



NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Devenhalli, Bangalore -562164

Department of Computer Science and Engineering

Course Title	C Programming Laboratory					
Course Code	19CPL16/26					
Programme	BE					
Semester	I	ECE,CIVIL & MECH				
	II	CSE & ISE				
Course Structure	Theory			Practical		
	Lecture	Tutorial	Credits	Lecture	Laboratory	Credits
	3	0	3	1	2	2
Course Coordinator	Dr Anitha Patil					
Course Faculty	Dr Anitha Patil, HoD, CSE Department Mrs Prabha, Associate Professor, CSE Department Mrs Bhagya, Associate Professor, CSE Department Mrs Shushma, Assistant Professor, CSE Department					

PREREQUISITES:

Level	Credits	Periods/Week	Prerequisites
UG	2	2	Fundamentals of Computers, Intelligence to do complex problem-solving.

SYLLABUS:

List of Programs	
S.No.	PART - A
1.	a. For producing a certain product in manufacturing company, suppose the total costs are represented by a quadratic equation. Design a C program to find the roots of the quadratic equation, for non-zero coefficients.
	b. The three pupils from a training academy are to be selected for the army, navy and air force. Design a C program using branching statements to find the tallest candidate selected for the army, second tallest to the navy and third tallest to air force.
2.	a. Design a C program to find greatest (GCD) & least (LCM) number of arrangements using Euclid's algorithm to make use of every balloon.
	b. Software company issues bonus to its employees on leap years. Given a year design a C program to find whether the employee is due for bonus or not using ternary operator.
3.	A criminal leaves a four digit number as his calling card. Design an algorithm and develop a C program to test the four digit number left by the criminal is palindrome or not.
4.	A detective finds a clue at crime scene. Develop a C program to search the found clue in his database which helps to find the criminal.
5.	The books in the library are randomly placed on the shelves. Design a C program that sorts the books based on ISBN (use bubble sort to implement the program).
6.	Design a C program to search and display student details in a college Database using the student's USN (using binary search technique).
7.	Design, develop and execute a program in C to read two matrices A (m x n) and B (p x q) and compute the product of A and B.
8.	You are given two envelopes, each containing money. Design, develop and execute a program in C to swap two envelopes using methods:
	a. Call by value. b. Call by reference
9.	Design a C program for a private bus seating arrangement where only a senior citizen

	should occupy a seat, where the seat number is a prime number. Check whether the seat is occupied by senior citizen or not (Prime number).
10.	The company is maintaining employee database. Using structures design a C program that accepts the details such as Employee_ID, Employee name and Basic, DA and HRA of employees and prints their details along with their gross salary.
PART - B	
Mini project using C concepts like Arrays, Structures and User defined functions	

Note: All lab programs should be executed in UBUNTU / LINUX platform only.