

**Day wise Workshop Schedule (Advanced Python)**  
**10th June 2025 to 20th June 2025**

Day	Content
Day-1 (Tuesday) (Revision)	Various types of print Statements, Operators, Typecasting, If else statement, for loop, while loop, range(), break and continue, use of pass, Nested loop, String: String Functions and slicing, List: List functions, List comprehension. Tuple, Set, Dictionary, Unpacking Sequences. Functions: Type of Arguments: Positional arguments, Keyword arguments, Default arguments, Variable length positional arguments, Variable length keyword arguments. Lambda function, Map, filter, Reduce.
Day-2 (Wednesday)	Classes and objects, User-Defined Classes, Class Variables and Instance, Variables, Instance methods, Class method, static methods, constructor in python, parameterized constructor
Day-3 (Thursday)	Magic Methods in python, Object as an argument, Instances as Return Values, namespaces
Day-4 (Friday)	OOPS: Introduction to inheritance and polymorphism, Abstract Class, Introduction to Abstraction and Encapsulation
	<b>(First test From topics taught b/w Day-1 to Day-3)</b>
Day-5 (Saturday)	Functional Programming: Immutability, Closures and Decorators, generators, Coroutines, iterators, Declarative programming,
Day-6 (Monday)	GUI Programming: Intro to GUI Programming, Setting widgets in the window's interior, Numeric Widgets, Boolean Widgets, Selection Widgets, String Widgets, Date Picker, Color Picker, Container Widgets, Creating a GUI Application, Tkinter, button, canvas
Day-7 (Tuesday)	NumPy: Basic Operation, Indexing, slicing and Iterating, Multidimensional arrays, NumPy Data types, Reading and writing data on Files, SciPy: Introduction to SciPy, Create function, modules of SciPy,
	<b>(Second test From topics taught b/w Day-4 to Day-6)</b>
Day-8 (Wednesday)	Pandas : Series and Data Frames, Grouping, aggregation, Merge Data Frames, Generate summary tables, Group data into logical pieces, Manipulation of data
Day-9 (Thursday)	Matplotlib: Scatter plot, Bar charts, histogram, Stack charts, Legend title Style, Figures and subplots, Plotting function in pandas, Labeling and arranging figures, Save plots.

	<p>Seaborn: style function, color palettes, heatmaps ,distribution plots, category plot, regression plot,</p> <p>Plotly : Line Plots , Areaplots, Scatterplots, Bubble Plots , Stacked bar charts,Grouped bar charts, Pie charts, Tables, Dashboards</p>
Day-10 (Friday)	<p>Web Scraping: Introduction, Web Crawling v/s Web Scraping, Uses of Web Scraping, Components of a Web Scraper, working of a Web Scraper, Crawl, Parse and Transform Store the Data, Beautiful Soup: Introduction to Beautiful Soup library, Accessing Tags, Navigable Strings, Navigating and searching with Beautiful Soup, Web Scraping, Example: Scraping Flipkart Website, Introduction to Github</p>
	<p><b>(Third test From topics taught b/w Day-7 to Day-10)</b></p>