



# Python Programming

**Dr. Raj Gaurang Tiwari**

Department of Computer Science and Engineering  
Chitkara University, Punjab

# Contents



**Why Python**



**Python - Compiler or Interpreter**



**How to Install Python**



**Python on Colab.research.google.cocm**



**Python as a Dynamically typed Language**



**Python as Object-Oriented Language**



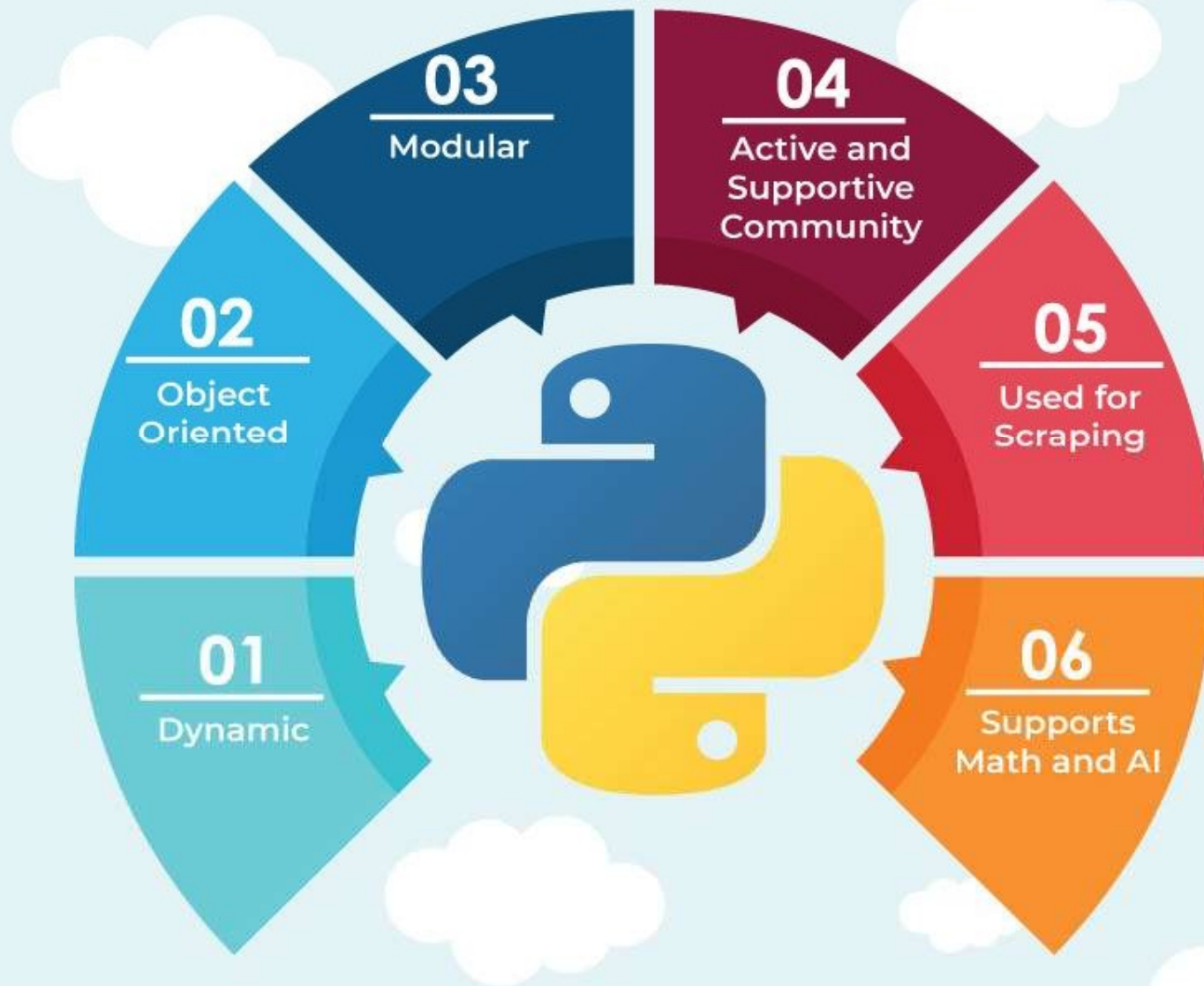
**Variables and Constant in Python**

# Brief History of Python

- Invented in the Netherlands, early 90s by Guido van Rossum
  - Named after Monty Python
  - Open sourced from the beginning
  - Considered a scripting language, but is much more
  - Scalable, object oriented and functional from the beginning
  - Used by Google from the beginning
  - Increasingly popular
-

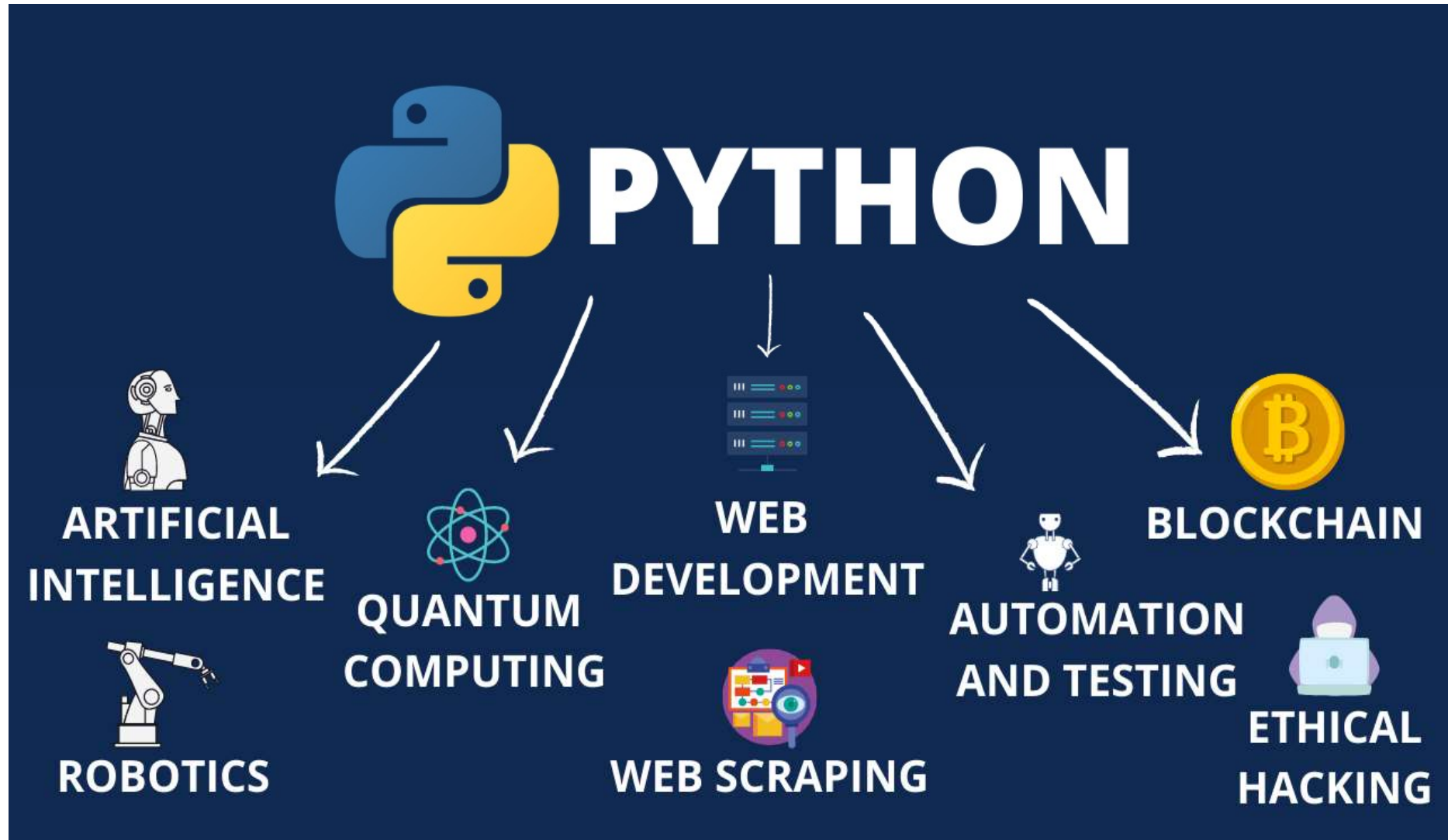
# Why Python

Reasons why Python is growing at a supersonic speed



# Why Python

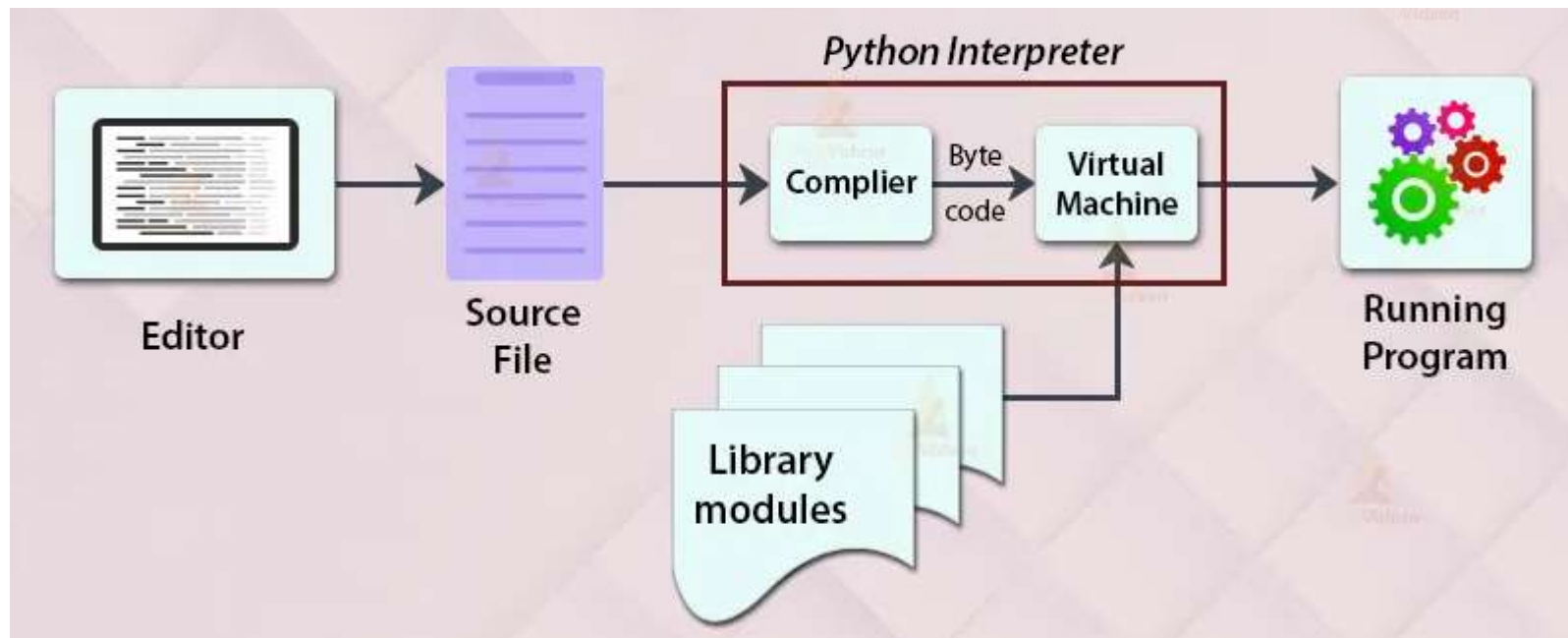
## Variety of Application Area



# Python - Compiler or Interpreter



- Python code is first compiled to something called a “**byte code**”. And it is then passed to the **Python Virtual machine** where it gets **interpreted**. So, we can think of Python as a “**compiled interpreted**” language. The interpreter **does not expose** this translation process to the **Python programmer**.



# How to Install Python

- Download latest version of Python from  
<https://www.python.org/downloads/>
- Install
- Type following command on command prompt
  - `python -m pip install`
  - `python -m pip install jupyter`
  - `Python -m jupyter notebook`

# Python on Colab.research.google.com



- Go to the following link

<https://colab.research.google.com/>

- What Colab Offers You?

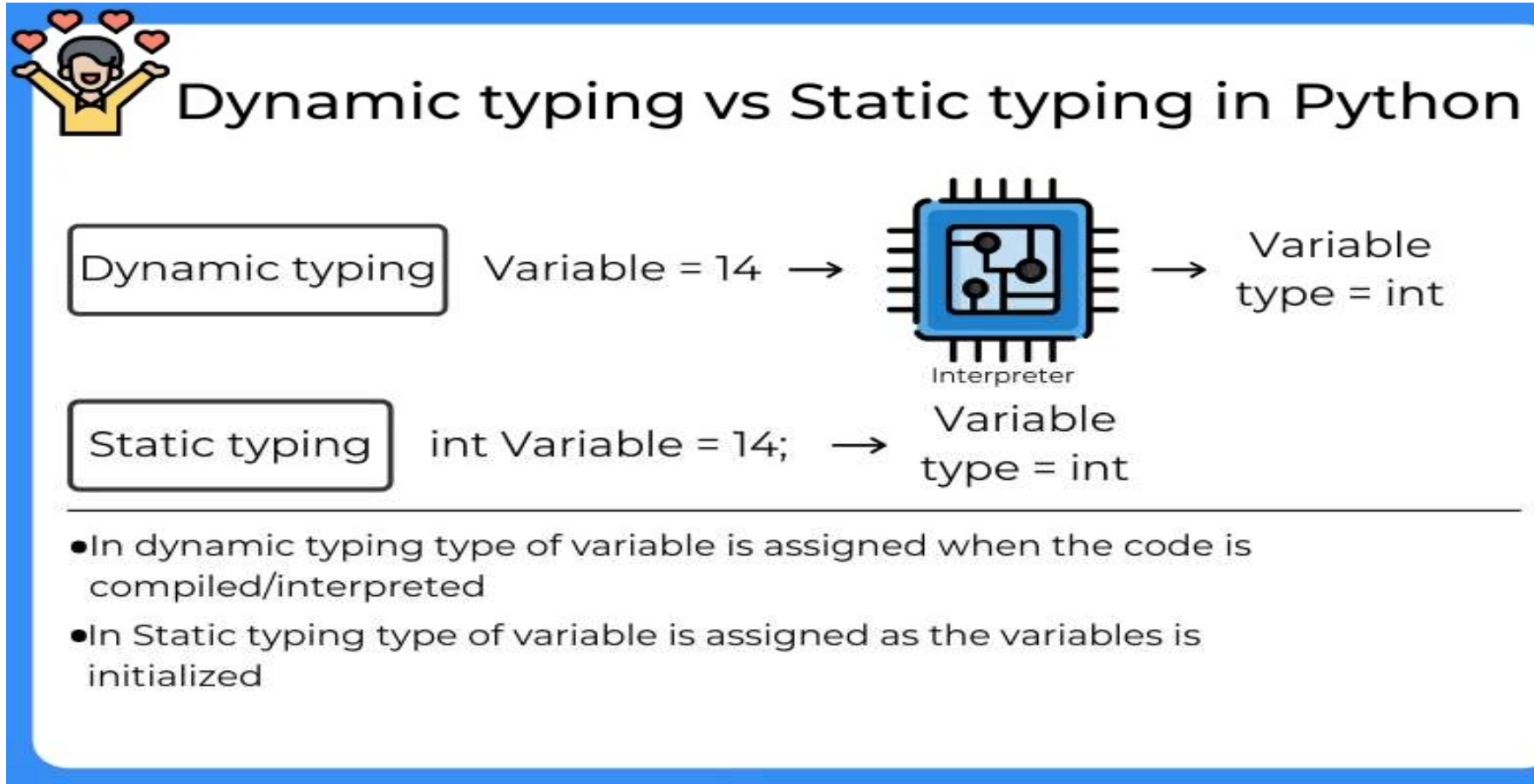
As a programmer, you can perform the following using Google Colab.

- ✓ Write and execute code in Python
- ✓ Document your code that supports mathematical equations ☐  
Create/Upload/Share notebooks
- ✓ Import/Save notebooks from/to Google Drive
- ✓ Import/Publish notebooks from GitHub Import external datasets e.g.  
from Kaggle
- ✓ Integrate PyTorch, TensorFlow, Keras, OpenCV
- ✓ Free Cloud service with free GPU



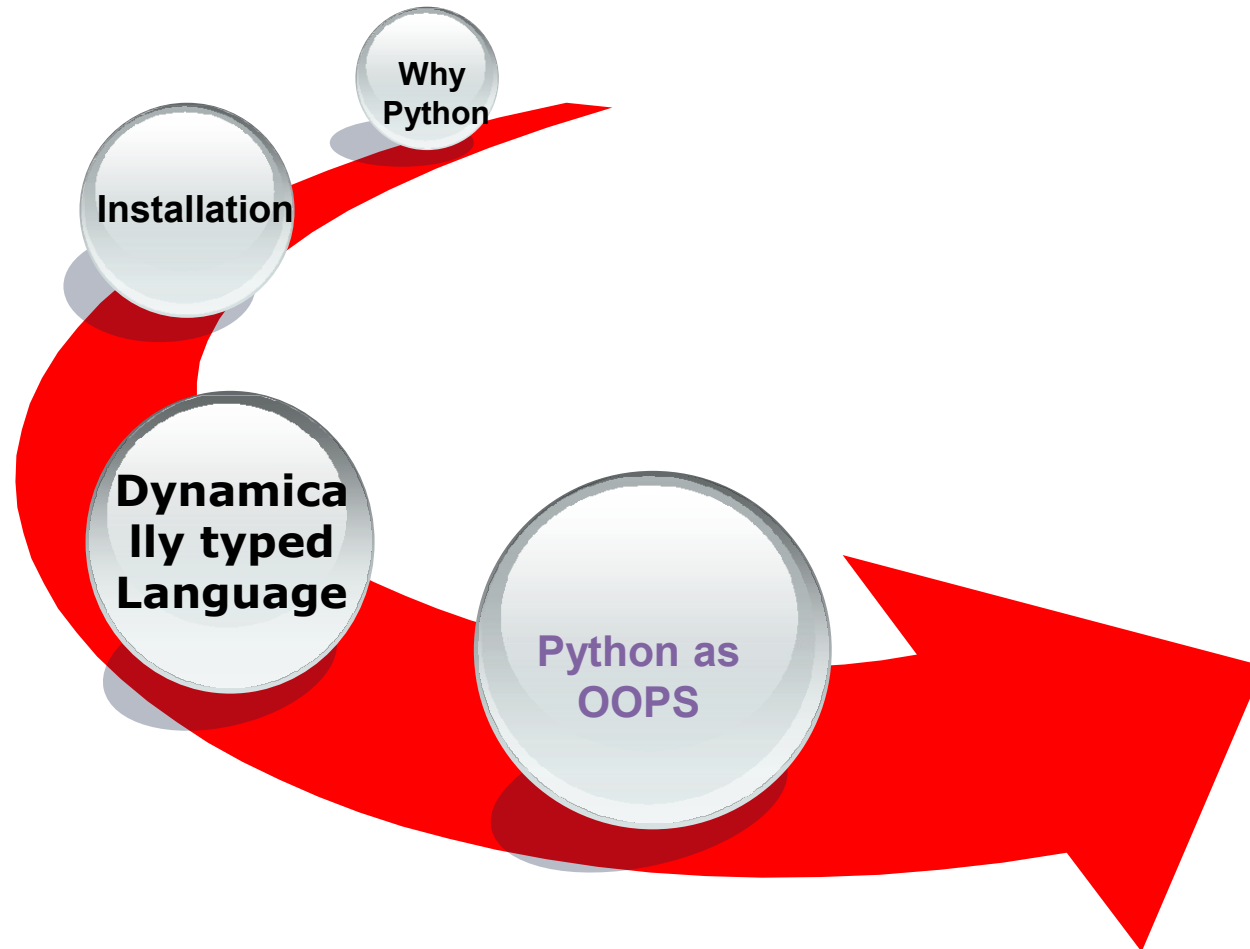
# Python as a Dynamically typed Language

*Python* is a dynamically typed language. What is dynamic? We don't have to declare the type of variable while assigning a value to a variable in *Python*.





# Summery





# Thank You !