Testing Report

1. Objective

The objective of this testing report is to document the testing process for the instant messaging web application, which includes functionalities like user register and login, real-time chat, group chat, view historical records, user status updates, and interaction between the front-end and back-end systems. The aim is to ensure that all implemented features work as expected without bugs or errors.
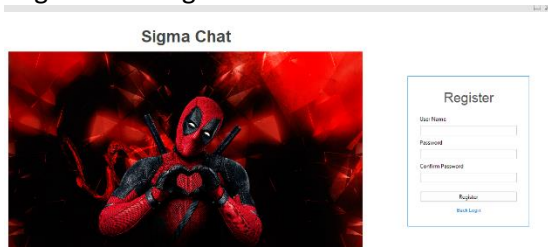
2. Testing Approach

Since a manual testing approach was chosen, the primary focus was on:

- Testing each function in isolation (unit testing).
- Testing how different modules interact (integration testing).
- Verifying both front-end and back-end functionalities.
- Ensuring that the system handles real-time communication efficiently.
- Testing the application in different scenarios such as normal, boundary, and error conditions.
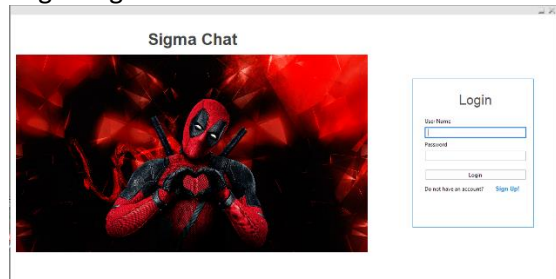
3. Features Tested

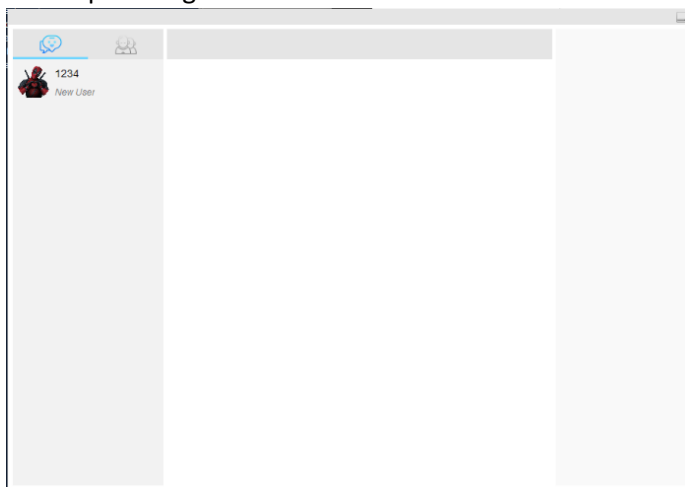### User Registration and Login

Registration Page   Login Page
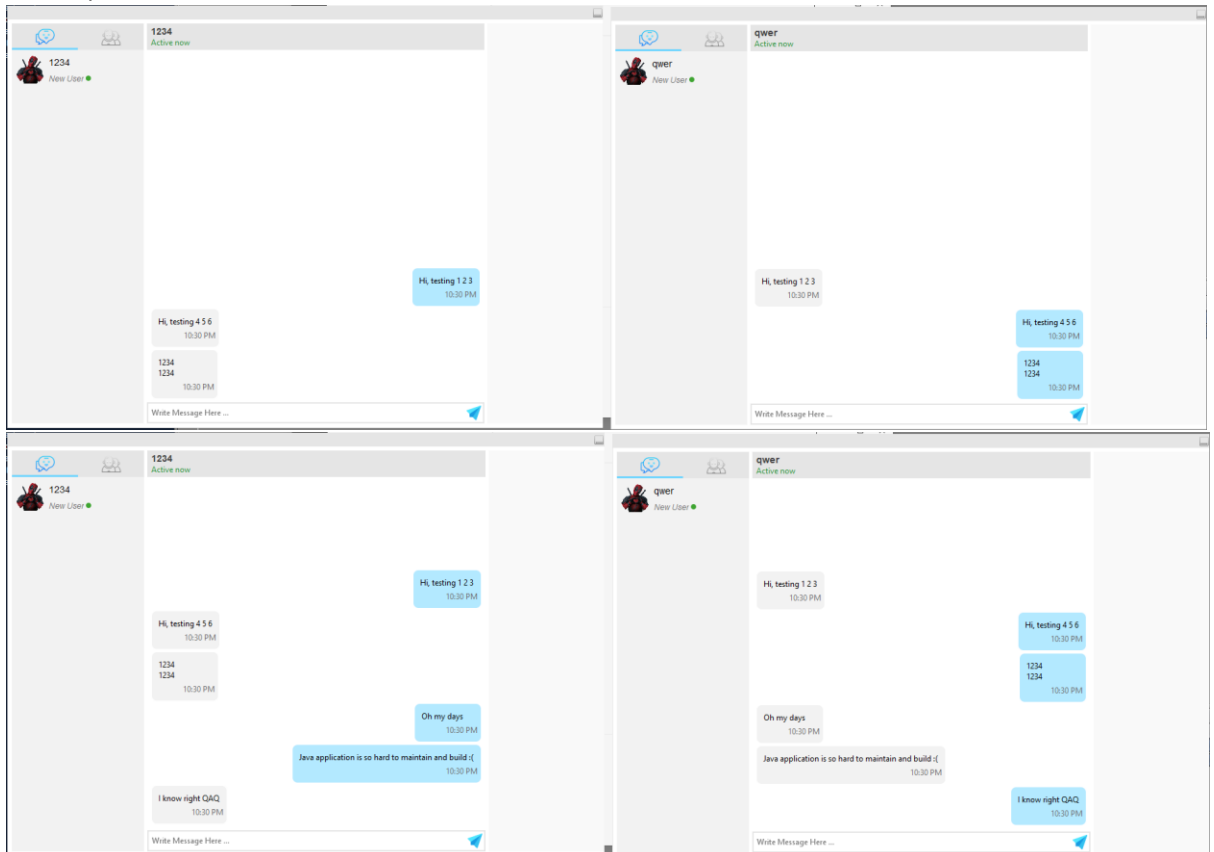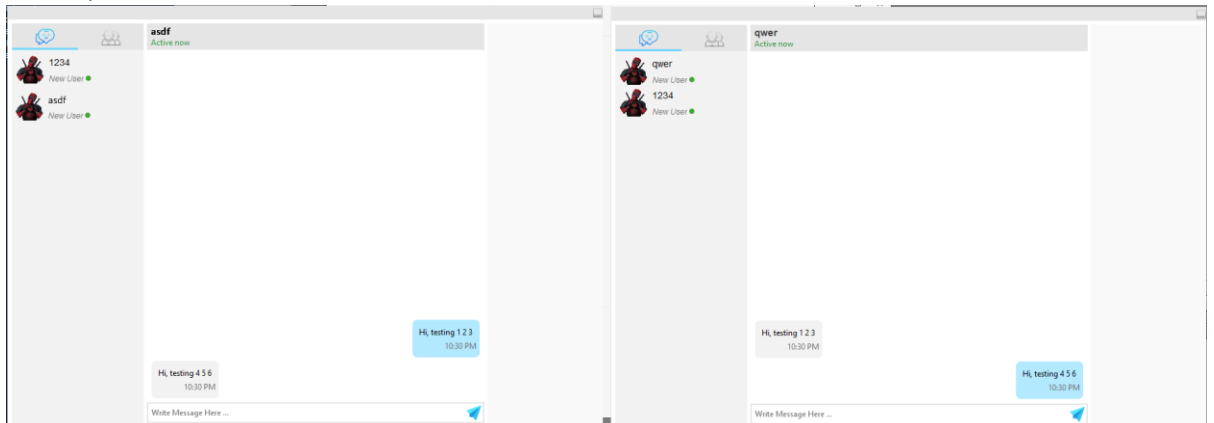

1. User "qwer" login

Result: Users able to register and login.

Private Chat

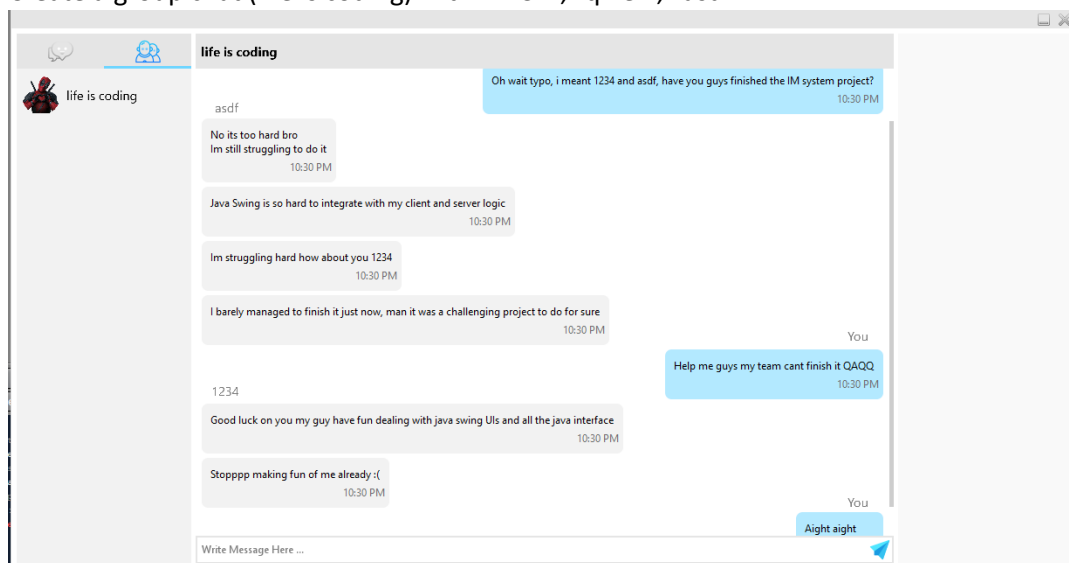1. User "qwer" chat with user "1234"

2. User "qwer" chat with user "asdf"

Result: Messages able appear instantly on both users' screens. User able to chat with multiple users simultaneously.
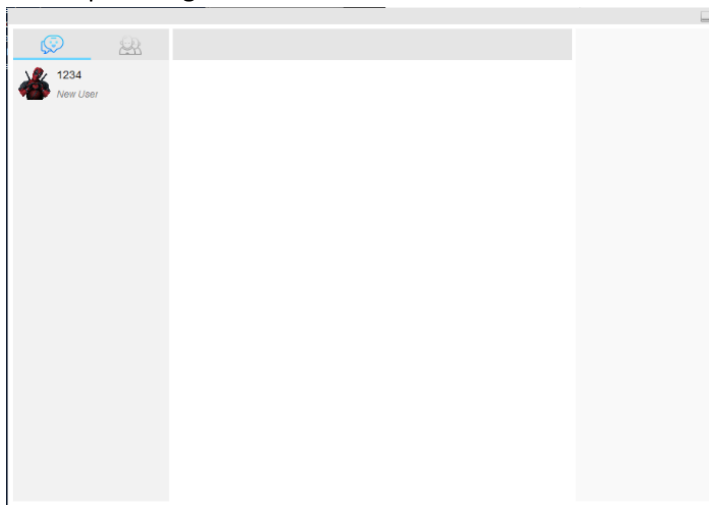
Group Chat

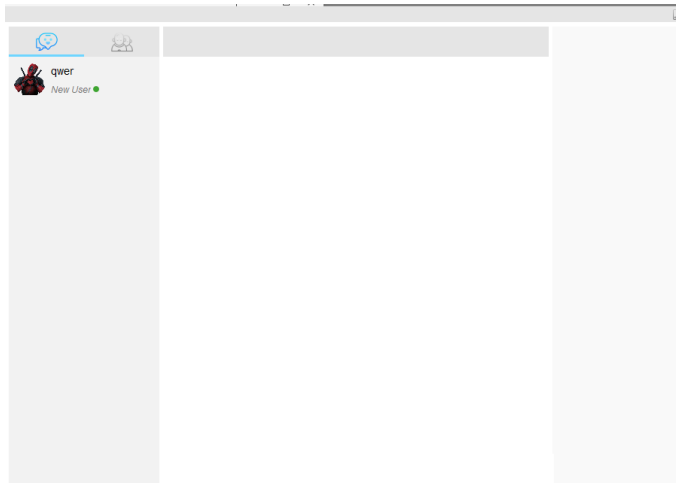1. Create a group chat (life is coding) with "1234", "qwer", "asdf"

Result: All users receive the messages in real-time.
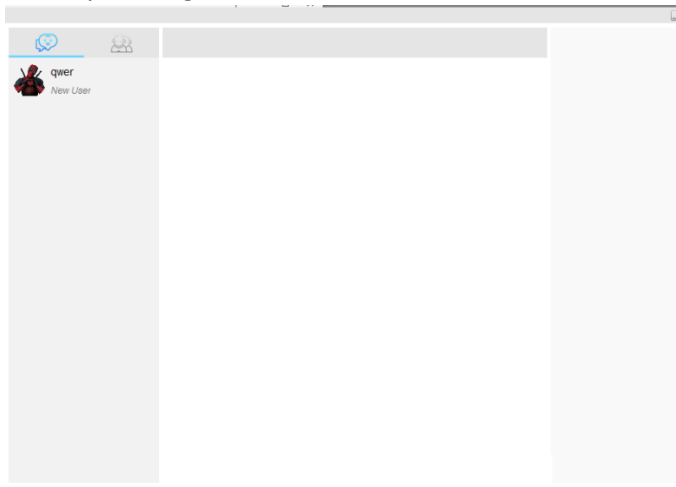
User Status Updates

1. User "qwer" login

2. User "1234" login

3. User "qwer" logout

Result: Statuses able to update in real-time as users log in and out.

Database Integration

```
1 ●    SELECT * FROM user
2
```


UserID	UserName	Password
36	1234	1234
37	qwer	qwer
38	asdf	asdf
NULL	NULL	NULL

Result: All data able to stored and retrieved accurately

5. Conclusion

All major functionalities of the instant messaging web application have been tested and are working as expected.