-IEEE-CS-
Python-Course](https://github.com/okanvk/2018-2019-ADU-IEEE-CS-Python-Course)

REFERENCES

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