PYTHON
NOTES

By : @curious--programmer

What is python?

1] Python is a General purpose, dynamic, high-level and interpreted programming language.

2] it supports object oriented programming approch to develop applications.

3] Python is easy to learn yet powerful and versatile scripting language, which makes it attractive for application developement.

4] Python's syntax and dynamic typing with its interpreted nature make it an ideal language for scripting and Rapid application developement

Python History :

1) Python was invented by Guido van Rossum in 1991 at CWI in netherland.

2) The idea of python programming language has taken from the ABC programming language or we can say that ABC is a predecessor of python language.

why to learn python?

Python provides many useful feature for programmers. i have listed below some essential feature.

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- easy to learn
- expressive language
- interpreted language
- object oriented language
- open source language
- integrated
- Dynamic memory allocation
- embeddable

where is Python used?

Python is a Genral purpose programming language and it is used in almost every technical feild.

The various areas of python are given below -
- Data science
- Data mining
- Desktop application
- concol-based application   @curious-programmer
- mobile applications
- software develope ment
- Artificial intelligence
- web applications

Python Popular framework and libraries

python has wide range of libries and frameworks used in various feild such as machine learning, artificial intelligence, web application etc.

- web developement - Django, flask, cherry Py
- GUI Based application - Tk, PyGTK, PyJS etc.
- machine learning   - Tenserflow, PyTorch
- mathematics   - numpy, pandas.

Python. installation

Python installation on Windows

1] Go to www.python.org/dowlods/
2] Download python as per your system requiment
3] Click on Python Relesed for windows. Select the link for letest python 3.
4] scroll to the bottom select eijther windows x86-64. exeuatable installer for 64-bit or windows x86 exeuatable installer for 32-bit

Best python IDEs

- Pycharm   @curious-programmer
- spyder
- vs code
- py dev
- atom

chapter 2 : modules, comment, pip.......

Python first programme :

Python programme to print helloworld !

print function : print function displays the given
object to screen or the text
stream file.

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Create file with name
- Hello.py

↓

print ("Hello world !")

↓

excuate python fire

Unlike other programming language. python
print() is most unique and versatile.

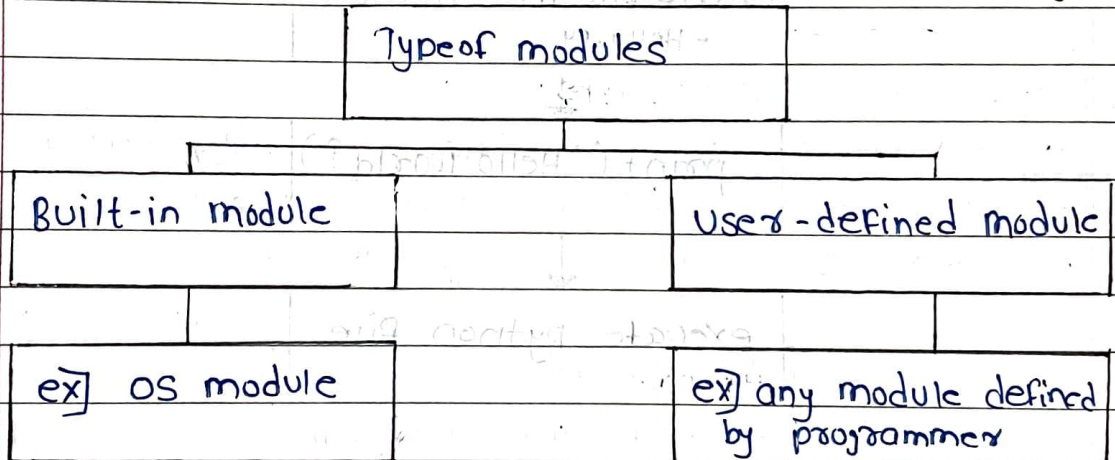| input :	output :
print ("Helloworld !")	Helloworld !

modules in python

o python module is a containing python defination and statement. A module can be define function classes and variables.

In other words we can say that our python code file saved with the extension (.py) is treated as a module.

modules in python provides flexibility to organize code in logical way.

Type of modules

Built-in module	User-defined module
ex] OS module	ex] any module defined by programmer

you can install external modules by PIP

Comments in Python

Comments are the lines in the code that are ignored by complier during execution of programe.

comments enhance the readability of code and help the programmer to understand the code

There are three types of commends in python -

- Single line Comment   @curious-programamer
- multi line Comment
- Docstring comment

Single-line comments:

..... python single line comments start with a hashtag symbol (#) with no white spaces and lasts till end of line.

example :		
# print Hello! to console		
print ("Hello")		

if the comment exceed one line then put a hashtag in next line and continue the comment.

Python multi line comments :-

Python dose not provide option for multiline comment. However, there are diffrent ways through which we can write multiine comment

python ignores the string literals that are not assign to a variable so we can use this as multi-line comments.

example :-

```
" " " this is a python
      · multiple line comment " " "
print ("Hello !")
```

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pip

pip is a package managment system written in python used to install and manage software package

it connects to an online repository of public package, called python package index.

ex] pip install pygame