



NATIONAL UNIVERSITY OF COMPUTER & EMERGING SCIENCES FAST - PESHAWAR CAMPUS

Subject: AL 2002 - Artificial Intelligence Lab

Instructor: Muhammad Saood Sarwar

Lab Task: Programming in Python

Objective

Practice Python programming concepts from **W3Schools** covering topics from basic syntax to classes, objects, and advanced concepts like ***args** and ****kwargs**. Submit your work as Jupyter Notebook (`.ipynb`) and a corresponding PDF with outputs.

Lab Task Instructions

1. Visit <https://www.w3schools.com/python/>.
2. Cover the following topics:
 - (a) Python Basics: Variables, Data Types, Operators
 - (b) Control Structures: If-Else, Loops
 - (c) Data Collections: Lists, Tuples, Sets, and Dictionaries
 - (d) Functions: Regular functions, ***args**, and ****kwargs**
 - (e) Classes and Objects
3. Write and test code snippets for each topic.
4. Save the code and its outputs in Jupyter Notebook format (`.ipynb`).
5. Export the notebook to PDF format.

Submission Requirements

- A Jupyter Notebook file (`.ipynb`) containing:
 - Properly labeled sections for each topic.
 - Code snippets and outputs.
- A PDF document generated from the notebook.