Session No 1

Learning Objectives and Introduction to python

Learning Objectives

Learning Objectives

1. Python
    a. Core Python
    b. OOP
    c. Numpy Pandas Matplotlib
2. Machine Learning
    a. Supervised Machine Learning
    b. Unsupervised Machine

Why take this course?

Desktop First -> Web First -> Mobile First -> Intelligence First

Surprise! Machine learning jobs are high-paying and in-demand

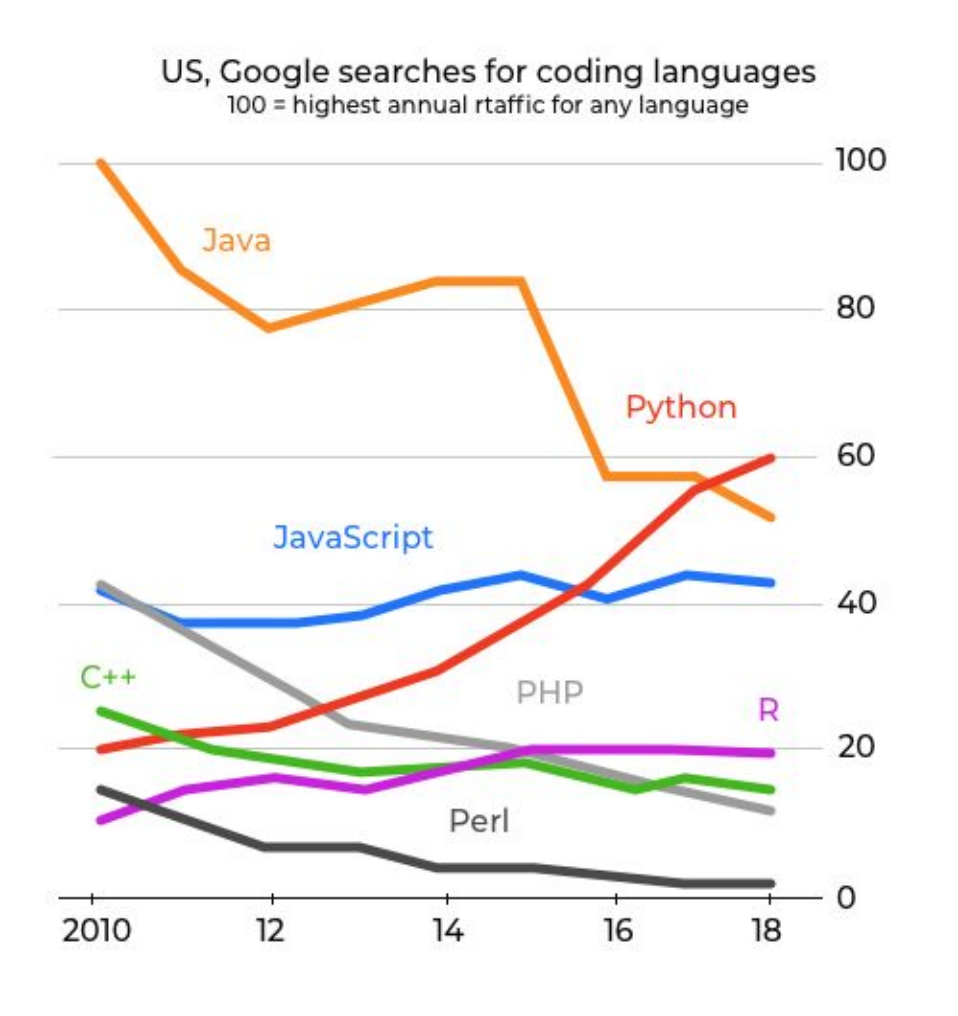
&

Huge Amount of Research

Why Python for Machine Learning?

Popularity

This graph shows python's popularity in terms of google searches



Libraries and Frameworks

Python has extensive range of libraries and framework for machine learning

1. Keras, TensorFlow, and Scikit-learn for machine learning
2. SciPy for advanced computing
3. Matplotlib for data visualization
4. Pandas for general-purpose data analysis
5. NumPy for scientific computing and data analysis

Readability

Easy to Read which makes debugging easy and making change simple

Introduction to Python

What is python?

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics.

Python is relatively simple so easy to learn.

History of Python

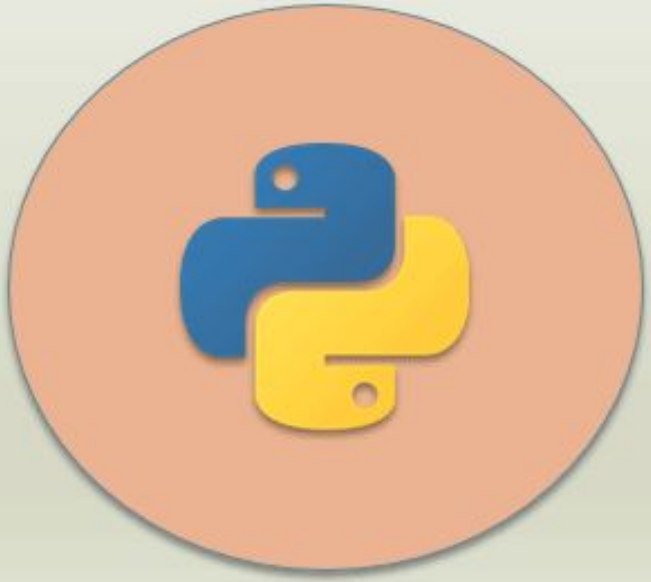
1. Guido Van Rossum Created Python
2. It was created from ABC a programming language
3. It was started as hobby project
4. Its name is taken from BBC’s popular show Monty Python’s Flying Circus

A Short History Of Python

www.venturelessons.com

Python Features

- Easy to Write
- Easy to Understand
- Object-Oriented
- Robust Standard Libraries
- Supports Various Programming Paradigms
- Support for Interactive Mode
- Dynamically Typed and Type Checking



- Databases and GUI Programming
- Extensible
- Portable
- Scalable
- Integrated
- Automatic Garbage Collection
- Free and Open Source

Module 1 Core Python

Getting started with Python

Download and Install Python 3

Download and install Sublime, VSCode, Notepad++ or any text editor of your choice

Python is an experiment in how much freedom programmers need. Too much freedom and nobody can read another's code; too little and expressiveness is endangered.

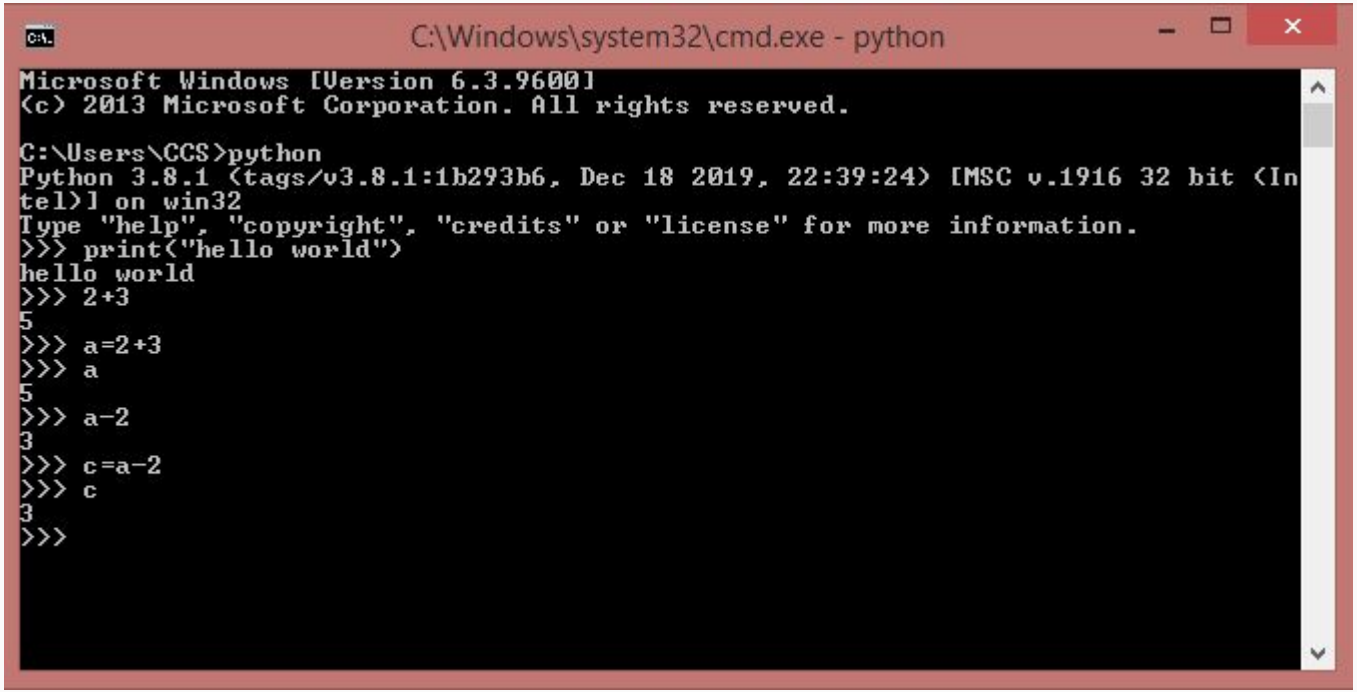
Guido Van Rossum

Programming modes

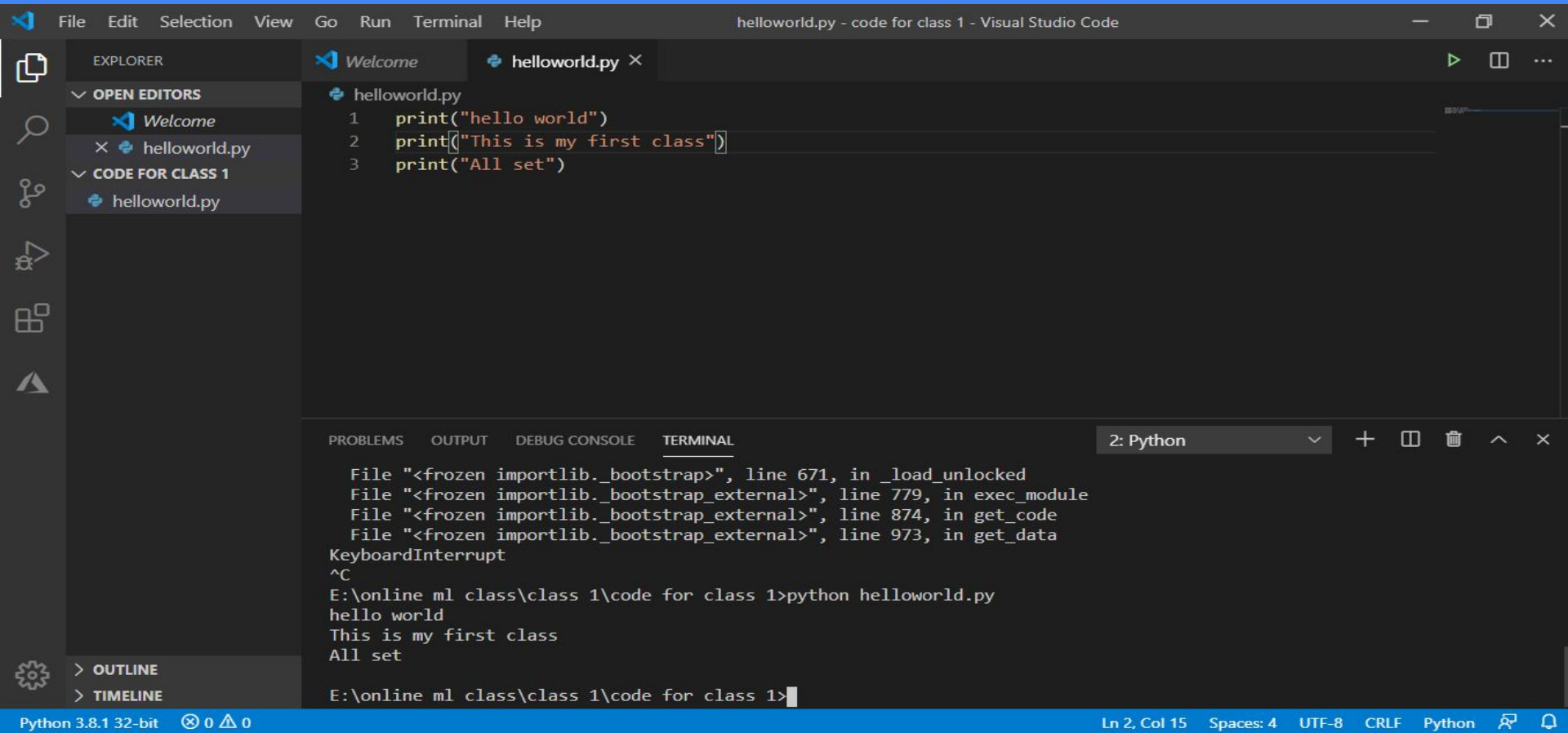
There are two python programming modes

1. Interactive mode programming
2. Script mode programming

Interactive mode programming



Script mode programming



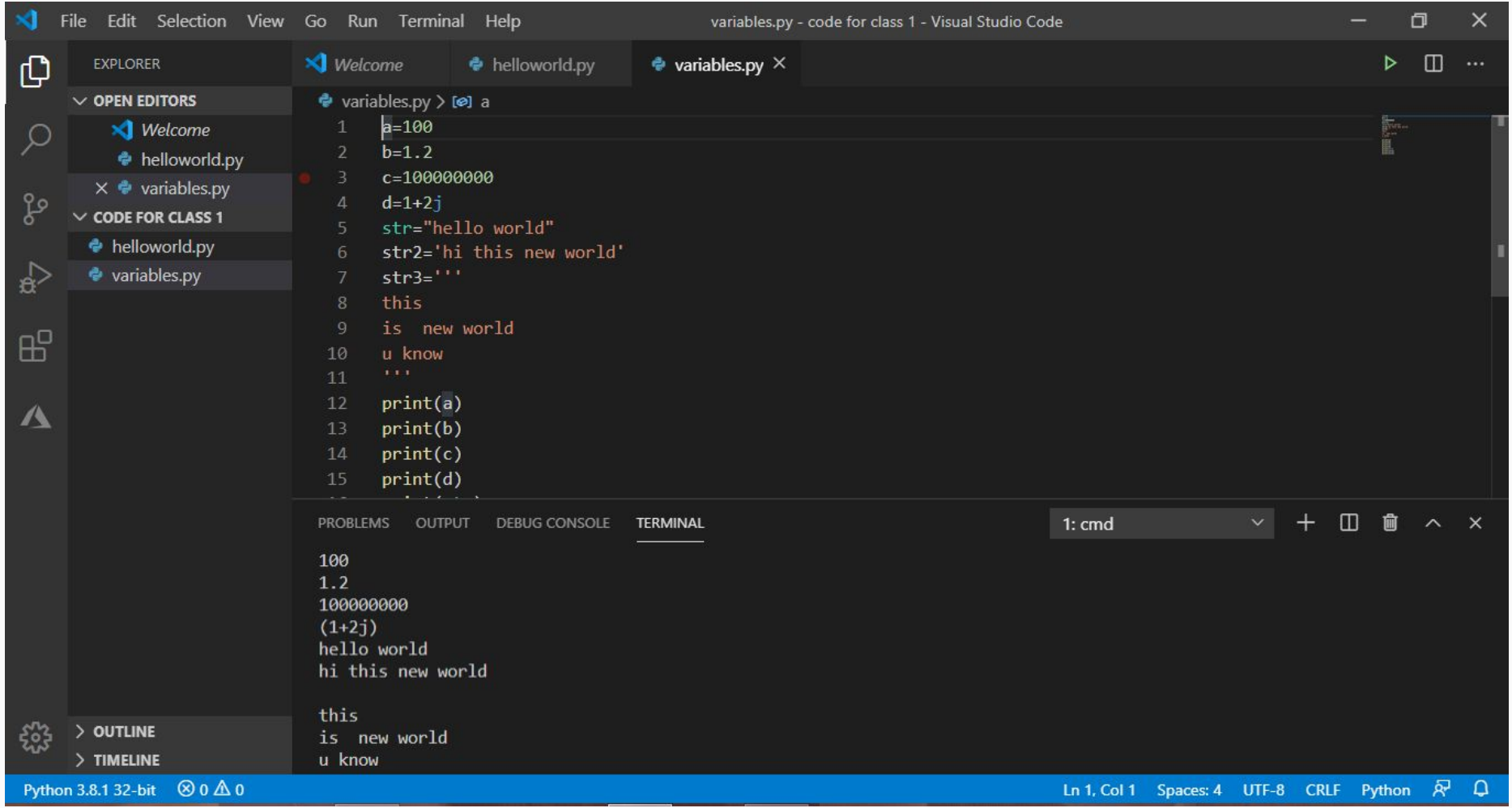
Assigning Value to Variable

Data Types

Python has five standard data types −

- Numbers
- String
- List
- Tuple
- Dictionary

int	long	float	complex
10	51924361L	0.0	3.14j
100	-0x19323L	15.20	45.j
-786	0122L	-21.9	9.322e-36j


File Edit Selection View Go Run Terminal Help
variables.py - code for class 1 - Visual Studio Code
EXPLORER
OPEN EDITORS
Welcome
helloworld.py
variables.py
CODE FOR CLASS 1
helloworld.py
variables.py
OUTLINE
TIMELINE
Welcome
helloworld.py
variables.py
variables.py > a
1 a=100
2 b=1.2
3 c=100000000
4 d=1+2j
5 str="hello world"
6 str2='hi this new world'
7 str3='''
8 this
9 is new world
10 u know
11 '''
12 print(a)
13 print(b)
14 print(c)
15 print(d)
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: cmd
100
1.2
100000000
(1+2j)
hello world
hi this new world
this
is new world
u know
Python 3.8.1 32-bit
0 0
Ln 1, Col 1
Spaces: 4
UTF-8
CRLF
Python

Thanks!

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2. Code Repository
3. LinkedIn