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## Python Introduction

Python → 1991 ; Java → 1995

Easy / Simple yet powerful

→ `print("Hello World")` . o/p → Hello World

General purpose

- Console Applications & Scripts
- Desktop Applications
- Machine learning, Deep learning, AI, Big Data etc.
- web Applications
- Game development

## Multiparadigm Support -

- Procedural style programming like C.
- Object Oriented programming (OOPs)
- Functional programming.

## Portable / Platform Independent

Programs are typically first compiled into intermediate code, then the code is run by interpreter.

## Dynamically typed

Python → Dynamically typed ; [C++, Java] → Statically typed

(Specify type of variable) → Yes: Statically  
→ No: Dynamically

x ← 10

y = "Python"

x ← "Programming"

Dynamically typed → type is assigned when runtime program is running.

Statically typed → type is assigned at the compile time.

→ More chances of error in dynamically typed languages.

→ They are slower than Java and C++.

## Automatic Garbage Collection -

When we dynamically allocate memory we don't have to worry about releasing this memory (Automatically takes care of it)

## Popular Applications built in Python

- Youtube
- Mozilla Firefox
- Dropbox
- Netflix
- Reddit
- Quora
- Instagram