

ANALYZE AND VISUALIZE DATA USING PYTHON

COURSE OVERVIEW

This course provides an introduction to programming using Python. It is designed for individuals who are new to programming or have limited experience with programming and are interested in learning Python. Through a combination of lectures, hands-on exercises, and project work, students will learn fundamental programming concepts and techniques, as well as how to build basic programs and scripts using Python.

The course covers topics such as variables and data types, control structures, functions, and modules, lists and tuples, dictionaries and sets, file input and output, exception handling, and object-oriented programming. Upon completion of this course, students will have a basic understanding of programming concepts and proficiency in Python syntax, and will be able to build basic programs using Python. This course provides a foundation for more advanced Python courses.

TARGET COMPETENCIES

- programming fundamentals
- App development
- Troubleshooting codes
- Text editing
- Text analysis
- Python Functions
- Python statement
- App design

COURSE OBJECTIVES

By completely attending this course, participants will be able to:

- Understanding python program and how to use it.
- Installing Python
- Installing text editor for python coding
- Write and execute python fundamental commands.
- Analyzing text using python commands
- Performing calculations
- Finding patterns in data
- Designing first python app

TARGET AUDIENCE

This course is designed for professional without any prior programming skills and looking for a starting journey with python. Best fit for entry level to build foundation in programming and learning the fundamentals skills to start using python at professional environment.

NOTE

Participants are required to bring laptops with a Windows operating system. Python installation is not required, it is part of the course where instructor will guide you to install python and text editor at your machine.

COURSE METHODOLOGY

This course is practical rather than theoretical. Participants will make applications using the Microsoft Visual Studio and Python throughout the entire duration. They will be required to complete exercises, case studies and solve review workshops at each module in the course.

COURSE OUTLINE

GETTING STARTED WITH PYTHON

- Learning Interface commands
- Learn python environment
- Python configuration
- Using python from command prompt
- Configure text visual studio code editor
- Understand the 4 Patterns for code:
 - Sequential
 - Conditional
 - Iterations
 - Store and Resue

USING VARIABLES

- Understand what variables are
- Create variables (string, Integer, float)
- Mnemonic variables and comments
- Edit variables
- Use variable in
- Write code paragraph using variables

EXPRESSIONS

- Understand what expressions are
- Understand expression syntax
- Create text expressions
- Create Numeric expressions
- Trouble shooting expressions

THE MAINLY TYPES OF STATEMENTS IN PYTHON

- Print statements
- Conditional statements (if and else if)
- Looping statements

WORKING WITH LISTS

- The mainly types of statements in Python
- What Is a List?
- Accessing Elements in a List
- Changing, Adding, and Removing Elements
- Modifying Elements in a List
- Adding Elements to a List
- Removing Elements from a List
- Organizing a List
- Avoiding Index Errors When Working with Lists

FUNCTIONS AND STATEMENTS

- The mainly types of statements in Python
- Print statements
- Conditional statements (if and else if)
- Looping statements
- Understand functions
 - Argument
 - Parameter
 - Result

BUILD FUNCTIONS

- Print()
- int()
- float()
- input()
- type()
- try()
- except()
- def()

To register or for complete course Information

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