Data Science Series

Python Course

Complete Python Programming Course from Beginner to Advance

Topic: Python Basis & Data Structures

DAY 1

15 AUGUST, 2020
08:00 PM

Welcome to the live session on “Python for Data Science”

Agenda for today:

1. Understanding Python
2. Why we need Python
3. Live code demo
    1. Python Data Structures
    2. Basic commands
    3. Lists
    4. Problem solving on Lists

What is Python?

Package → set of code that are pre-written for an application
code file

Python is an easy, simple to learn and a very powerful programming language that can be widely used in many applications. Often, programmers fall in love with Python because of the increased productivity it provides. Since there is no compilation step, the edit-test-debug cycle is incredibly fast.

Java → compile → execute

Python → Run

Applications:

1. Data Science — $klearn, Pandas, numpy
2. Game Development — pygame
3. Web Development — django

What we need to learn Python?

Python has the most number of openings for the year 2020.

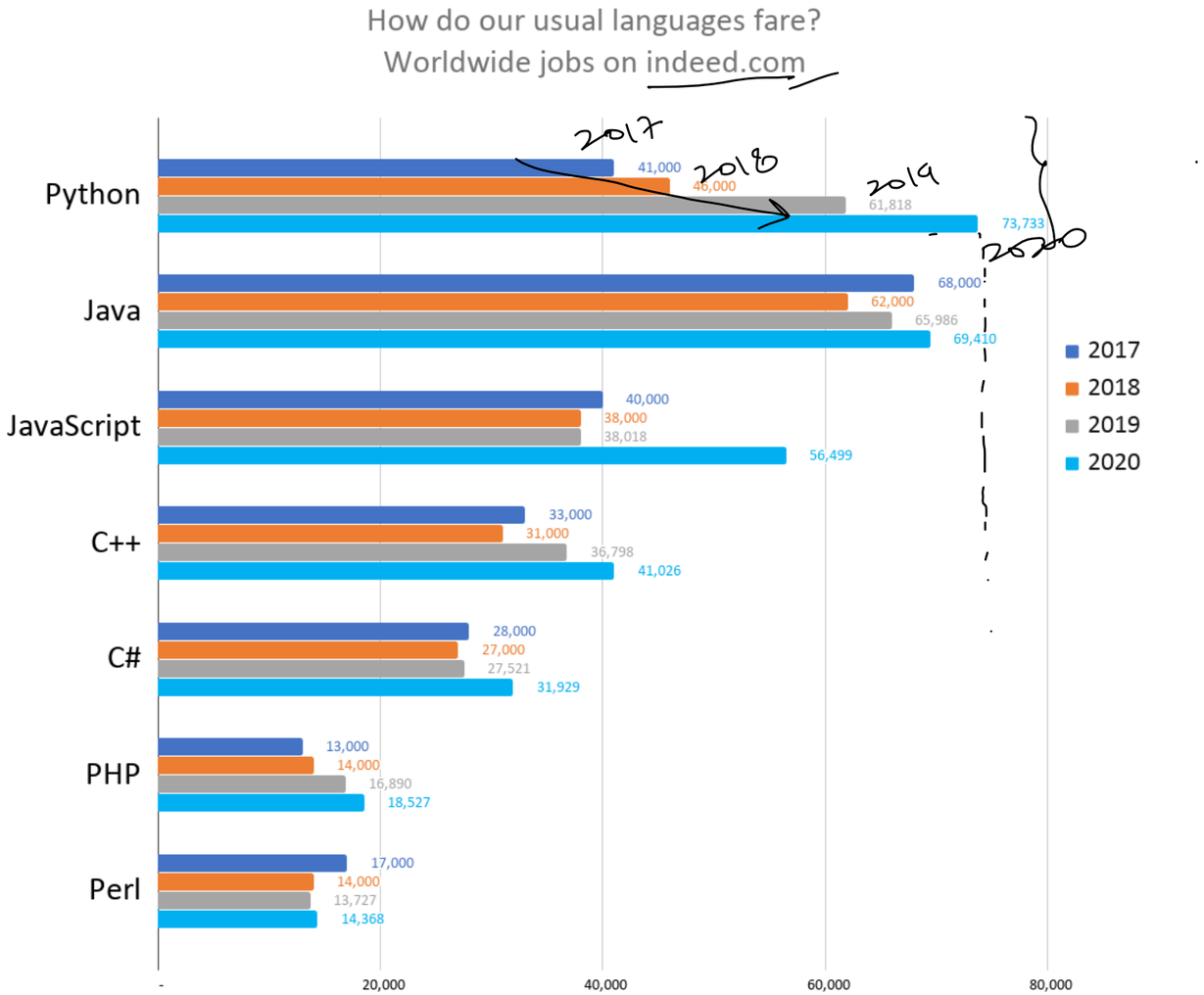


Image Source: [Codingdogo]

What we need to learn Python?

- Python is easy to understand and follows English like code construct.
- We can run Python on various platforms such as Windows, Mac, Linux etc.
- Python requires less line of code than other languages like Java.
- Python has a huge set of open sourced libraries for various applications.

Java

```java
File dir = new File("."); // get current directory
File fin = new File(
    dir.getCanonicalPath() + File.separator + "Code.txt"
);

FileInputStream fis = new FileInputStream(fin);

// Construct the BufferedReader object
BufferedReader in = new BufferedReader(new InputStreamReader(fis));

String aLine = null;
while ((aLine = in.readLine()) != null) {
    // //Process each line, here we count empty lines
    if (aLine.trim().length() == 0) {}
}

// do not forget to close the buffer reader
in.close();
```

Python

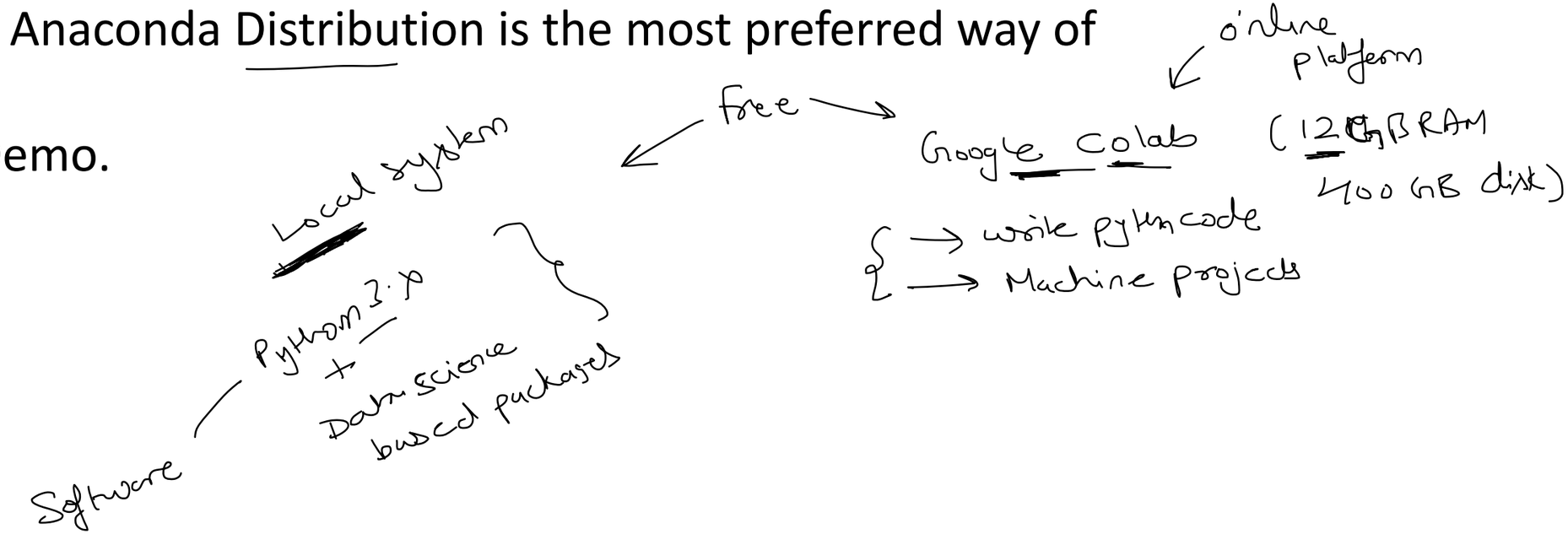
```python
my_file = open("/home/xiaoran/Desktop/test.txt")

print(my_file.read())
my_file.close()
```

Image Source: BellTSoft

How to install Python?

- For Data Science, Anaconda Distribution is the most preferred way of installing Python.
- Let's look at the Demo.



ANACONDA®

How Python hold data?

- Data Types
- Objects
- Variable