Final Submission Write-Up

1. Project Design

**Cookout Estimation**

**Project Design**

***Project Design***

**Secondary Functions:**

* **format\_name(string name) 🡪 Format a string name passed into a title where first character is uppercase and the rest lowercase**
* **format\_phone(string phone) 🡪 Format a string phone passed into (xxx)xxx-xxxx**
* **format\_ssn(string ssn) 🡪 Format a string SSN passed into xxx-xx-xxxx**
* **show\_table(list data\_list) 🡪 Format the list of List into a table with rows and columns**
* **write\_and\_close\_program(data\_list) 🡪 Open file in a WRITE mode, where deletes the data in the file and paste the data from the List data\_list to the file**
* **update\_table(value, dataList, newData, newData\_column) 🡪 Search the value’s row and update its column**
* **delete(value, dataList) 🡪 Search the value’s row and delete the entire row**
* **search\_in\_table(inputSearch, dataList) 🡪 Search the user input in the table, check if the user input is located in each row. Return a boolean True if founded, otherwise False**
* **search\_row(inputSearch, dataList) 🡪 Search the input’s row in the dataList and return each column of that row**

**Main Functions:**

* **addEntry() 🡪 Function to display the Add Entries Menu**
* **updateEntry() 🡪 Function to display the Update Entries Menu**
* **deleteEntry() 🡪 Function to display the Delete Entries Menu**
* **lookEntry() 🡪 Function to display the Search Entries Menu**
* **programInfo() 🡪 Function to display the Programmer Information**
* Print Welcome
* While True loop to display table
  + Ask the user to display the table
  + If customer say Yes
    - Show table
    - break
  + Else If customer say No
    - break
  + Else
    - Ask user to re-enter again Y or N
    - Continue to loop again
* End While-loop
* While True the menu choice
  + Show the user the menu: 1. Add entry, 2. Update Entry, 3. Delete Entry, 4. Look Entry, 5. Quit
  + If user choose 1. Add Entry
    - Call addEntry() 🡪 when this function returns False, BREAK
  + If user choose 2. Update Entry
    - Call updateEntry() 🡪 when this function returns False, BREAK
  + If user choose 3. Delete Entry
    - Call deleteEntry() 🡪 when this function returns False, BREAK
  + If user choose 4. Search Entry
    - Call lookEntry() 🡪 when this function returns False, BREAK
  + If user choose 5. Quit
    - Call show\_table(), write\_close\_program(), programInfo()
  + Else:
    - Ask user to re-enter number 1-5. Continue next loop

2. Test Cases

Test Case 1 – WORST CASE

----------------------------------------------------------------

-------------------------WELCOME------------------------

Would you like to display a current list of contacts? (Y/N) y

NAME: E-MAIL: PHONE NUMBER: SSN:

Maria Rojas mr@gmail.com (200)100-1234 999-88-7777

Alberto Maria mr@gmail.com (100)200-3000 800-80-8888

Bernardo Flowers bf@gmail.com (202)200-4055 111-22-3333

What would you like to do?

1. Add entry

2. Update entry

3. Delete entry

4. Look up an entry

5. Quit

Enter a number 1-5: 6

What would you like to do?

1. Add entry

2. Update entry

3. Delete entry

4. Look up an entry

5. Quit

Enter a number 1-5: 1

Adding an Entry...

Would you like to add an entry into the database (Y/N) yep

What is the name of the person: Francisco Boromier

What is the email of the person: fb@gmail.com

What is the phone number of the person: 20122244

The phone number must have 10 digits

What is the phone number of the person: 2012224444

What is the Social Security Number of the person: 00011222

The SSN must have 9 digits

What is the Social Security Number of the person: 000112222

Entry added sucessfully...

Do you want to add, update, delete, or search another contact? (Y/N): yea

What would you like to do?

1. Add entry

2. Update entry

3. Delete entry

4. Look up an entry

5. Quit

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Input Type** | **User Input** | **Expected Output** | **Actual Output** | **Pass?** |
| User input | y | Would you like to display a current list of contacts?  🡪Table Info | Would you like to display a current list of contacts?  🡪Table Info | Yes |
| User input | 6 | Enter a number 1-5: | Enter a number 1-5: | Yes |
| User input | 1 | Enter a number 1-5:  Adding an Entry...  Would you like to add an entry into the database (Y/N) | Enter a number 1-5:  Adding an Entry...  Would you like to add an entry into the database (Y/N) | Yes |
| User input | yep | What is the name of the person: | What is the name of the person: | Yes |
| User input | Francisco Boromier | What is the email of the person: | What is the email of the person: | Yes |
| User input | fb@gmail.com | What is the phone number of the person | What is the phone number of the person | Yes |
| User input | 20122244 | The phone number must have 10 digits.  What is the phone number of the person: | The phone number must have 10 digits.  What is the phone number of the person: | Yes |
| User input | 2012224444 | What is the Social Security Number of the person: | What is the Social Security Number of the person: | Yes |
| User input | 00011222 | The SSN must have 9 digits.  What is the Social Security Number of the person: | The SSN must have 9 digits.  What is the Social Security Number of the person: | Yes |
| User input | 000112222 | Entry added sucessfully...  Do you want to add, update, delete, or search another contact? (Y/N): | Entry added sucessfully...  Do you want to add, update, delete, or search another contact? (Y/N): | Yes |
| User input | yea | What would you like to do?  1. Add entry  2. Update entry  3. Delete entry  4. Look up an entry  5. Quit | What would you like to do?  1. Add entry  2. Update entry  3. Delete entry  4. Look up an entry  5. Quit | Yes |

Test Case 2: WORST CASE

-------------------------WELCOME------------------------

Would you like to display a current list of contacts? (Y/N) y

NAME: E-MAIL: PHONE NUMBER: SSN:

Maria Rojas mr@gmail.com (200)100-1234 999-88-7777

Alberto Maria mr@gmail.com (100)200-3000 800-80-8888

Bernardo Flowers bf@gmail.com (202)200-4055 111-22-3333

Francisco Boromir fb@gmail.com (201)222-4444 000-11-2222

What would you like to do?

1. Add entry

2. Update entry

3. Delete entry

4. Look up an entry

5. Quit

Enter a number 1-5: 2

Search for a contact to UPDATE

How would you like to search?

1. Name

2. Phone Number

Enter a number 1-2: 4

Please enter a number between 1 and 2

Search for a contact to UPDATE

How would you like to search?

1. Name

2. Phone Number

Enter a number 1-2: 2

Which phone number do you want to search? 450451004

NO FOUND

Which phone number do you want to search? 2001001234

Do you want to update contact name? (Y/N) yeasd

Change name to: Jose Rojas

Do you want to update email address? (Y/N) yeeeep

Change email address to: jr@montgo.edu

Do you want to update phone number? (Y/N) y

Change phone number to: 33344455556

Do you want to update SSN? (Y/N) y

Change SNN to: 9998877

Do you want to add, update, delete, or search another contact? (Y/N): no

Do you want to COMMIT the changes? (Y/N): no

No changes to the database were made...

Test Case 3: GOOD CASE

-------------------------WELCOME------------------------

Would you like to display a current list of contacts? (Y/N) yea

NAME: E-MAIL: PHONE NUMBER: SSN:

Maria Rojas mr@gmail.com (200)100-1234 999-88-7777

Alberto Maria mr@gmail.com (100)200-3000 800-80-8888

Bernardo Flowers bf@gmail.com (202)200-4055 111-22-3333

Francisco Boromir fb@gmail.com (201)222-4444 000-11-2222

What would you like to do?

1. Add entry

2. Update entry

3. Delete entry

4. Look up an entry

5. Quit

Enter a number 1-5: 3

Search for a contact to DELETE

How would you like to search?

1. Name

2. Phone Number

3. Social Security Number

Enter a number 1-3: 3

What SSN do you want to search? 988775555

NO FOUND

What SSN do you want to search? 999887777

Row deleted...

Do you want to add, update, delete, or search another contact? (Y/N): yes

What would you like to do?

1. Add entry

2. Update entry

3. Delete entry

4. Look up an entry

5. Quit

Enter a number 1-5: 1

Adding an Entry...

Would you like to add an entry into the database (Y/N) Yes

What is the name of the person: Jose Valdivia

What is the email of the person: jv@montg.edu

What is the phone number of the person: 3012734055

What is the Social Security Number of the person: 444667777

Entry added sucessfully...

Do you want to add, update, delete, or search another contact? (Y/N): yessssss

What would you like to do?

1. Add entry

2. Update entry

3. Delete entry

4. Look up an entry

5. Quit

Enter a number 1-5: 4

Search a contact to see his/her INFO

How would you like to search?

1. Name

2. Phone Number

3. Social Security Number

Enter a number 1-3: 1

Which name do you want to search? Jose Valdivia

We found a contact...

Name: Jose Valdivia

E-mail: jv@montg.edu

Phone Number: (301)273-4055

SSN: 444-66-7777

Do you want to add, update, delete, or search another contact? (Y/N): y

What would you like to do?

1. Add entry

2. Update entry

3. Delete entry

4. Look up an entry

5. Quit

Enter a number 1-5: 4

Search a contact to see his/her INFO

How would you like to search?

1. Name

2. Phone Number

3. Social Security Number

Enter a number 1-3: 3

What SSN do you want to search? 111223333

We found a contact

Name: Bernardo Flowers

E-mail: bf@gmail.com

Phone Number: (202)200-4055

SSN: 111-22-3333

Do you want to add, update, delete, or search another contact? (Y/N): no

Do you want to COMMIT the changes? (Y/N): yes

The database is updated...

NAME: E-MAIL: PHONE NUMBER: SSN:

Alberto Maria mr@gmail.com (100)200-3000 800-80-8888

Bernardo Flowers bf@gmail.com (202)200-4055 111-22-3333

Francisco Boromir fb@gmail.com (201)222-4444 000-11-2222

Jose Valdivia jv@montg.edu (301)273-4055 444-66-7777

Thanks for using this Program

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Course: CMSC 206

Assignment: Project 3B (Address Book)

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3. Learning Experience

The project 3 helped to sharpen my skills to code menu-programs and understand basic concepts in python. The assignment was about to create a table, which contains information, to add, update, delete, and search for an entry in that table and output it in a csv file. I was able to code this program by using list of lists. First, I coded the menu which was the hardest part from this assignment because I needed to validate every input from user by using while loops and try-except statements. Thanks to my experience in my last project in coding the menu client, I did not have any inconvenience while doing so. Then I started building the skeleton of this assignment, which is to define the functions with built-in queries to collect information from the file. While I was doing these functions, I learned the process and coded the algorithm for queries in a table, formatting names and numbers, and mastering lists.

Moreover, I also learned how to open, read, and write in a csv file. By importing csv, I was able to create an csv object to read each line of this file and convert it into a list of lists, which has row and columns. Since I also learning SQL databases, it was easier for me to visualize data in list of lists, so I did not have any problems while I was coding the for loops to go through the list of lists.

At the end, the program worked successfully and had not complications with user-program interaction. Each possible incorrect input was acknowledged so that the user re-enters another answer. Furthermore, I added a while loop for the whole menu so that it loops forever until the user decides to stop. Overall, it was a fun program to code, I am happy with the outcome of this assignment, and I am ready for the next challenge coding program and projects.

4. Assumptions

* The user may choose Yes or No to print the table at the beginning of the program. If the user input other than Yes or No, the program will ask the user to re-enter. If the user enters “Yes” “yes” “nO” “noo”, the program will always take the first character of the input and convert it to uppercase to get either ‘Y’ or ‘N’. If this is not the case, ask the user to re-enter a valid answer.
* The user will choose between 1-5 when asked for a choice. If the user enters a number out of range. The program will prompt to re-enter again and will show the menu again. However, if the user input is other than a number, the program will prompt an error message and will show the menu again
* When user choose option 1. Search by name, the program will ask user to re-enter the name to be search if such data is not found in the file.
* Same when user choose option 2. Search Phone number, the program will ask user to re-enter the phone number to be search if such data is not found in the file.
* This same pattern applies to other menu choices 1 to 5: Add entry, Update Entry, Delete Entry, and Search Entry.
* The program will ask user if wants to repeat the menu. If yes, repeats. If not, quit. If answer other than that, the program will prompt an error message to re-enter again an asnswer.
* Input validation for phones. If the user enters a non-US number (other than 10 digits), the program will ask to re-enter the phone number again.
* Input validation for SSN. If the user enters a SSN with other than 9 digits, the program will ask the user to re-enter the SSN again.