Revision

- Python is a `interpreted` programming language.

(Python code gets executed line by line)

- Python interpreter (tool that comes along python installation. We use this tool to write single line Python code.)

In [ ]:

```python
print("hello world")
```

Plain Text: Text without formatting

Rich Text: Text with formattingm

- `Jupyter notebook` - type of IDE (its an editor dedicated for Python language)
- `IDLE` - type of IDE

`Built-in` functions

- Functions that are already provided by the language
- Functions that are readily available

- syntax

    Rules of programming language
- syntax for function call

    function-name(input)

    print("hello world!")

Built-in functions

- print
- type
- help

In [6]:

```python
print("hello world!")    # we are "calling" print function
                         # we are "invoking" print function
```

hello world!

How to we write single-line comment in `Python` ?

- we use `#` character to write comment in python
- a comment is a comment. Meaning, it does not have any impact on the code.

In [4]:

```python
print("hello world!")   # a comment
```

hello world!

- Jypyter notebook has cells
- cells can be used to write either code or notes

Markdown: documentation format used for documenting the code

Why are we using `Jupyter notebook` ?

- Easy to demonstrate
- I can write notes in once cell and code in other

In [ ]:

```
OOP
Functional programming
Basic concepts
```

What are file extensions?

Video - .mp4, .mkv, .avi

Photo - .jpg, .png, .img etc

Text - .txt, .docx, .docs

Programming languages files have extensions

Java - .java - .js - .c ... ...

```
    – .py

    – .ipynb    (specific extension for jupyter notebook)

    – .md        ()
```

```
`Jupyter-lab` vs `Jupyter-notebook`
```

How to install `Jupyter-lab` ?

pre-requisite

```
    – `Python` must be installed
    – `PATH` variable
```

Follow these simple steps

- Step 1: select `start` button and search for "CMD"
- Step 2: open the application called "command prompt"
- Step 3: run following command

        `pip install jupyterlab`

- Step 4: wait
- Step 5: Open "command prompt" again and run command `jupyter-lab`
- Step 6: Click on "Python3" under title "NOTEBOOK"

what softwares do you get when you install python?

```
- pip (CMD)
     its a software (package manager) used to install
     other packages / softwares required for Python

     pip is kind of a installer

- IDLE
- Python interpreter (CMD)
```

```
Official website for Python

https://www.python.org/
```

```
Official website for Jupyter

https://jupyter.org/
```

```
Programming languages are categorized into 2 types (based on approaches to code)

    - Object Oriented Programming

       object
           - data (size, weight, power)
           - functionility (capuchino, latte, hot water, etc)

   - Functional programming (also known as `procedure oriented programming`)
```