

**C – PROGRAMMING LAB****OBJECTIVES:**

- Understand the basic concept of C Programming, and its different modules that includes conditional and looping expressions, Arrays, Strings, Functions, Pointers, Structures and File programming.
- Acquire knowledge about the basic concept of writing a program.
- Role of constants, variables, identifiers, operators, type conversion and other Building blocks of C Language.
- Use of conditional expressions and looping statements to solve problems associated With conditions and repetitions.
- Role of Functions involving the idea of modularity.

**List of Experiments**

1. Algorithms and Flow charts design and evaluation (Minimum 2)
2. Write C Programs to demonstrate C-tokens and operators
3. Write C Programs to demonstrate Decision Making And Branching (Selection)
4. Write a C program to demonstrate different loops
5. Write a C program to demonstrate arrays
6. Write a C program to demonstrate functions
7. Write a C program to implement the following
8. To manipulate strings using string handling functions.
9. To manipulate strings without using string handling functions
10. Write a C program to demonstrate different library functions
11. Write a C program to implement the following
12. To exchange two values using call by value and reference
13. To multiply two matrices using pointers
14. Write a C program to demonstrate functions using pointers
15. Write a C program to implement the following operations using structure and functions:
  - i) Reading a complex number
  - ii) Writing a complex number
16. Write a C program
17. To copy data from one file to another
18. To reverse the first n characters in a given file (Note: The file name and n are specified on the command line)

**List of Mini-Projects:**

1. Merging of two arrays
2. Arithmetic operations on two complex numbers
3. Employee's Management System
4. Library management
5. Department store system
6. Personal Dairy Management System
7. Telecom Billing Management System
8. Bank Management System
9. Contacts Management
10. Medical Store Management System

### **COURSE OUTCOMES:**

- Apply and practice logical ability to solve the problems.
- Understand C programming development environment, compiling, debugging, and linking and executing a program using the development environment
- Analyzing the complexity of problems, Modularize the problems into small modules and then convert them into programs
- Understand and apply the in-built functions and customized functions for solving the problems.
- Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems.
- Document and present the algorithms, flowcharts and programs in form of user-manuals
- Identification of various real time domains and programming resources in C through
- MiniProjects