



Graphic Era
HILL UNIVERSITY

Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)

DEHRADUN CAMPUS

PRACTICAL FILE / TERM WORK

CBNST LAB

PMA-502

B.Tech CSE

V

2024-25

**DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING**

**GRAPHIC ERA HILL UNIVERSITY,
DEHRADUN**

SUBMITTED TO

Mr. PURUSHOTTAM DAS

ASST. PROFESSOR

DEPARTMENT OF COMPUTER

SCIENCE & ENGG.

SUBMITTED BY

NAME:

Examination Roll No.:

Course / Sem:

COLLEGE ROLL NO. _____

EXAMINATION ROLL NO. _____



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THIS IS TO CERTIFY THAT Mr. / Ms. _____
HAS SATISFACTORILY COMPLETED ALL THE EXPERIMENTS IN THE LABORATORY OF THIS
COLLEGE. THE COURSE OF THE EXPERIMENTS / TERM WORK
_____ IN PARTIAL FULLFILLMENT OF THE
REQUIREMENT IN _____ SEMESTER OF B.TECH (CSE) / M.TECH() / BCA / MCA /
BBA / MBA DEGREE COURSE PRESCRIBED BY GRAPHIC ERA HILL UNIVERSITY, DEHRADUN
DURING THE YEAR _____ - _____

CONCERNED FACULTY

HEAD OF DEPARTMENT

NAME OF EXAMINER:

SIGNATURE OF EXAMINER:



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Department of Computer Science & Application

Lab Details

Name of the Lab: - CBNST Lab

Lab Code: - PMA-502

Subject Credit: - 2

Course: - B.Tech

Branch: - CSE

Semester: - V

Section: - K1

Number of students enrolled: -

Name of the Faculty: - Mr. Purushottam Das

Name of Lab Instructor: -

Lab Number:-

Lab Time Table

Lab Session	Day	Lecture Number	Timing
1	Wednesday	7 - 8	04:00PM – 05:50PM



Department of Computer Science & Application

List of Practical's

Subject Code: PMA-502

Subject Name: CBNST Lab

Course : B.Tech CSE

Branch & Sem:-V

1. WAP to find the roots of non-linear equation using Bisection method.
2. WAP to find the roots of non-linear equation using False position method.
3. WAP to find the roots of non-linear equation using Newton's Raphson method.
4. WAP to find the roots of non-linear equation using Iteration method.
5. WAP to interpolate numerically using Newton's forward difference method.
6. WAP to interpolate numerically using Newton's backward difference method.
7. WAP to interpolate numerically using Lagrange's method.
8. WAP to Integrate numerically using Trapezoidal rule.
9. WAP to Integrate numerically using Simpson's 1/3 rules.
10. WAP to Integrate numerically using Simpson's 3/8 rules.
11. WAP to find numerical solution of ordinary differential equations by Euler's method.
12. WAP to find numerical solution of ordinary differential equations by Runge-Kutta (fourth order) method.
13. WAP to linear Curve fitting by least – square approximations.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
STUDENT LAB REPORT SHEET
CBNST LAB (PMA-502)

Name of Student Mo. No.....

Address Permanent

Father's Name Mo No

Mother's Name Mo No.....

SectionBranch.....Semester..... Class Roll No.....

Local Address.....Email.....Grade A B C

Marks 5 3 1

S. No.	Name of the Experiment	D.O.P.	Date of Submission	Grade (Viva)	Grade (Report File)	Total Marks (out of 10)	Student's Signature	Teacher's Signature
1	WAP to find the roots of non-linear equation using Bisection method.							
2	WAP to find the roots of non-linear equation using False position method.							
3	WAP to find the roots of non-linear equation using Newton's Raphson method.							
4	WAP to find the roots of non-linear equation using Iteration method.							
5	WAP to interpolate numerically using Newton's forward difference method.							
6	WAP to interpolate numerically using Newton's backward difference method.							
7	WAP to interpolate numerically using Lagrange's method.							
8	WAP to Integrate numerically using Trapezoidal rule.							

9	WAP to Integrate numerically using Simpson's 1/3 rules.							
10	WAP to Integrate numerically using Simpson's 3/8 rules.							
11	WAP to find numerical solution of ordinary differential equations by Euler's method.							
12	WAP to find numerical solution of ordinary differential equations by Runge-Kutta (fourth order) method.							
13	WAP to linear Curve fitting by least – square approximations.							

Total No of Practical allotted:

Total No of Practical completed:

Percentage Attendance of Practical:

ACKNOWLEDGEMENT

Name of Student

**DEHRADUN CAMPUS**[illegible]

Term work:

- [1] Write a program in C to find absolute, relative and percentage error for round-off and truncation cases.
- [2] Write a program in C find the roots of non-linear equation using Secant method.
- [3] Write a program in C to solve the system of linear equations using Gauss Elimination method.
- [4] Write a program in C to solve the homogeneous system of linear equations using Gauss Jordan method.
- [5] Write a program in C to solve given system of linear equations using Gauss-Siedal iterative method.
- [6] Write a program in C to interpolate using Gauss forward Interpolation formula for given values.
- [7] Write a C Program to implement curve fitting for a straight line.
- [8] Write a C Program to implement parabolic curve fitting.
- [9] Write a C Program to implement regression lines.