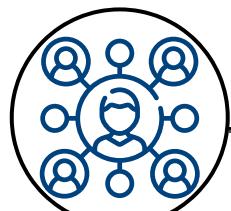


PYTHON LANGUAGE PROFESSIONALS



NETWORK
ADMINISTRATOR



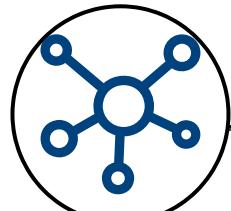
DATABASE
ADMINISTRATOR



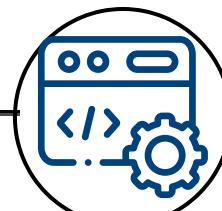
DATA ANALYST



CYBER SECURITY
EXPERT



MACHINE LEARNING
ENGINEER



TELECOM ENGINEER

COURSE OUTLINE

Module 01

Introduction to Python

Module 02

Variable and Data Types

Module 03

Control Flow

Module 04

Data Structures

Module 05

Functions

Module 06

File Handling

Module 07

Error Handling and Exceptions

Module 08

Modules and Libraries

COURSE OUTLINE

Module 09 | Object-Oriented Programming (OOP) Basics

Module 10 | Advanced OOP Concepts

Module 11 | Functional Programming

Module 12 | Regular Expressions

Module 13 | Working with Data

Module 14 | Web Scraping

Module 15 | GUI in Python

Module 16 | Final Project

Introduction Python

- Overview of Python
- Installation and Setup
- Basic Syntax and Hello World

Variable and Data Types

- Variables and Naming Rules
- Numeric Data Types
- String Data Type
- Input and Output

Control Flow

- Conditional Statements (if, elif, else)
- Logical Operators
- Loops (for and while)
- Loop Control Statements (break, continue)

Data Structures

- Lists
- Tuples
- Sets
- Dictionaries

Functions

- Function Definition and Syntax
- Parameters and Arguments
- Scope and Lifetime of Variables
- Return Statements

File Handling

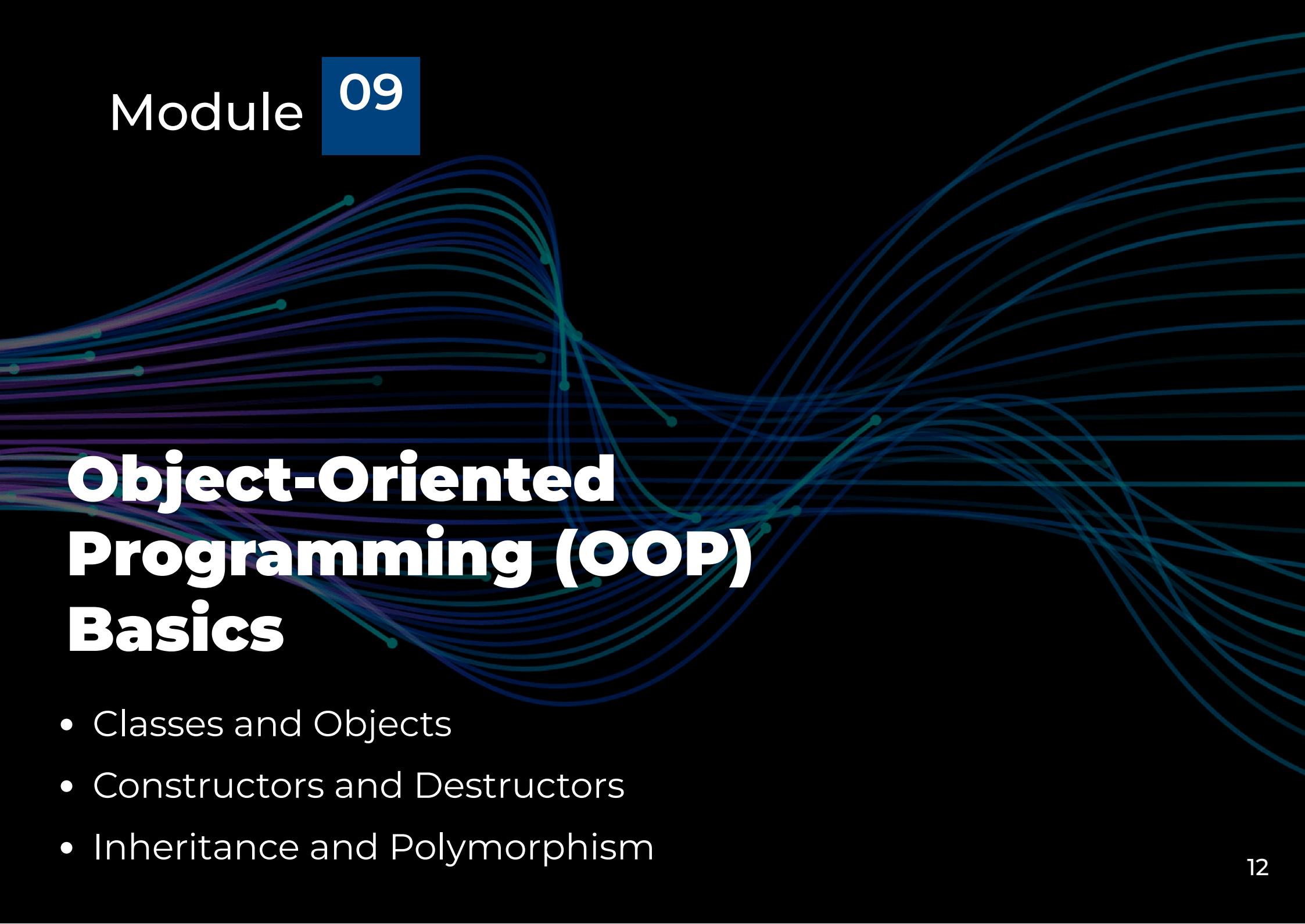
- Reading and Writing Text Files
- Working with CSV and JSON Files

Error Handling and Exceptions

- Exception Handling (`try`, `except`, `finally`)
- Custom Exception Classes

Modules and Libraries

- Using Built-in Modules
- Creating and Importing Custom Modules
- Introduction to Python Standard Library



Object-Oriented Programming (OOP) Basics

- Classes and Objects
- Constructors and Destructors
- Inheritance and Polymorphism

Advanced OOP Concepts

- Encapsulation
- Abstraction
- Method Overriding
- Class and Instance Variables

Functional Programming

- Lambda Functions
- Map, Filter, and Reduce
- Closures

Regular Expressions

- Pattern Matching with Regular Expressions
- Re Module Functions

Working with Data

- Introduction to NumPy and Pandas
- Data Manipulation and Analysis

Web Scraping

- Requests Library
- BeautifulSoup for HTML Parsing

GUI in Python

- Introduction to GUI
- GUI libraries in python
- Basic GUI components
- Event Handling
- Data Input Validation

Final Project

- Applying Python skills to develop a real-world project