Python Syllabus

❖ **Python Basic**
- *Python Introduction*
- *Python installation and Environment variables*
- *Input and output function*
- *Data Types (int, list, string, dictionary, tuple, set etc., Typecasting)*
- *Operators in python*
- *Flow Control (If, for, while, break, continue, comprehension techniques)*
- *Functions (Builtin functions, UDF, Special Functions: lambda, map etc)*
- *Modules, packages (installation, import and use, examples: os, shutil etc)*

❖ **Python Advance**
- *Generator, iterator, decorator, closure*
- *File Handling with Python (text file, xls file, JSON file, Yaml file)*
- *Regular expressions*
- *Object Oriented Python (Inheritance and Polymorphism Overriding Methods)*
- *Exception Handling in python*
- *Logging in python*
- *Database interaction with Python (mysql, sqlite3, ORM-sqlalchemy)*
- *Testing & Debugging Framework (pytest, pdb)*
- *Multithreading in python*

❖ **Pycharm Editor**
- *Create project*
- *Set environment*
- *Installation of module and pluging*
- *Debug in pycharm*
- *PEP 8 standard in pycharm*

❖ **Data Science Libraries**
- *Numpy*
- *Pandas*
- *Scipy*
- *Matplotlib*
- *Data manipulation with xls, xml*
- *Beautiful soup4*

- *Web scraping and crawling*

❖ Cloud
- *AWS Fundamentals*
- *AWS Services*
- *Identity and access management*
- *Compute services*
- *Storage services*
- *Deployment services*
- *Case studies etc.*

❖ Profile Requirement along with above topics:
- *HTML, CSS, Javascript*
- *Git (add, commit, merge, rebase, push, pull etc)*
- *Jenkins (pipelining)*
- *Server (any one WSGI, Apache, Nginx)*
- *Postman*
- *Database (any one MySQL, Oracle, MangoDB)*
- *Project Management tool (Ejira)*
- *Project Methodology (Agile, Waterfall)*
- *UNIX Basic Commands*
- *Project and Project mapping with technical terms*