Assignment-1
Due Date: Oct 9, 2020 11:59pm

A Phonebook Application

You are asked to write a simple C++ phonebook application program. Here are the requirements for the application.

- read the contact information from a given input file (phonebook.txt) into a dynamically created array of Contact objects. Each line of the input line includes name and phone information of a contact. Assume that each name has a single part
- Allow to perform operations on array of data such as search for a person, create a new contact or delete an existing contact

A sample run:

```
***MY PHONEBOOK APPLICATION***
Please choose an operation:
A(Add) | S (Search) | D(Delete) |L(List) |Q(Quit): A
Enter name: MARY SMITH
Enter phone: 5062396

A(Add) | S (Search) | D(Delete) |L(List) |Q(Quit): S
Enter name: MARY SMITH
Phone Number: 5062396

A(Add) | S (Search) | D(Delete) |L(List) |Q(Quit): L
BARBARA BROWN 4059171
ELIZABETH JONES 2736877
LINDA WILLIAMS 3532665
PATRICIA JOHNSON 973437
…

A(Add) | S (Search) | D(Delete) |L(List) |Q(Quit): D
Enter name: LINDA WILLIAMS

A(Add) | S (Search) | D(Delete) |L(List) |Q(Quit): L
BARBARA BROWN 4059171
ELIZABETH JONES 2736877
PATRICIA JOHNSON 973437
…
A(Add) | S (Search) | D(Delete) |L(List) |Q(Quit): Q
```

1

Sample content from phonebook.txt

```
PATRICIA JOHNSON 973437
LINDA WILLIAMS 3532665
BARBARA BROWN 4059171
ELIZABETH JONES 2736877
JENNIFER MILLER 3863726
MARIA DAVIS 6297086
SUSAN GARCIA 6063076
MARGARET RODRIGUEZ 350662
DOROTHY WILSON 2829644
LISA MARTINEZ 6299105
NANCY ANDERSON 3441823
KAREN TAYLOR 1459582
BETTY THOMAS 3977357
HELEN HERNANDEZ 6798052
SANDRA MOORE 4951844
DONNA MARTIN 4335417
CAROL JACKSON 1719547
RUTH THOMPSON 5713343
SHARON WHITE 3236192
MICHELLE LOPEZ 6411624
LAURA LEE 1119042
SARAH GONZALEZ 2212564
```

Hint: Sample Codes

//A sample code for reading from a file:
//readfile.cpp
```cpp
#include <iostream>
#include <fstream>
using namespace std;

int main(){
    int a, b;
    ifstream file;
    file.open("test.txt");
    file>>a>>b;
    cout<<a<<b;
    return 0;
}
```

Content of test.txt

```
1 3
```

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```cpp
//A sample code for writing to a file:
//writefile.cpp
#include <iostream>
#include <fstream>
using namespace std;

int main(){
    int a=10, b=45;
    ofstream outfile("out.txt");
    outfile<<a<<" "<<b;
    return 0;
}
```
Content of out.txt

10 45

How to Submit

- You'll submit your work via **GitHub** Classroom assignment created by your instructor
- You'll receive a link to your assignment via Assignment tool on Canvas
- After you accept the assignment, you'll enter the assignment repository on GitHub
- Click "Clone or Download" and **clone** the assignment onto your computer
- After you make changes, **commit** them. Commits are essentially taking a snapshot of your projects.
- At some point you'll want to get the updated version of the assignment back onto GitHub, either so that we can help you with your code, or so that it can be graded. You can do this by performing **push** operation.

How to Evaluate

The following rubric describes how your work will be evaluated.
Correctness (90 points)
- [90] Program is correct in object oriented design and function; meets specification
- [75] Program output is correct but elements of specification missing, e.g. variable/method declarations.
  [45] Part of the specification has been implemented, e.g. one out of two required
- subprograms.
- [20] Program has elements of correct code but does not assemble/compile.

Readability (20 points)
- [10] Programmer name and assignment present. Sufficient comments to illustrate program logic. Well-chosen identifiers.
- [7] Programmer name present, most sections have comments. Fair choice of identifiers
- [5]   Few comments, non-meaningful identifiers

- [0]   No programmer name. No comments. Poor identifiers