

K. S. SCHOOL OF ENGINEERING AND MANAGEMENT

Department of Computer Science and Engineering

C Programming Laboratory

LIST OF EXPERIMENTS

Laboratory Programs:

1. Familiarization with computer hardware and programming environment, concept of naming the program files, storing, compilation, execution and debugging, taking any simple C-code.

PART A

2. Develop a program to solve simple computational problems using arithmetic expressions and use of each operator leading to simulation of a commercial calculator. (No built-in math function)
3. Develop a program to compute the roots of a quadratic equation by accepting the coefficients. Print appropriate messages.
4. Develop a program to find the reverse of a positive integer and check for palindrome or not. Display appropriate messages.
5. An electricity board charges the following rates for the use of electricity: for the first 200 units 80 paise per unit; for the next 100 units 90 paise per unit; beyond 300 units Rs 1 per unit. All users are charged a minimum of Rs. 100 as meter charge. If the total amount is more than Rs 400, then an additional surcharge of 15% of total amount is charged. Write a program to read the name of the user, number of units consumed and print out the charges.
6. Introduce 1D Array manipulation and implement Binary search.
7. Implement using functions to check whether the given number is prime and display appropriate messages. (No built-in math function)

PART B

8. Develop a program to introduce 2D Array manipulation and implement Matrix multiplication and ensure the rules of multiplication are checked.
9. Develop a Program to compute $\sin(x)$ using Taylor series approximation. Compare your result with the built-in Library function. Print both the results with appropriate messages.
10. Write functions to implement string operations such as compare, concatenate, string length. Convince the parameter passing techniques.
11. Develop a program to sort the given set of N numbers using Bubble sort.
12. Develop a program to find the square root of a given number and execute for all

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Name

possible inputs with appropriate messages. Note: Don't use library function sqrt(n).

13. Implement structures to read, write and compute average-marks and the students scoring above and below the average marks for a class of N students.

14. Develop a program using pointers to compute the sum, mean and standard deviation of all elements stored in an array of nreal numbers.

15. Implement Recursive functions for Binary to Decimal Conversion.

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