

Lab 8 & 9: Pointers

Objectives:

To understand pointers and references.

Use Pointers with Arrays and Functions

Tasks:

1. Write a C++ program where you take two values in two variables from user, add the values of the two variables and put it into a third variable using a pointer. you must use only one pointer.
2. Create a string array of size 2, in the first element enter your name and in the second element enter your registration number, using a pointer, now pass the array address to function called display(), which has a string pointer as a parameter, the function will display both elements of the array.
3. Write a program which calculates the average of an array of 5 elements (initialize the values of the array during declaration) the average should be calculated in a function called average(), this function will have a pointer parameter (array must be passed here) and an integer parameter (which is the size of array) i.e., average(int *arr , int size).
4. Write a C++ program where you create 2 functions (percentage, GPA) and a 3rd function called caller, the caller will have one integer and a pointer to function as parameters. In the main function you must prompt the user to enter marks, then prompt him again to ask what he wants to find out, GPA (assume 90-100 marks = A = 4.0 GPA and so on) based on marks or percentage based on marks. Then call the caller function accordingly.
5. Write a C++ program where you declare an array of 5 elements, create a pointer that points to the array, then ask the user to input 4 values in the array using pointer (keep the last index value 0), now to declare two separate integers that will act as the indexes of the array, ask the user to input values in them (if the user enters 3,2 so arr+2, arr+1). Now finally send the two array indexes values to a function, the function must have two pointers as parameters. The function will add the two values on index locations and put them back in the fifth index/element of the array replacing the 0. Display the updated fifth index of array in main().