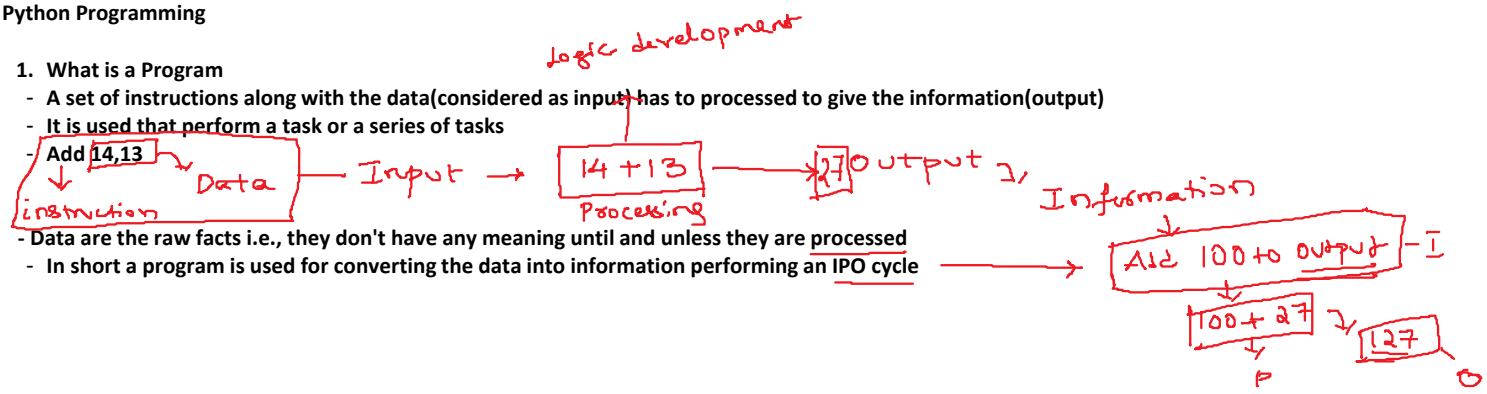
Day1_Programming Basics

Modules We are going to learn

1. **Python Programming from the Data Science Perspective**
2. **Math and Statistics from the Data Science Perspective**
3. **Machine Learning**
4. **Deep Learning**
5. **Live Project Using Machine Learning and Deep Learning**

Python Programming

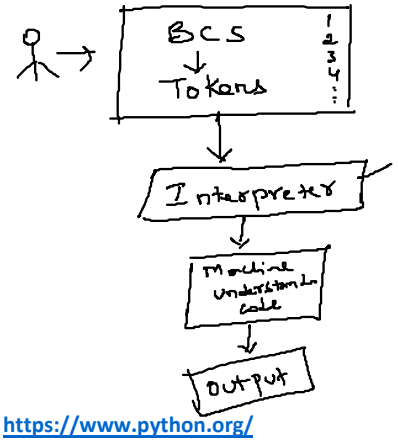
1. **What is a Program**
   - **A set of instructions along with the data(considered as input) has to processed to give the information(output)**
   - **It is used that perform a task or a series of tasks**
   - **Add 14,13**

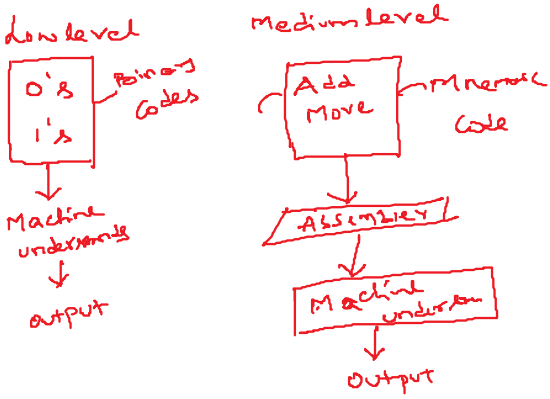


   - **Data are the raw facts i.e., they don't have any meaning until and unless they are processed**
   - **In short a program is used for converting the data into information performing an IPO cycle**

2. **How we develop the programs**
   - **By using a programming language we develop the programs.**
   - **Programming language is made up of the Basic Character Set --> {A-Z,a-z,0-9,%$#%..}**
   - **The Basic Character Set characters are bundled up as Tokens or the components that follow the program grammar or syntax**

3. **Python is a High Level Programming language since it is made up of the Basic Character Set**





Install Python from https://www.python.org/
Install Anaconda from https://www.anaconda.com/products/individual

Tokens or components of Python Programming

We know that the tokens are made up of Basic Character Set: {A-Z,a-z,0-9,%$#%..}

1. **Non Executable Tokens: 1. The components which are non-executable i.e., they will not contribute towards the output**
   2. The comments in programming make up the Non Executable Tokens
   3. In python we use # symbol followed by a line of comments
   Syntax: #Line-of-Comment
   Ex: #Program for adding two numbers
   4. We can have the comments made anywhere in the program

```
#Program for adding two numbers
a = 10 #a is given a value 10
b = 5  #b is given a value 5
a+b #a,b are added

#output
15
```

2. **Executable Tokens**