

## 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 the Client program functions

1. Enter 2 where you will be prompted to test concurrency or normal function of the program
2. Enter the number of users to test
3. 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:
```

4. 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
```

5. 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.

```
[0]. Exit
Enter your Choice here: 1

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

6. 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
```

7. 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
```

8. 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
```

9. 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

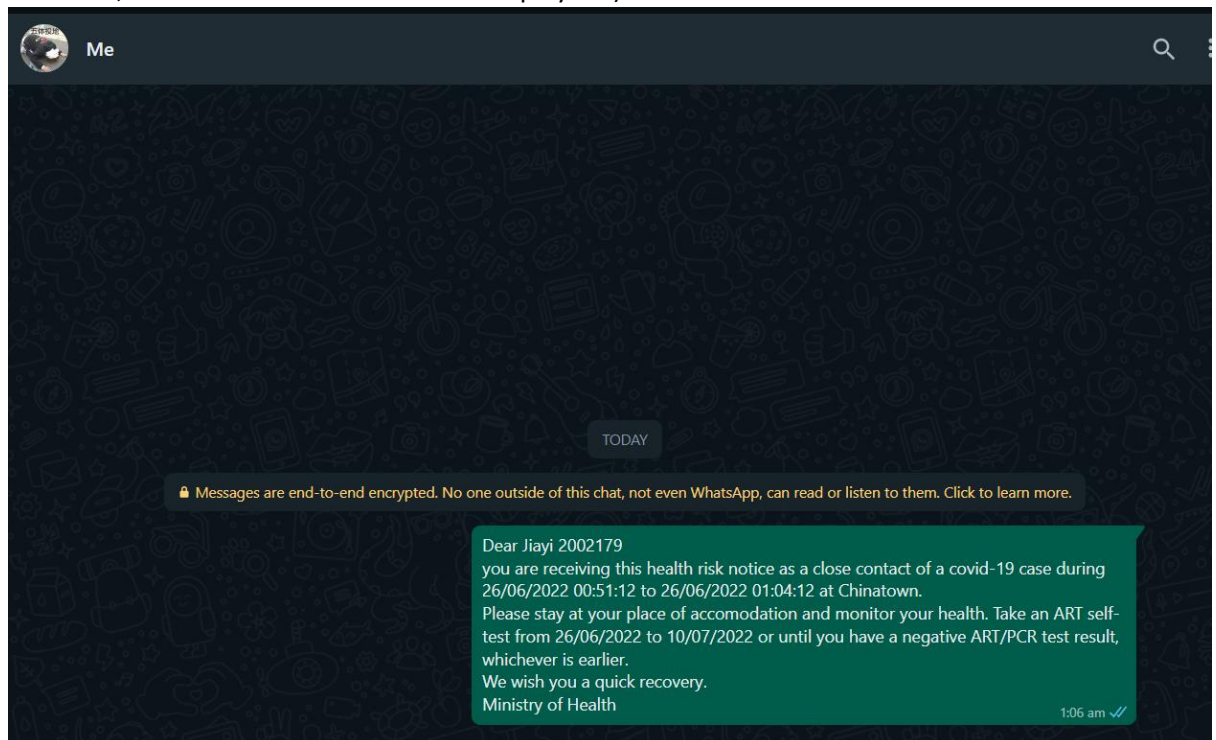
1. Upon running the MOH Client, MOH users will be prompt to enter the location that a covid case visited.
2. MOH Users will have to enter the date and time visited (checked-in and out) in the format given.

```
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. )



### **Testing For Concurrency Method 1**

1. Enter 1 where you will be prompted to test concurrency or normal function of the program
2. 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.
  - a. Check-in (1)
  - b. Check-out (2)
3. Check-in will be automatically executed.
4. 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)
5. When both users have checked-in/checked-out, the program will end.

### **Testing For Concurrency Method 2**

1. Open two or several terminals and run the client file at the same time. Ensure the server file terminal is running as well.
2. For all terminals, enter 1 for the number of users to test. Use different sets of user name, user id and phone number to represent different clients login.
3. Then test functions such as check in, check out etc at all terminals by following the section "Testing the Client program functions".