**Testing Document**

**Feature: Group Isolation Creation**

The Group Isolation Creation feature optimizes updates in the database of entries to isolation and updates recovery at the end of isolation for a group of people who were exposed to the virus in a common radius.

**Testing Scope**

This testing document covers end-to-end testing of the feature, including both server-side and position-side testing. The following test cases should be considered:

**Server-Side Testing**

1. Ensure that the server can receive requests to create group isolation with a valid payload, including a landmark, date of exposure to the virus, date of recovery from the virus, and an array of people who need to be updated.

2. send a valid request and ensure the server returns a 201 status code

3. Send a request with a different format for the date fields and verify that the system handles it correctly and a 201 status is received.

4. Send a request with a missing field and ensure that the server returns a 400 status code

5. Send a request with invalid data types for the fields and verify that a .400 status is received.

6. Assuming that a location can be entered into the request manually, check if the system knows how to create an isolation group by itself? If the system depends on the Google Maps API, does it handle it and what type of status code will be sent?

7. Send a request with a landmark that is not recognized by Google Maps and verify that the system handles it correctly and a .400 status is received.

8.Test the feature with a large array of people who need to be updated to ensure that it can handle large payloads and does not crash the server or the UI

9. Check whether when there is a server failure the data is saved in the cache and can be accessed

10. Check whether the system handles a location that transmitted incorrectly due to an event of a Google Maps failure.

11. Assuming that the phone tracking technology provides the identity card of the person who needs to be isolated, check whether in the situation where an identification was received for an identity card that does not exists in the database the system handles it correctly.

**Client-Side Testing**

1. Ensure that the UI can display a Google Maps element and allow users to select a landmark.

.Ensure that the UI can display a date of exposure to the virus field2

3.Ensure that the UI can display a "Create Isolation" button and that it sends a request to the server with a valid payload when clicked

4.Try to create an isolation group without select a date/location, and Ensure that the UI displays a pop-up message

5. Ensure that when a 400 status code is received from the server the UI displays an error message to the user

6. Try to choose a future date and ensure that the UI handle it and displays an error message.

7. Try to choose a long past date and ensure that the UI handle it and displays an error message.

8. Check whether when there is a failure to connect to Google Maps which causes the location chosen by the user not to be transferred in the request, the UI knows that this is the reason to the 400 status code and displays a message about that.

9. Check whether when there is a failure on the server the UI displays a message to the user

10. Check whether in the event of a connection failure to the phone tracking technology causing the array of isolated people to be empty, the user will receive a message detailing the time and location where the failure occurred, and the operations performed in the system that could have been affected by the failure.

**Conclusion**

The Group Isolation Creation feature should be thoroughly tested to ensure that it works correctly from end-to-end and can handle edge cases and unexpected behavior. By testing both the server-side and the position-side, we can ensure that the feature is reliable and efficient in a real-world setting.