



Laboratory Manual



**School of Computer Science and Engineering
Department of Computer Science and Application.**

BCA

Second Year

Semester - III

Lab Course based on Python Programming

Course Code: XCA312

2023-



Guidelines

Laboratory rules

1. Attendance is required for all lab classes. Students who do not attend lab will not receive credit.
2. Ensure that you are aware of the test and its procedure before each lab class. **You will NOT be allowed to attend the class if you are not prepared!**
3. Personal safety is top priority. Do not use equipment that is not assigned to you.
4. All accidents must be reported to your instructor or laboratory supervisor.
5. The surroundings near the equipment must be cleaned before leaving each lab class.
6. Ensure that outputs are checked and marked by your TA for each lab period.
7. Bags & eatables are not allowed in the lab.



STUDENT'S DETAILS

Name of Student

Academic

Programme

Class/ Roll

PRN No.



Certificate

This is to certify that

Mr. / Miss _____

Roll No _____ PRN No. _____

of class _____ has satisfactorily / unsatisfactorily
completed the Lab Course _____ in the school
during the academic year _____.

Course Teacher

Head of Department

Dean Academics

Table of contents

Instruction: Draw Flow-Chart and write algorithms wherever is needed in the Manual.				
Sr. No.	Title of Experiment	Page No	Date	Remark
Group A				
1	Write a menu driven program to convert the given temperature from Fahrenheit to Celsius and vice versa depending upon user's choice.			
2	WAP to calculate total marks, percentage and grade of a student. Marks obtained in each of the three subjects are to be input by the user. Assign grades according to the following criteria : Grade A: Percentage ≥ 80 Grade B: Percentage ≥ 70 and ≤ 60 and ≤ 40 and < 40			
3	WAP to display the first n terms of Fibonacci series.			
4	WAP to find factorial of the given number.			
5	WAP to find sum of the following series for n terms: $1 - \frac{2}{2!} + \frac{3}{3!} - \dots - \frac{n}{n!}$			
6	WAP to calculate the sum and product of two compatible matrices.			
7	Write a menu-driven program, using user-defined functions to find the area of rectangle, square, circle and triangle by accepting suitable input parameters from user.			
Group B				
8	Write a menu-driven program to create mathematical 3D objects I. curve II. sphere III. cone IV. arrow V. ring VI. Cylinder.			
9	WAP to read n integers and display them as a histogram.			
10	WAP to plot a graph of people with pulse rate p vs. height h. The values of p and h are to be entered by the user.			
Group C				

11	Create a form to design a student information system, using various tools like buttons, check boxes, radio buttons, and text boxes.			
12	Create a shopping cart application based on various GUI controls.			
