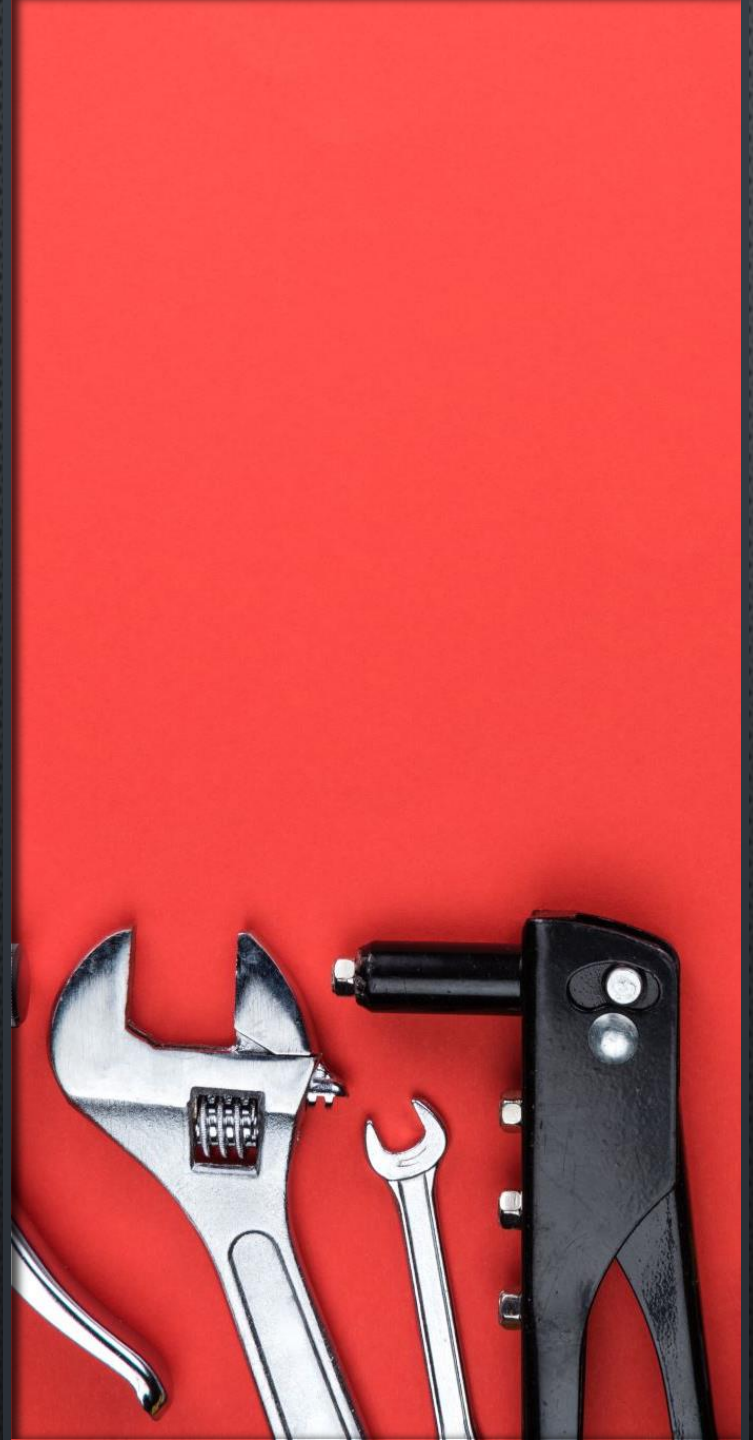
PYTHON4ALL

BY RAM



TOPICS

- Compiler vs interpreter
- History of python
- Python introduction
- Python2 vs python3
- Programming paradigm

COMPILER VS INTERPRETER

COMPILER	INTERPRETER
Translates source code to byte code at a same time e.g., if program contains 100 lines everything will be converted to byte code at a time	Translates source code to byte line by line e.g., if program contains 100 lines, then it converts line by line
If errors exists, compiler will display all errors at once in single execution	If errors exists, Interpreter will display one error per execution
Requires lot of memory	Requires less memory
Huge amount of time to analyze the code	Less time to analyze the code
Overall execution time is less	Overall execution time is huge
Python, Ruby, Nodejs, java script	C,CPP,JAVA

History of Python

- First released in 1991
- Guido van Rossum, google
- GOAL – Fun to use
  - "Named after – british comedy group (MONTY PYTHON)"
- First stable release – 0.9.0
- Developed using C programming language
- Python2 & Python3

PYHTON INTRODUCTION

- Object oriented
- Interpreted language
- High level language
- General purpose language
  - Scientific computing language – FORTRAN, ALGOL
  - Commercial data processing language - COBOL
- Strongly and dynamically typed

OBJECT ORIENTED

- ABSTRACTION
- INHERITANCE
- ENCAPSULATION
- POLYMORPHISM

HIGH LEVEL LANGUAGE

- High level of abstraction wrt to machine language
- Deals with variable, objects, functions, list etc., rather than registers, memory address
- Unlike low level languages, these won't depend upon single system
- More memery consumption
- Programmer friendly, easy to understand and write code
- C++, Python, Ruby, Java, Javascript, etc.,

PYTHON2 VS PYTHON3

Python2.x	Python3.x
Released year 2000	Released year 2008
5/2=2	5/2=2.5
Print "hello students"	Print("hello students")
Strings are ASCII by default	Strings are UNICODE by default
xrange	range

Strongly and dynamically typed

- Strongly typed - Variables are bound to specific data type

  Myvar = "hello"+" students"

- Dynamically typed – datatype declaration is not required

  Myvar = 10

  Myvar = "new students"

REFERENCE

https://www.educative.io/blog/object-oriented-programming?aid=5082902844932096&utm_source=google&utm_medium=cpc&utm_campaign=blog-dynamic&gclid=Cj0KCQjwnueFBhChARIsAPu3YkRg6fNAhBfDSMHVf14vyE60FUMSO0Q7FHIICLTCHvzwNeJf1KIS5cMaAmFcEALw_wcB