**Python Programming**

**LAB MANUAL**

**PARUL UNIVERSITY**

**FACULTY OF ENGINEERING AND TECHNOLOGY**

**COMPUTER SCIENCE & ENGINEERING**

**WAGHODIA, VADODARA**

**PARUL UNIVERSITY**

**FACULTY OF ENGINEERING AND TECHNOLOGY**

**PARUL INSTITUTE OF TECHNOLOGY**

**Department of Computer Science & Engineering**

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**LAB MANNUAL**

**(EVEN SEMESTER)**

**SUBJECT CODE: 203124208**

**SUBJECT NAME: Python Programming**

**YEAR/SEM: 2nd/ 3rd**

**DEPARTMENT: CSE**

**PREFACE**

It gives us immense pleasure to present the first edition of *Python Programming Practical Book* for the B.Tech. 2nd year students for PARUL UNIVERSITY.

The Python programming theory and laboratory courses at **PARUL UNIVERSITY, WAGHODIA, VADODARA** are designed in such a way that students develop the basic understanding of the subject in the theory classes and then try their hands on the experiments to realize the various logical phenomena learnt during the theoretical sessions. The main objective of the Python Programming laboratory course is: **Learning Python Programming**.

The objective of this ***Python Programming*** is to provide a comprehensive source for all the experiments included in the Python Programming course. It explains all the aspects related to control structure, exception handling etc. It also gives sufficient information on how to interpret and discuss the obtained results.

We acknowledge the authors and publishers of all the books which we have consulted while developing this Practical book. Hopefully this *Python Programming Book* will serve the purpose for which it has been developed.

**Instructions to students**

1. The main objective of the Python Programming laboratory is: ***Learning concepts of Python Language***
2. Be prompt in arriving to the laboratory and always come well prepared for the experiment.
3. Every student should have his/her individual copy of the *Python Programming Practical Book*.
4. Every student have to prepare the notebooks specifically reserved for the Python Programming practical work: *“Python Programming Book”*
5. Every student has to necessarily bring his/her *Python Programming Practical Book*, *Python Programming Practical Class Notebook* and *Python Programming Practical Final Notebook*, when he/she comes to the Practical to perform the experiment.
6. Do not forget to get the information of your next allotment (the experiment which is to be performed by you in the next laboratory session) before leaving the laboratory from the Technical Assistant.
7. The grades for the Python Programming practical course work will be awarded based on your performance in the laboratory, regularity, recording of experiments in the *Python Programming Practical Final Notebook*, lab quiz, regular viva-voce and end-term examination



CERTIFICATE

This is to certify that Mr./Ms.…………………………………………………… with enrolment no. …………………………has successfully completed his/her laboratory experiments

In Python Programming laboratory during the academic year…………

Date: Signature of lab teacher:

Signature of HOD:

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| **Sr. no.** | **Title** | **No. of Hours** | **Page No.** | **Performance Date** | **Assessment Date** | **Marks out of 10** | **Sign** |
| 1 | WAP to read and display the following information. Name, Address, Phone no. |  |  |  |  |  |  |
| 2 | WAP to read two numbers from the keyboard and display the larger one on the screen. |  |  |  |  |  |  |
| 3 | WAP to find, a given number is PRIME or NOT. |  |  |  |  |  |  |
| 4 | Write a Function to swap values of a pair of integers. |  |  |  |  |  |  |
| 5 | WAP to find N! Using function. |  |  |  |  |  |  |
| 6 | WAP to print Fibonacci series of n numbers, where n is given by the programmer. |  |  |  |  |  |  |
| 7 | WAP to read a set of numbers in an array & to find the largest of them. |  |  |  |  |  |  |
| 8 | WAP to sort a list of names in ascending order. |  |  |  |  |  |  |
| 9 | WAP to read a set of numbers from keyboard & to find the sum of all elements of the given array using a function. |  |  |  |  |  |  |
| 10 | Calculate area of different geometrical figures (circle, rectangle, square, and triangle). |  |  |  |  |  |  |
| 11 | WAP to increment the employee salaries on the basis of their designation. Use employee name, id, designation and salary as data member and inc\_sal as member function |  |  |  |  |  |  |
| 12 | Create two classes namely Employee and Qualification. Using multiple inheritance derive two classes Scientist and Manager. Take suitable attributes & operations. WAP to implement this class hierarchy. |  |  |  |  |  |  |
| 13 | WAP to read data from keyboard & write it to the file. After writing is completed, the file is closed. The program again opens the same file and reads it. |  |  |  |  |  |  |
| 14 | Case Study of Security Mechanism in Python |  |  |  |  |  |  |
| 15 | Case Study of Graphics in Python |  |  |  |  |  |  |