

## Programming in C Language Lab ( Practical ) \_UHSES0124\_AY 2025-26

Experiment No.	Experiment Title	Sub-Experiment								
Experiment No. 1	<b>To study different Linux commands and different IDEs.</b>	Write Ten Linex commands and name different IDEs used for C Programming.								
Experiment No. 2	<b>To study variables and constants in “C” Practical/Experimentation:</b>	Declare and initialize variables and constant using assignment statement and scanf function. Use printf function to display the variables – (data type formatting)								
Experiment No. 3	<b>To Study arithmetic operators in “C”</b>	<p>1. Develop a program to use arithmetic operators.</p> <p>2. Write a program to calculate and display the area and perimeter of a circle, triangle and rectangle.</p>								
Experiment No. 4	<b>To Study logical operators and Conditional execution.</b>	<p>1. Write a C program to check whether an entered character is a vowel or consonant.</p> <p>2. Write a C program to find the largest among 3 numbers entered by the user using a nested if else statement.</p> <p>3. An electric power distribution company charges its domestic consumers as follows. Write a program to calculate electricity bill (accept number of units from user) according to the following criteria</p> <table border="1"> <tr> <td>Units</td> <td>Price</td> </tr> <tr> <td>First 100 units</td> <td>No charge</td> </tr> <tr> <td>Next 100 units</td> <td>Rs 5 per unit</td> </tr> <tr> <td>After 200 units</td> <td>Rs 10 per unit</td> </tr> </table>	Units	Price	First 100 units	No charge	Next 100 units	Rs 5 per unit	After 200 units	Rs 10 per unit
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	<b>To Study concepts of Decision</b>	<p>1. Write a C program to check whether the entered number is palindrome or not.</p> <p>2. Write a C program to check whether the entered number is an even or odd.</p>								

Experiment No. 5	<b>Making and Looping.</b>	<p><b>3.</b> Write a C program to list all the prime numbers between 1 and n, where n is a value entered by the user.</p> <p><b>4.</b> Write C program to print Fibonacci series upto the number entered by user.</p>
Experiment No. 6	<b>To Study User Defined functions.</b>	<p><b>1.</b> Develop a function which accepts a integer array and print the array.</p> <p><b>2.</b> Develop a Menu driven program to perform arithmetic operations(+,-,/,* ) and display the result using user defined functions.(switch case using function)</p> <p><b>3.</b> Write C program that convert a lowercase character to uppercase using a user defined function.</p> <p><b>4.</b> Write a C program for Swapping of two numbers using call by value.</p>
Experiment No. 7	<b>To Study Concept of Arrays.</b>	<p><b>1.</b> write a C program to show sum of 10 elements of an array and their average.</p> <p><b>2.</b> Write a C program for finding smallest and largest numbers from given numbers from elements of an array.</p> <p><b>3.</b> Write a program for to check given String is Palindrome or not using string handling functions</p> <p><b>4.</b> Write a C program Replace a specified character from a string with another character.</p>
Experiment No. 8	<b>To Study Multi-Dimensional Array</b>	<p><b>1.</b> Implement Matrix Addition, Subtraction and Multiplication using 2D array.</p> <p><b>2.</b> Write a C program to calculate the sum of the Upper triangular elements of a matrix. (matrix size taken from user)</p> <p><b>3.</b> Write a C program to generate transpose of matrix.</p> <p><b>4.</b> Write a C program to calculate the sum of the primary diagonal elements of a 2x2 matrix.</p>

Experiment No. 9	<b>To Study Concept of Pointers.</b>	<p><b>1.</b> Write a C program for Swapping of two numbers using call by reference.</p> <p><b>2.</b> Develop a function to accept array arguments using pointer, modify and display contents of the array using pointer.</p>
Experiment No. 10	<b>To Study Memory allocation in “C”</b>	Write a program for dynamic array creation(allocation) using malloc() /calloc() function and destroying(deallocation) using free() function.