

PYTHON BEGINNERS' TRAINING - COHORT 1

Area to be covered: **Fundamentals of Python Programming**

SCHEDULE	TOPIC	DURATION (Weeks)	SUB-TOPICS	COMMENT
Week 1	Introduction to Python	1	Why Python?	
			Key Features	
			Getting Started	
Week 2	Python Basics	1	Hello World	
			Variables & Data types	
			Basic operations	
			Code commenting in python	
			Input and Output	
Week 3	Strings & Manipulation	1	Creating Strings	
			String Operations	
			String indexing & Slicing	
			String Methods	
			String Formatting	
			Escape characters	
Week 4	Program Control Flow	2	Introduction to program control flow	
			Conditional Statements	

Week 4	Program Control Flow	2	Loops control flow	
			Exception handling	
Week 5	Lists	1	Introduction	
			Creating and Accessing Lists	
			List Operations	
			Iterating through Lists	
			List Functions	
			Nested Lists	
Week 6	Tuples	1	Definition	
			Creating and Accessing Tuples	
			Tuple Operations	
			Iterating Through Tuples	
			Tuple Functions	
			Advantages of Tuples	
Week 7	Dictionaries	1	Introduction	
			Creating & Initializing Dictionaries	
			Accessing and Modifying Dictionary Elements	
			Dictionary Methods	
			Dictionary Comprehension	
			Nested Dictionaries	

Week 8	Sets	1	Introduction	
			Creating & Initializing Sets	
			Basic Set Operations	
			Set Methods	
			Set Comprehension	
Week 9	Functions	1	Introduction to Functions	
			Creating and Defining Functions	
			Calling Functions	
			Return Statement	
			Scope and Lifetime of Variables	
			Docstrings and Comments	
			Lambda Functions	
Week 10	File Handling	1	Introduction	
			Opening & Closing files	
			Reading from files	
			Writing to files	
			Appending files	
			File Handling Best Practices	
	Handling Errors and		Introduction	
			Types of Error	
			Exception Handling	

Week 11	Handling Errors and Exception in Python	1	Raising Exceptions	
			Exception Heirarchy	
			Custom Exceptions	
			Logging Exceptions	
Week 12 & 13	Introduction to Object Oriented Programming	2	Introduction to Object-Oriented Programming	
			Key Concepts of OOP(Classess & Objects, Encapsulation, Inheritance, Polymorphism)	
			Creating & Using Classes	
			Constructors and Destructors	
			Class and Instance Variables	
			Method Overloading and Overriding	