

## Testing Guide

(Things to take note before testing:

1. All the Check-in location for the system is randomly generated from the `random_location` array.
2. Ensure you have `server_file` folder and `client_file` folder in the project directory. (create them if do not have)
3. Re-compile the proto file before testing)
1. Open a new console and set the current directory to SafeEntry using command: `cd SafeEntry`
2. Run command: `pip install -r requirements.txt` to install all the dependencies.
3. When all the dependencies are being installed, key in command:
  - a. `python -m grpc_tools.protoc -I. --python_out=. --grpc_python_out=. SafeEntry.proto`
  - b. `python SafeEntry_server.py` to start the server file. It should show 'Server starts...' on the terminal
4. Open another terminal and key in command: `python SafeEntry_client.py` to start the client file.

### Testing For Concurrency

5. Enter 1 where you will be prompted to choose either 1 or 2 (Test Check-in before Check-out)  
You can check `server_file` and `client_file` folder for Check-in and Check-out details.  
.  
Check-in (1)  
a. Check-out (2)
6. Check-in will be automatically executed.
7. Check-out will require the user to type in the location. (Please note that the first prompt is for the first thread location Check-out input)
8. When both users have checked-in/checked-out, the program will end.

### Testing the Client program functions

1. Enter the number of users to test
2. Enter the user's name, id and phone number(must be a real number). If the number of users entered > 1 , the program will prompt for the next user details.

```
Enter the number of user: 2
User No.1:
Enter the name: Jiayi
Enter the id: 2002179
Enter the phone number(add 65 at the front eg. 6592375431): 6597156459
User No.2:
Enter the name: Jieqi
Enter the id: 2002178
Enter the phone number(add 65 at the front eg. 6592375431): 6596638535

Jiayi Thread started:
```

3. The first user thread will start, prompting the user to choose between:

```
Which function do you wish to perform?
[1]. Check in
[2]. Check out
[3]. Group Check in
[4]. Group Check out
[5]. Display the history of visited locations
[6]. Exit
```

4. Choosing option 1(Check in) will let the user be checked in at a location. The successful message will be shown once the user has checked in.

```
Enter your Choice here: 1

Jiayi Response Received:
Jiayi Check In City Hall successful
```

5. Choosing check out will display the list of check-in locations where users should type out the location that they want to check out. A successful message will be shown once the user has checked out.

```
[0]. Exit
Enter your Choice here: 2

Jiayi Type the location that you wish to check out:
City Hall
City Hall

Jiayi Response Received:
Jiayi Check Out City Hall successful
```

6. For group check-in, users need to enter their family member details according to the format. A successful message will be shown.

```
[0]. Exit
Enter your Choice here: 3

Peter Response Received:
Peter Check In Straits View successful
Peter Enter your family member name (enter _ if space), id and phone th
at you wish to check in or type 'q 1 1' if finished inputting:
Spider 2002178 6596638535
Peter Enter your family member name (enter _ if space), id and phone th
at you wish to check in or type 'q 1 1' if finished inputting:
q 1 1

Peter Response Received:
Group Check In Straits View successful
```

7. For group check-out, users can just enter the name and id, and they will be prompted to enter the location that they are checked-in. The locations that are checked in will be displayed for them to enter. Users must also type in their own name for group checkout. A successful message will be shown if the server receives the request and successfully checks the users out.

```
Enter your Choice here: 4
Jiayi Enter your family member name (enter _ if space) and id that you
wish to check out or type 'q 1' if finished inputting:
Jieqi 2002178
Please type the location that you want to check out:
Singapore General Hospital
Singapore General Hospital
Jiayi Enter your family member name (enter _ if space) and id that you
wish to check out or type 'q 1' if finished inputting:
□
```

```

Jiayi Enter your family member name (enter _ if space) and id that you
wish to check out or type 'q 1' if finished inputting:
Jiayi 2002179
Please type the location that you want to check out:
Singapore General Hospital
Singapore General Hospital
Jiayi Enter your family member name (enter _ if space) and id that you
wish to check out or type 'q 1' if finished inputting:
q 1

Jiayi Response Received:
Group Check Out successful

```

8. For displaying location of safeEntry history, the list of locations that the user has checked-in using both individual and group checked-in/out.

For 1st User:

```

Enter your Choice here: 5
res_msg: "City Hall"

res_msg: "Singapore General Hospital"

Hello Jiayi Press E to exit the program or other button to continue.

```

2nd User:

```

Jieqi Thread started:

Hello Jieqi
Which function do you wish to perform?
[1]. Check in
[2]. Check out
[3]. Group Check in
[4]. Group Check out
[5]. Display the history of visited locations
[6]. Exit
Enter your Choice here: 5
res_msg: "Singapore General Hospital"

Hello Jieqi Press E to exit the program or other button to continue.

```

### Testing the MOH Client program functions

1. Upon running the MOH Client, MOH users will be prompt to enter the location that a covid case visited.
2. MOH Users will have to enter the date and time visited (checked-in and out) in the format given.

```

Enter the location:
Chinatown

Declare the check-in date and time visted by a COVID-19 case (Format sh
ould be: DD/M/YYYY H:MM):
26/6/2022 12:01
Declare check-out date and time visited by a COVID-19 case (Format shou
ld be: DD/M/YYYY H:MM):
26/6/2022 12:59
Location: Chinatown
Response Received:
Updates have been received for : Chinatown at Date and Time: 26/6/2022
12:01 and CheckOut Date and Time: 26/6/2022 12:59
Press E to exit the program or other other button to continue.

```

3. Upon successful update, the messenger service (whatsapp) will be prompt, and the message will be auto sent to the affected user.
4. If more than 1 user is affected, after sending the 1st message, the next message will be sent in another tab.
5. The message will contain the location, check-in/out date and time. (note, if the user did not checkout, the checkout time will not be displayed. )

