Data Structures and Algorithms

LAB 2:

Functions (pass by reference), Method overloading and Friend Functions

1 Functions Pass by Reference

a. Create a function that swaps two variables. The function receives the both values by reference.
b. Create a pass by reference function and calculates cube of the given **variable**. Display the variable in main function before and after calling the Cube function.
c. Create a pass by reference function to create a copy of variable x.

2 Method Overloading.

a. Create a class name Calculator which contains 4 methods with the same name ADD. All 4 methods contain different number of parameters. Create all these 4 methods to show method overloading.

b. Create a class that contains 4 methods, all with the same name. All methods accept only one parameter and display the data types of the given parameter. The data types accepted as parameters are int, float, string, and char.

3 Friend Functions and Classes

a. Create a class named Minor. Its private attributes may include name, father name, and age (which cannot be negative), and address. Create another class CheckMinor that contains three functions the first one takes one Minor object as a parameter and displays if that object is minor or not. The other takes two Minor objects as parameters. The method checks if both objects are minors or not. If both are minors it returns the object who is younger in age. The third takes three parameters. And compare the ages of all three objects and returns the youngest object. All three methods have the same name. *Minor is one who is below 18 of age*.