Online FDP on Python Programming (July 26 – Aug 06, 2021)

Lecture Schedule

	Lecture Session 1	Lecture Session 2	LUNCH	Practice Session	Quiz
Date\ Time	(10:00 AM to 11:30 AM)	(11:45 AM to 1:15 PM)	(1:15 AM to 2:30 PM)	(02:30 PM to 4:30 PM)	(4:30 AM to 5.00 PM)*
Day 1, July 26, 2021	**Inauguration (9.30 AM) +** Introduction to Python (AK)	Elements of Python Programs and User Interaction (AG)	LUNCH	(AK)	Quiz
Day 2, July 27, 2021	Data Type, Variables and Expressions (AK)	Strings in Python (AG)	LUNCH	(AK)	Quiz
Day 3, July 28, 2021	Conditional Expressions (AK)	Loops (AG)	LUNCH	(AK)	Quiz
Day 4, July 29, 2021	Functions (AG)	Recursion (AK)	LUNCH	(AK)	Quiz
Day 5, July 30, 2021	Advanced Data Types-1 (AG) – List, Tuples	Advanced Data Types-2 (AK) – Dict and Set	LUNCH	(AK)	Quiz
No Sessions - July 31 and Aug 01, 2021					
Day 6, Aug 02, 2021	Exception Handling (AK)	File Handling (AG)	LUNCH	(AG)	Quiz
Day 7, Aug 03, 2021	Modules and Packages -1 (AK)	Modules and Packages -2 (AG)	LUNCH	(AK)	Quiz
Day 8, Aug 04, 2021	OOPs in Python-1 (AK)	OOPs in Python-2 (AK)	LUNCH	(AK)	Quiz
Day 9, Aug 05, 2021	ML in Python-1 (AG)	ML in Python-2 (AG)	LUNCH	(AG)	Quiz
Day 10, Aug 06, 2021	Python- Industrial Perspective – I (AA)	Python- Industrial Perspective – II (AT)	LUNCH	Valedictory	--

*Alternatively, a participant can appear in the daily quiz during 9.30 – 10.00 PM.

Instructors:	AK – Amey Karkare, IITK	AG – Atul Gupta, IIITDMJ
	AA – Allahabaksh A, Infosys	AT – Ashish Tendulkar, Google Research

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Course Contents

Date	Time	Title	Topics
Day 1, July 26, 2021	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, July 27, 2021	10:00 AM - 11:30AM	Data Types, Variables and Expressions	Data Types, Token, Variables, Assigning Value to Variables, eval () function, Formatting Numbers and Strings, Operators and Expressions
	11:45AM - 1:15PM	String datatype in Python	Python Core Data Type, Strings, Inbuilt functions for String, indexing and slicing, traversal of String, String operators, unpacking strings,
Day 3, July 28, 2021	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, July 29, 2021	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 and applications
Day 5, July 30, 2021	10:00 AM - 11:30AM	Advanced Data Types-1	Creating Lists, Basic list operators, Slicing, Inbuilt functions for Lists, List operator, List Methods, Splitting, Tuples, Creating Tuples;

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			Tuple () Function, Inbuilt Functions for Tuples, Indexing and Slicing; Operations on Tuples; Traverse Tuples from a List,
	11:45AM - 1:15PM	Advanced Data Types-2	Sets, Set operators, Inbuilt Functions for Sets, Need of Dictionary, creating a Dictionary, Adding and Replacing Values, Retrieving Values, Deleting Items and Traversing Dictionaries.
Day 6, Aug 02, 2021	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, Aug 03, 2021	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, Aug 04, 2021	10:00 AM - 11:30AM	OOP in Python - 1	Classes and Objects, Methods.
	11:45AM - 1:15PM	OOP in Python - 2	Operator Overloading, Inheritance, super () and Method Overriding.
Day 9, Aug 05, 2021	10:00 AM - 11:30AM	ML in Python - 1	Introduction to Machine Learning, Regression and Classification, Linear regression and Classification algorithms
	11:45AM - 1:15PM	ML in Python - 2	Introduction to Text Processing and Applications like sentiment analysis
Day 10, Aug 06, 2021	10:00 AM - 11:30AM	Python Industrial Perspective - I	
	11:45AM - 1:15PM	Python Industrial Perspective - II	