Basic Pointer

Write a program in C++ to declare an integer variable, store its address in a pointer, and display both the value of the variable and its address using the pointer.

Pointer Arithmetic

Write a program in C++ to create an array of 5 integers. Use a pointer to traverse the array and print all elements using pointer arithmetic.

Call by Reference (using pointer)

Write a program in C++ to swap two numbers using pointers.

Dynamic Memory Allocation

Write a program in C++ to dynamically allocate memory for an array of 5 integers using a pointer, take input from the user, and display the array elements.

Function with Pointer

Write a program in C++ to pass a pointer to a function that updates the value of a variable.

String with Pointers

Write a program in C++ to count the length of a string using a character pointer (without using built-in functions like strlen).

Dynamic Integer

Write a program in C++ to dynamically allocate memory for a single integer using `new`, assign a value, display it, and then free the memory using `delete`.

Dynamic Array

Write a program in C++ to create an array of 5 integers using `new`, take input from the user, display the array elements, and then release the memory using `delete[]`.

Dynamic 2D Array

Write a program in C++ to create a 2D array (matrix) dynamically using `new`. Take input for rows and columns from the user, fill the matrix, display it, and free memory using `delete[]`.

Dynamic String

Write a program in C++ to dynamically allocate memory for a string using a character pointer and `new`. Take user input for the string, display it, and then free the memory.

Function Returning Dynamic Memory

Write a program in C++ with a function that returns a pointer to a dynamically allocated array. In `main()`, call the function, display the array, and free the memory.

Pointer Re-allocation (basic simulation)

Write a program in C++ to dynamically allocate an array of integers using `new`, fill it with values, then allocate a bigger array, copy the old values into it, add more elements, and release both old and new arrays properly.