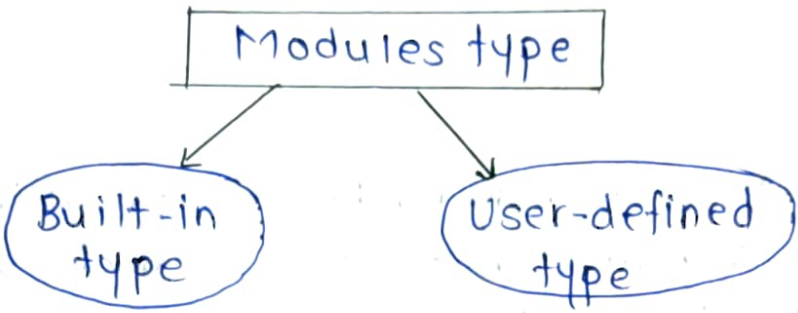
31-07-22

- What are Python Modules?

-Modules provides us with a way to share reusable function. A module is simply a "Python file" which contain code we can reuse in multiple Python programs.

-A module may contain functions, classes, lists, etc.



1> Built-in ~~type~~ Modules.

-One of many superpowers of Python is that it comes with a "rich standard library". The rich standard library contains lots of built-in modules. Hence, it provides a lot of reusable code.

- Python contain modules like "os", "sys", "datetime", "random".

-You can import and use any of the built-in modules whenever you like in your program (We'll look at it shortly).

2> User-defined Modules.

-Another superpower is to take thing in own hands.

-You can create your own functions & classes, put them inside modules & voila! You can now include hundreads of line of code into any prog- am just by writing a simple 'import' statemen

* Visual-studio code

- Visual studio code is a source-code editor made by Microsoft.
- VS code is used with variety of programming languages including Java, Javascript, Go, Node.js, Python, c++, C, Rust.
- Visual code can be extended via extensions, available through a central repository.

* CamelCase In Python.

- Camelcase is naming Protocol for giving file or attribute name that contain more than one word joined that all start with a capital letter.
- Camelcase is the programming language that allows you to name files or functions without breaking the underlying languages naming rules.

For download ~~Modules &~~ camelcase ~~s~~, command which are used:

1> pip install camelcase.

* Tensorflow

- Tensorflow is an end-to-end open source platform for machine learning.
- Tensorflow is Python library for fast numerical computing created and released by Google.

• How to download tensorflow:

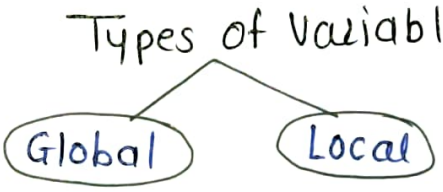
→ pip install tensorflow.

* Python Variable

- Variable is container which store values.
- Python variable is also known as an identifier and used to hold value.
- We don't need to specify the type of variable because python is infer language.

Rules for python Variables:-

1) A variable must start with a ~~character~~ letter or underscore
2) A variable cannot start with number.
3) A variable must be contain alpha-numeric character & underscore (A-Z, 0-9, _)
4) Variable names are case sensitive (age, Age & AGE are different variable).



1) Global variable.
   - Variables which is visible throughout the whole program.
   - Defined at the start of program.
2) Local variable.
   - Variables which are visible through the function where it is defined.
   - Defined in particular function.

* Type Casting.

- Converting one data type to another which is useful in day-to-day & aggressive programming.

e.g.

```
a = 15
b = "28"
b = int (b) //type casting
print (b)
```