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Power Ahead

Mentored Learning Session
Python Fundamentals

Agenda

1. Welcome & Introductions
2. Introduction to Python
3. Caselet - Data Types in Python
4. Caselet - Conditional Statement and Loops
5. Case Study - Iris Data
6. QnA

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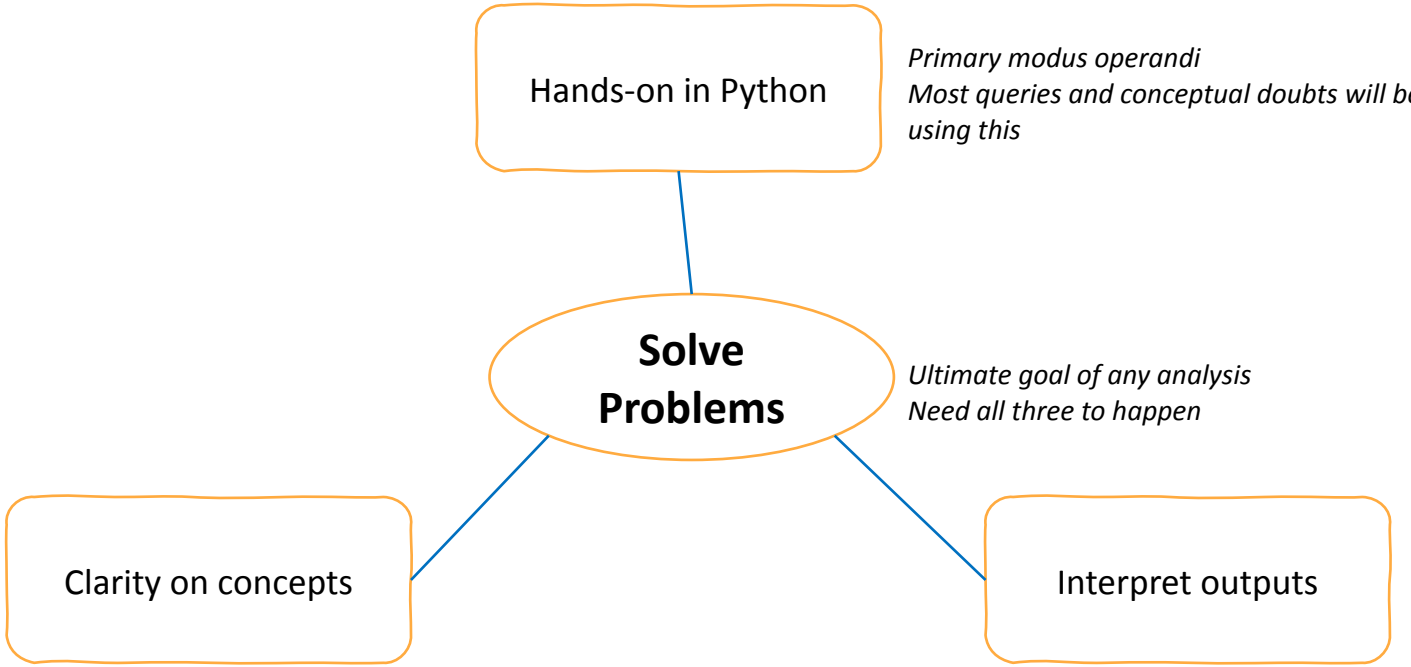
Introductions

Expectations from Mentored Learning Sessions



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Python (What and Why?)

- Python is the programming language of choice for Data Engineers and Data Scientists across the world
- Very rich libraries & functions
- Community support
- Easy to deploy in production
- Support for all the new state of the art technologies (like deep learning)

Common Python libraries

- NumPy – handling multi-dimensional arrays
- Scipy – Statistical package
- Matplotlib, Seaborn – Visualisation
- Pandas – handling arrays & dataframes

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Data Types in Python

Numeric	Numeric data type consists of numbers. These numbers can be whole numbers, decimal numbers or complex numbers.
String	String Data type usually is used to store text. The data to be stored in this data type is enclosed between single ('') or double ("") quotes.
Boolean	The boolean data type has just two values, i.e., True or False.

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Conditional Statements and Loops

Conditional Statements	Conditional statements are used to make decisions based on conditions. These statements are handled by IF - ELSE statements in Python.
Loops	A loop is used for iterating over a sequence. There are two kinds of loops in Python - FOR and WHILE.

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Case Study - Iris Data

About Data	Data Description
The Iris Dataset contains four features (length and width of sepals and petals) of 50 samples of three species of Iris (Iris setosa, Iris virginica and Iris versicolor). These measures were used to create a linear discriminant model to classify the species. The dataset is often used in data mining, classification and clustering examples and to test algorithms.	• Petal Length - in cm • Petal Width - in cm • Sepal Length - in cm • Sepal Width - in cm • Species - Sentosa, Versicolour, and Virginica

Steps to follow

1. Load the dataset
2. Overview of the data
3. Export dataframe as csv
4. Displaying the number of rows randomly
5. Check out the shape of the dataset
6. Slicing the rows
7. Displaying only specific columns
8. Calculating sum, mean, median and mode of a particular column
9. Calculating sum, mean and mode of a particular Species

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Questions

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Happy Learning !