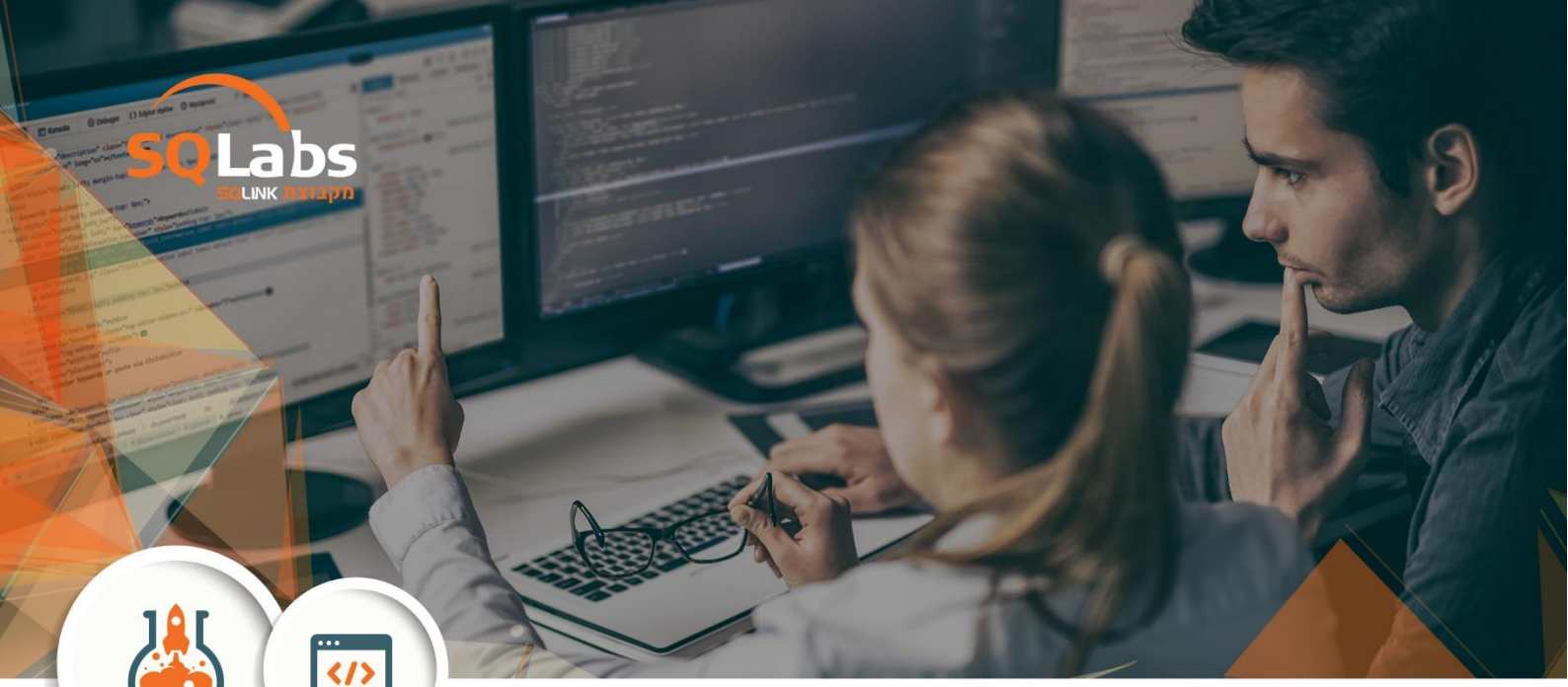

Advanced Python Programming

Course Description

- Python is an easy-to-use interpreted language that has steadily gained in popularity over the last few years in a wide spectrum of applications, ranging from AI to Web Services. Python is also powerful, portable, object-oriented open source programming language for writing standalone programs, quick scripts, and prototypes for large applications.
- This course provides an in-depth and hands-on walkthrough to a few advanced Python topics

Target Population

- Developers and Devops engineers who wish to quickly get familiar and practice advanced Python subjects

Pre-requisites

- Basic Python programming

Course Objectives

Upon completion of the course, participants will be able to:

- Write Python modules and classes
- Use functional programming
- Efficiently test code

- Build and deploy Python code on multiple environments

Course Topics

Module 1 – Functional programing

- Map and Reduce
- Lambda
- Filters
- Iterators and generators

Module 2 – Object Oriented Programming

- Functions
- Modules
- Classes
- Importing Modules

Module 3 – Handling Files and accessing web resources

- Files
- Sockets
- Web
    - The Requests module

Module 4 – Testing your code

- Exception handling
- Assertions and testing
- Unit tests

Module 5 – Python environments

- Python distributions
- Managing modules
    - Install and upgrade
    - Manage versions
- Virtual environments
- Handling dependencies
- Deploying code

Module 6 : Threading (If time permits)

- Process
- Threads
- Manipulating current thread
- Multiple Threads
- Threads sync
- Pass data between threads
- Locking