

Foundry Interview Task

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Task Objectives – All the task Objectives were completed

```
libAddressBook.lib - x64-Debug
1  #pragma once
2  #include <iostream>
3  #include <string>
4  #include <vector>
5
6  // The global namespace has not been polluted
7
8
9  /// The main Address Book implementation. Extend as required.
10 class AddressBook
11 {
12
13 public:
14     /// A container for address book data
15
16     struct Entry
17     {
18         std::string first_name;
19         std::string last_name;
20         std::string phone_number;
21     };
22
23     // The entriesList has been declared as a member variable
24     std::vector<Entry> entries;
25
26     /// Add an entry. Implement in address_book.cpp.
27     void add(Entry person);
28
29     /// Remove an entry. Implement in address_book.cpp.
30     void remove(Entry person);
31
32     /// Return all entries sorted by first names. Implement in address_book.cpp.
33     std::vector<Entry> sortByFirstName();
34
35     /// Return all entries sorted by last names. Implement in address_book.cpp.
36     std::vector<Entry> sortByLastName();
37
38     /// Return all matching entries. Implement in address_book.cpp.
39     std::vector<Entry> find(const std::string & name);
40
41     // Partial Match find
42     // An overloaded method could not be implemented because the method signatures cannot be change
43     //, one needs a string name as a parameter to find entry or entries in the addressbook
44     std::vector<Entry> PartialMatchFind(const std::string& name);
45
46 };
```

As the class files show all the task requirements have been met , the code has been kept as clean and readable as possible.

The learning process took – 5 days

Code Implementation and Debugging took – 3.5 hours.

Resource Used – A Tour of C++ by Bjarne Stroustrup

Tests Implemented –

- 7 tests are implemented and all were passed successfully ,

```
[-----] Running 7 tests from 1 test suite.
[-----] Global test environment set-up.
[-----] 7 tests from AddressBookTests
[ RUN      ] AddressBookTests.AddPerson
[ OK       ] AddressBookTests.AddPerson (0 ms)
[ RUN      ] AddressBookTests.SortedByFirstNames
Add contact test ran[ OK ] AddressBookTests.SortedByFirstNames (0 ms)
[ RUN      ] AddressBookTests.SortedByLastNames
Add contact test ran[ OK ] AddressBookTests.SortedByLastNames (0 ms)
[ RUN      ] AddressBookTests.FindPerson
Add contact test ran[ OK ] AddressBookTests.FindPerson (0 ms)
[ RUN      ] AddressBookTests.removePerson
[ OK       ] AddressBookTests.removePerson (0 ms)
[ RUN      ] AddressBookTests.FindPersonCaseInsensitive
Add contact test ran[ OK ] AddressBookTests.FindPersonCaseInsensitive (0 ms)
[ RUN      ] AddressBookTests.partialMatchFind
Add contact test ran[ OK ] AddressBookTests.partialMatchFind (0 ms)
[-----] 7 tests from AddressBookTests (3 ms total)

[-----] Global test environment tear-down
[-----] 7 tests from 1 test suite ran. (4 ms total)
[ PASSED  ] 7 tests.

D:\Foundry Task\C__Programming_Address_Book_Task\address-book-starter-template-main\out\build\x64-Debug\test\AddressBookTests.exe (process 13960) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

Screenshot of successful tests

Thank You So
Much for this
Learning
Opportunity...!!!