

Lecture Schedule

Online FDP on Python Programming (Sep 7-18, 2020)

<https://www.iiitdmj.ac.in/ict.iiitdmj.ac.in/Joint-online-Summer-FDPs-2020/Python-Programming.html>

	Lecture Session 1	Lecture Session 2	Quiz	LUNCH	Practice Session
Date\ Time	(10:00 AM to 11:30 AM)	(11:45 AM to 1:15 PM)	(1:15 AM to 1:30 PM)	(1:30 AM to 2:30 PM)	(02:30 PM to 4:30 PM)
Day 1 7-Sep-2020	Inauguration + Introduction to Python (AK)	Running Python Programs and User Interaction (AG)	Quiz	LUNCH	Practice Exercises on the topics covered in the forenoon sessions (SDD)
Day 2 8-Sep-2020	Variables and Expressions (AK)	Data Types in Python (AG)	Quiz	LUNCH	
Day 3 9-Sep-2020	Conditional Expressions (AK)	Loops (AG)	Quiz	LUNCH	
Day 4 10-Sep-2020	Functions (AK)	Recursion (AG)	Quiz	LUNCH	
Day 5 11-Sep-2020	Advanced Data Types-1 (AG)	Advanced Data Types-2 (AG)	Quiz	LUNCH	
	Weekend Break Sep 12-13, 2020				
Day 6, 14-Sep- 2020	Exception Handling (AK)	File Handling (AG)	Quiz	LUNCH	Practice Exercises on the topics covered in the forenoon sessions (SDD) Valedictory on Sep 18, 2020
Day 7, 15-Sep- 2020	Modules and Packages -1 (AK)	Modules and Packages -2 (AG)	Quiz	LUNCH	
Day 8, 16-Sep- 2020	OOPs in Python-1 (AK)	OOPs in Python-2 (AK)	Quiz	LUNCH	
Day 9, 17-Sep- 2020	ML in Python-1 (AG)	ML in Python-2 (AG)	Quiz	LUNCH	
Day 10, 18-Sep- 2020	Python- Industrial Perspective - I	Python- Industrial Perspective - II	--	LUNCH	

Instructors: AK – Amey Karkare, IITK AG – Atul Gupta, IIITDMJ SDD - Sourabh Dattatray Deoghare, IIITDMJ

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Date	Time	Title	Topics
Day 1, 7th Sept.	10:00 AM - 11:30AM	Introduction to Python	Introduction to Python, History of Python. why Python. Python vs other popular languages
	11:45AM - 1:15PM	Running Python Programs and User Interaction	Installing Python, Executing Python Programs, Internal Working of Python, Python IDEs, Writing simple code, simple Input/output using input() function, and print() function.
Day 2, 8th Sept.	10:00 AM - 11:30AM	Variables and Expressions	Python Character Set, Token, Variables, Assigning Value to Variables, eval() function, Formatting Numbers and Strings, Operators and Expressions
	11:45AM - 1:15PM	Data Types in Python	Python Core Data Type, str class, Inbuilt functions for String, index[] operator, traversal of String, String operators, String Operations
Day 3, 9th Sept.	10:00 AM - 11:30AM	Conditional Expressions	Boolean Type, Boolean Operators, Using Number and Strings with Boolean Operators, Decision Making Statements and Conditional Expressions
	11:45AM - 1:15PM	Loops	While loop, range() Function, For Loop, Nested Loops, Break Statement, Continue Statement
Day 4, 10th Sept.	10:00 AM - 11:30AM	Functions	Syntax and Basics of a Function, Use of a function, Parameters and Arguments, Return statement, Local and Global Scope Scope of a Variable
	11:45AM - 1:15PM	Recursion	Recursive Functions.

Day 5, 11th Sept.	10:00 AM - 11:30AM	Advanced Data Types-1	Creating Lists, Basic list operators, Slicing, Inbuilt functions for Lists, List operator, List Methods, Splitting, Need of Dictionary, creating a Dictionary, Adding and Replacing Values, Retrieving Values, Deleting Items and Traversing Dictionaries.
	11:45AM - 1:15PM	Advanced Data Types-2	Tuples and Sets: Creating Tuples; Tuple () Function, Inbuilt Functions for Tuples, Indexing and Slicing; Operations on Tuples; Traverse Tuples from a List, Set operators
Day 6, 14th Sept.	10:00 AM - 11:30AM	Exception Handling	Exception Handling
	11:45AM - 1:15PM	File Handling	File Handling: Need of File Handling, Reading/Writing Text and Numbers to/from a File, Directories on a disk.
Day 7, 15th Sept.	10:00 AM - 11:30AM	Modules and Packages-1	Understanding and Creating Python modules and packages for modular programming
	11:45AM - 1:15PM	Modules and Packages-2	NumPy, Pandas, Matplotlib, and NLTK
Day 8, 16th Sept.	10:00 AM - 11:30AM	OOPS in Python - 1	Classes and Objects, Methods.
	11:45AM - 1:15PM	OOPS in Python - 2	Operator Overloading, Inheritance, super () and Method Overriding.
Day 9, 17th Sept.	10:00 AM - 11:30AM	ML in Python - 1	Introduction to Regression, Types of Regression, linear regression.
	11:45AM - 1:15PM	ML in Python - 2	Classification and Clustering
Day 10, 18th Sept.	10:00 AM - 11:30AM	Python Industrial Perspective - 1	
	11:45AM - 1:15PM	Python Industrial Perspective - 2	