PCET's Pimpri Chinchwad University	Pimpri Chinchwad Education Trust's **Pimpri Chinchwad University** **Sate Maval, Pune**	**Record No.: ….** **Revision: ….** **Date:**

Python Programming LAB Sessions

School of Engineering & Technology (SOET)

Name of the Program:	**MCA**	**Semester : I**	**Level: PG**
Course Name	**Python Programming Lab**	**Course Code and Course Type**	**PMC102 / MAJM**
Course Pattern	**2024**	**Version**	1.0

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LAB-1

Sr No	Practical Title	Week No. / Turn 1	Details	CLO	Hours
1	Practical 1: Different ways to execute a Python Program.	Week 1	1. Demonstrate about Basics of Python Programming. 2. Demonstrate about fundamental Data types in Python Programming. (i.e., int, float, complex, bool and string types) 3. Demonstrate the working of following functions in Python. i) id ( ) ii) type ( ) iii) range ( )	CLO1	2

***Instructions:**

1. ***Write the programs in both interactive mode and script mode.***
2. ***Make the programs user-friendly in script mode by displaying clear instructions and messages for the user on the output screen. As a developer, add comments wherever necessary.***
3. ***Save each program in a folder with your name.***
4. ***Keep a copy of the output for each program for future reference.***

Installation

1. Install Python from python.org/downloads

Basics of Python Programming

2. WAP to print "Welcome to Python Programming!" and explain the structure of a Python program.
3. WAP to calculate the sum, difference, product, and division of two numbers entered by the user.
4. WAP to swap two numbers using a third variable and without using a third variable. Print the values before and after swapping.
5. WAP to find the area of a rectangle given its length and breadth as inputs.

Fundamental Data Types

6. WAP to create and print variables of type int, float, complex, bool, and string.
7. WAP to concatenate two strings provided by the user and print the resulting string.
8. WAP to create a boolean variable and print its value. Also, demonstrate changing the value from True to False and vice versa.
9. WAP to demonstrate basic arithmetic operations (addition, subtraction, multiplication, division) on complex numbers and print the results.

Working of Functions in Python

10. WAP to demonstrate the use of the id() function: create two variables with the same value and print their memory locations.
11. WAP to demonstrate the use of the type() function: create variables of different data types and print their types using the type() function.
12. WAP to demonstrate the use of the type() function by assigning a single variable to different types (e.g., int, float, str) and printing the type each time.

String Slicing

13. WAP to take a string input from the user and print the first 5 characters using slicing.
14. WAP to take a string input from the user and print the last 3 characters using slicing.
15. WAP to take a string input from the user and print a substring from the 2nd to the 5th character using slicing.
16. WAP to take a string input from the user and print every alternate character using slicing (e.g., 'abcdef' should print 'ace').

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