**University of Michigan – Dearborn**

**CIS 200 – Computer Science 2**

**Lab# 9**

Quan Le

[lmmquan@umich.edu](mailto:lmmquan@umich.edu)

December 6, 2024

**Table Content**

Contents

[Question 1 3](#_Toc184400935)

[Source Code 3](#_Toc184400936)

[Challenges 3](#_Toc184400937)

[Screenshots 3](#_Toc184400938)

# Question 1

## Source Code

The source code for this question has been uploaded to Canvas as Lab\_9.cpp.

## Challenges

* I had some challenges about tweaking the given BST functions to match the AddressBook class. Therefore, it took pretty much time to tweak those.
* Also, I’ve got logic bugs related to input the choice of the menu, which is later solved by adding cin.ignore()
* Some bugs related to getting the full input. At first, I used cin >> ….., then I found out I must use getline (cin ,….)
* There were also some challenges when trying to update the Total number of contacts, but I managed to solve it.
* Some challenges when declearing AddressBook methods (addContact, removeContact, displayContact) since I also declare BinarySearchTree and use it in the code. But BinarySearchTree hasn’t been initialized when initializing AddressBook. Therefore, I just declared BinarySearchTree at first (no methods or attributes). Then I declared and initialized it later. Also, the AddressBook methods, I initialized them after finishing initializing BinarySearchTree.

Solution is like this :

class BinarySearchTree; //Must declare this first in order to use this class in class AddressBook

class AddressBook

{

public:

void addContact(BinarySearchTree &bst);

void removeContact(BinarySearchTree &bst);

void displayContacts(BinarySearchTree &bst);

};

class BinarySearchTree

{

public:

……..

private:

………

};

//Then initialize the AddressBook methods

void AddressBook::addContact(BinarySearchTree &bst)

{

//code

}

void AddressBook::removeContact(BinarySearchTree &bst)

{

//code

}

void AddressBook::displayContacts(BinarySearchTree &bst)

{

//code

}

## Screenshots

A screen shot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer screen

Description automatically generated