Pycharm

How do we configure terminal in `Pycharm`?

- You might have multiple command line interfaces installed on your OS
- We typically use "CMD" on windows.
- File > Settings > Tools > Terminal > Shell PATH > powershell.exe / cmd.exe
- We have to choose "CMD"

How do we configure Python interpreter in `Pycharm`?

File > Settings > Project > Python Interpreter > Base interpreter > Create environment using `virtualenv`

`virtualenv` is a one of the tools to create virtual environment (old and popular)

`conda` - part of anaconda ecosystem (data science)
`pipenv` - If you have multiple Python versions installed on your system
System Interpreter - base interpreter

What is the use of `requirements.txt`?

- Required packages to run the project
- Dependencies for the project
- We specify package names and their specific version in `requirements.txt`
- `pip install -r requirements.txt` (single shot installation of all packages)

Typing module

IDE

- It's an editor dedicated for a particular programming language

Function annotation and type annotation

- IDEs prompt us usage of function when we hover cursor on function names OR when we type out function names

Modules

- `typing` (built-in)
- `pdb` module (built-in)

Production system

- Any system that is being used by our clients

Debugging in Python

- `print` statements
- `breakpoint` : We stop code execution at this point
- debugging in python is done using a in-built library called `pdb` (https://docs.python.org/3/library/pdb.html)
- wherever you want to put "breakpoint" you can place following code there.

```
import pdb
pdb.set_trace()
```

- How to write above code in single line?
  ```
  import pdb; pdb.set_trace()
  ```

Again in Python 3.x onwards, we have again a shortcut function called `breakpoint()`

`pdb` **commands**

n (next) proceed with execution to the next line in code flow
c (continue). proceed with execution until end of the code