CSE104:COMPUTER PROGRAMMING LABORATORY

L:0 T:0 P:2 Credits:1

Course Outcomes: Through this course students should be able to

CO1 :: Interpret problems perspicuously and convert them into working programs

CO2 :: Design error free programs which will lay the foundation for reliable problem solving

CO3 :: Formulate a problem solving approach using C language and subsequently other languages

List of Practicals / Experiments:

Variables, Constants, Operators, Control statements

- C programming exercises involving the use of variables, Constants, Arithmetic, Relational, Logical and Bit-wise operators
- C programming exercises involving the use of looping constructs (while, Do while and for), Selection and multi selection (if, Else, Switch), Break, Continue, Goto statements

Formatted and unformatted Input/Output functions, User defined functions, Recursive functions

- writing C programs using formatted and unformatted functions such as scanf(), printf(), getch(), getche(), getchar(), gets(), puts()
- writing C programs using user defined functions, library functions in math.h, recursive functions

One dimensional and two dimensional arrays

- writing C programs using 1D, 2D arrays
- operations on arrays
- C programming exercises involving assigning of values and manipulation of integer, float and character arrays
- passing arrays to functions
- sorting of arrays using bubble sort

String, String functions, Sorting and searching in string

- writing C programs on strings, array of strings, library functions in string.h
- C programming exercises to insert and delete n characters from a given position in a string
- C programming exercises to count the words and characters in a given line of text
- writing C programs involving searching and sorting of strings
- writing C programs to check whether a string is a palindrome or not

Pointers

- writing C programs to locate basic data type variables using pointers
- pointer to arrays
- pointer to string
- pointer to pointer
- returning pointer from function

Structures and Unions

- writing C programs using structures and unions
- writing C programs using nested structures

Dynamic Memory Allocation

- writing C programs to implement dynamic memory management using malloc(), calloc(), realloc(), free() functions

File handling

- writing C programs to read and write in to text and binary files opened with different modes
- writing C programs to append to the data present in the files

Text Books:

1. PROGRAMMING IN C by ASHOK N. KAMTHANE, PEARSON

References:

1. PROGRAMMING IN ANSI C by E. BALAGURUSAMY, MCGRAW HILL EDUCATION
2. C HOW TO PROGRAM by PAUL DEITEL AND HARVEY DEITEL, PRENTICE HALL