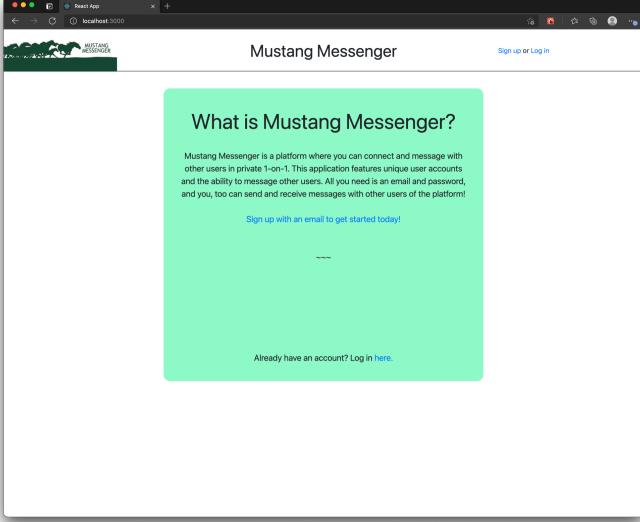
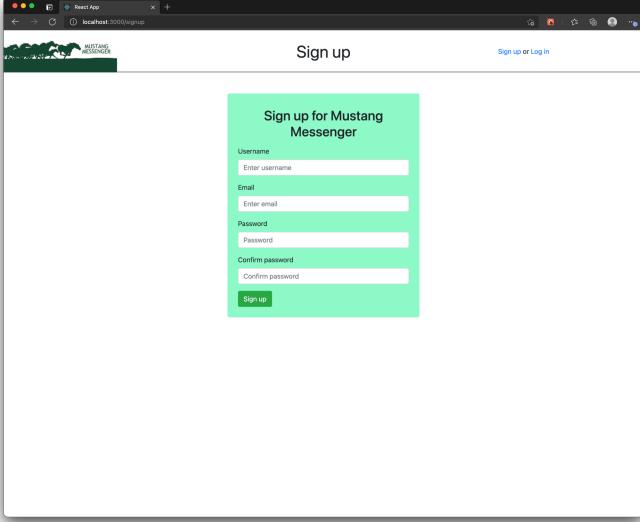


ID	Subject	instructions	Screen Capture	What to Test and Check
1	Welcome	Open application (http://localhost:3000)		<p>Check layout</p> <p>Click on mustang messenger logo in top left corner, verify it takes you to current page.</p> <p>Click on sign up and sign in in top right of the header, verify they take you to the correct page.</p> <p>Verify that "Sign up with an email to get started today!" takes you to the sign up page.</p> <p>Verify that the "here" button takes you to the log in page.</p>
2	Sign up	Click on sign up in the top navigation bar		<p>Check layout</p> <p><u>Try to submit form with:</u> no fields filled some missing fields improper email address mismatching passwords short password</p> <p>In all cases check error messages and verify that user is not created in the backend</p>

2.1.1

The screenshot shows the 'Sign up' form for Mustang Messenger. The form includes fields for Username, Email, Password, and Confirm password. The 'Email' field is highlighted in red with the error message 'Please fill out this field.' The 'Sign up' button is visible at the bottom.

2.1.2

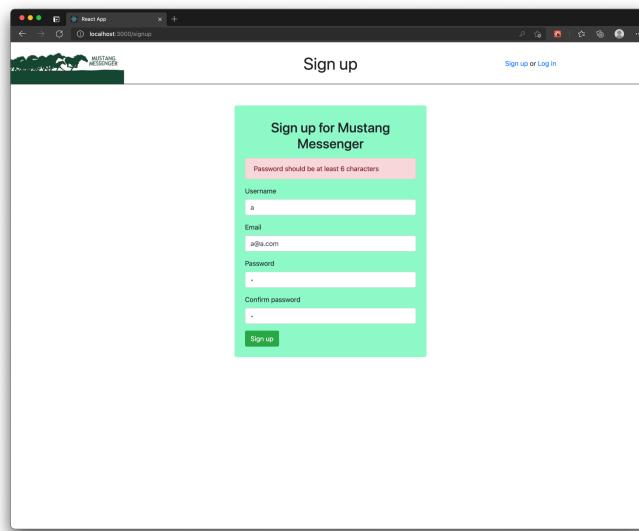
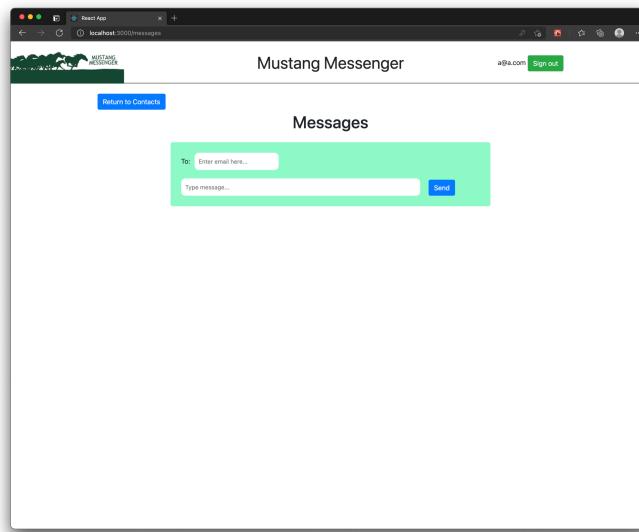
The screenshot shows the 'Sign up' form for Mustang Messenger. The 'Email' field contains 'a' and has an error message: 'Please include an \'@\' in the email address. \'a\' is missing an \'@\'. -'. The 'Password' field contains '-' and has an error message: 'The password must be at least 8 characters long. -'. The 'Sign up' button is visible at the bottom.

2.1.3

A screenshot of a web browser displaying the 'Sign up' form for Mustang Messenger. The form includes fields for Username, Email, Password, and Confirm password. An error message 'The email address is badly formatted.' is displayed above the Email field. The browser title bar shows 'localhost:3001/signup'.

2.1.4

A screenshot of a web browser displaying the 'Sign up' form for Mustang Messenger. The form includes fields for Username, Email, Password, and Confirm password. Two error messages are displayed: 'Passwords do not match.' above the Password field and 'Email is required.' above the Email field. The browser title bar shows 'localhost:3001/signup'.

2.1.5**2.1.6**

Successfully create user following all specifications, application should forward to the messages page. Active user should appear in the top right, along with sign out button. Verify all layout is correct.

2.2.1

Go to firebase and select authentication from the left menu

The screenshot shows the Firebase Authentication page with the URL <https://console.firebaseio.google.com/projectmustang-messenger-4172/authentication/users>. The page displays a table of users with columns: identifier, provider, created, signed in, and user ID. The table lists 14 users, each with their email, provider (e.g., Google), creation date, sign-in date, and a unique user ID. The user IDs are long strings of characters.

Identifier	Provider	Created	Signed In	User ID
furnited@gmail.com	Google	Mar 5, 2021	Mar 5, 2021	0x44972B99589048907978A2
corriegomes.com	Google	Mar 5, 2021	Mar 5, 2021	0x449249A9D2C94904907978A2
corin.corine@gmail.com	Google	Mar 5, 2021	Mar 5, 2021	0x449249A9D2C94904907978A2
ethanchoi@gmail.com	Google	Mar 6, 2021	Mar 7, 2021	FMrAvz7dQmQpTfZQzQmRwv8E2
bawatchthm@gmail.com	Google	Mar 6, 2021	Mar 6, 2021	1c754fd8D2102140494904907978A2
ehan@email.com	Google	Mar 5, 2021	Mar 5, 2021	NaLuhHt4P9MEUevOJ7be07D15a2
one@email.com	Google	Mar 4, 2021	Mar 4, 2021	NsgpC9191J2P9Vg9N9y9c2
isaegeekale175@gmail.com	Google	Mar 6, 2021	Mar 6, 2021	SjA0CavW9M8TSpnG92q56v982
ethan@calpoly.edu	Google	Mar 4, 2021	Mar 6, 2021	W5t5xuL27b7Q9u9y9U9HZ2
otakarime.com	Google	Mar 7, 2021	Mar 7, 2021	0b019f7120f9a9104904907978A2
big0@orange.com	Google	Mar 5, 2021	Mar 5, 2021	tsvVh6v90U0L79aKgM9Qh...
a@ja.com	Google	Mar 6, 2021	Mar 6, 2021	ckHmch4hMs9Btf9PfG9HYE2
sumiko@google.com	Google	Mar 5, 2021	Mar 5, 2021	r0fGmMlctSwkNDf9aAbg0...
two@email.com	Google	Mar 4, 2021	Mar 4, 2021	vXGdfq7vQETUJOhemBzq92

In the firebase authentication page check that the user is correctly generated with all info correct.

2.2.2

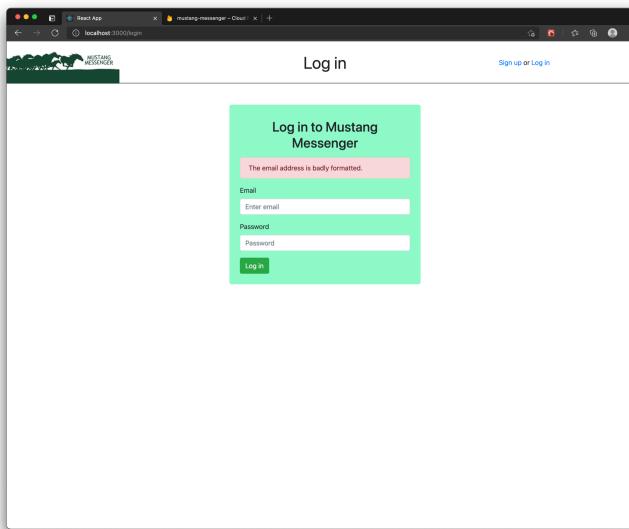
Go to firebase and select cloud firestore from the left menu

The screenshot shows the Firebase Cloud Firestore page with the URL https://console.firebaseio.google.com/projectmustang-messenger-4172/firestore/data-2fuser_profiles-2fa@ja.com. The page displays the user_profiles collection under the mustang-messenger-4172 database. It shows a list of documents, with one document expanded to show its fields: afa.com, which contains contacts information such as email, last_login, uid, and username.

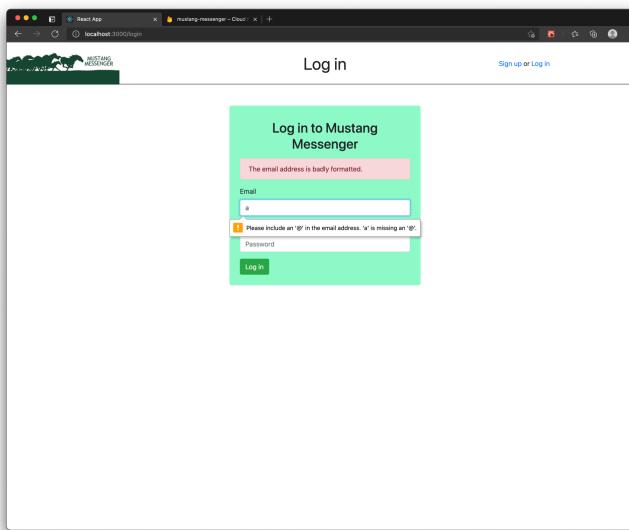
In the firebase cloud firestore check that the user_profiles has a new entry for the test user, all information should be correct. The contacts array should be empty.

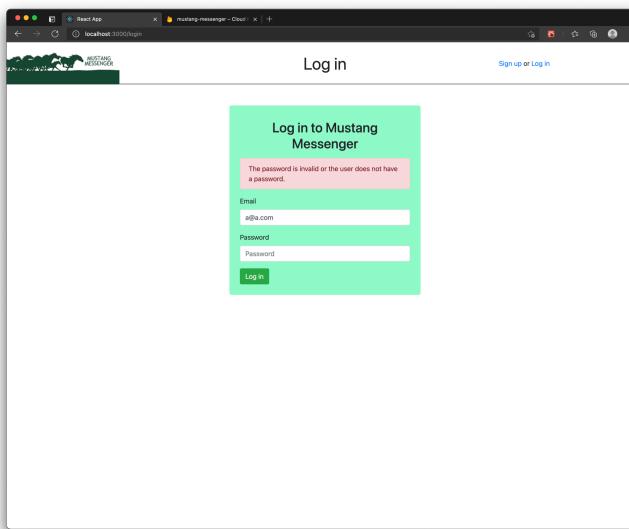
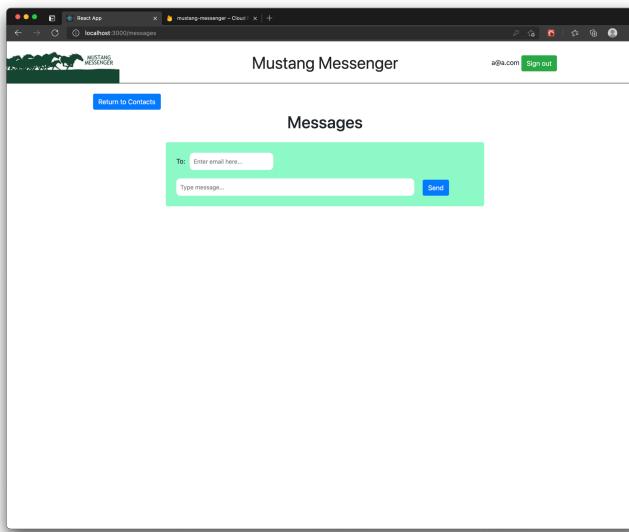
2.3		<p>The screenshot shows the 'Sign up' page of the Mustang Messenger application. At the top, there's a logo and a navigation bar with 'Sign up or Log in'. The main form is titled 'Sign up for Mustang Messenger'. It has four input fields: 'Username' (containing 'a'), 'Email' (containing 'a@a.com'), 'Password' (containing '*****'), and 'Confirm password' (containing '*****'). Below the form is a green 'Sign up' button. A red error message box at the top right of the form area says: 'The email address is already in use by another account.'</p>	
3	Log in Click on log in in the top navigation bar	<p>The screenshot shows the 'Log in' page of the Mustang Messenger application. At the top, there's a logo and a navigation bar with 'Sign up or Log in'. The main form is titled 'Log in to Mustang Messenger'. It has two input fields: 'Email' (placeholder 'Enter email') and 'Password' (placeholder 'Password'). Below the form is a green 'Log in' button.</p>	<p>Log out using the button in the top right of the application, try to sign up again using the same information as before. Application should reject based on email conflict.</p> <p>Check layout</p> <p><u>Try to submit form with:</u></p> <ul style="list-style-type: none">no fields filledsome missing fieldsimproper email addressincorrect password <p>In all cases check error messages.</p>

3.1.1

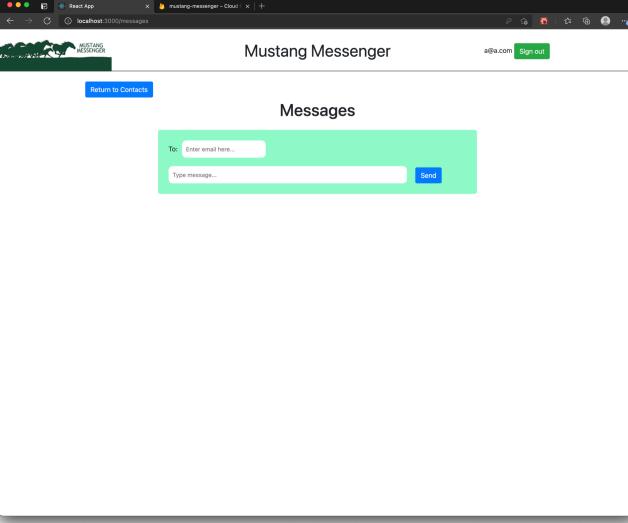
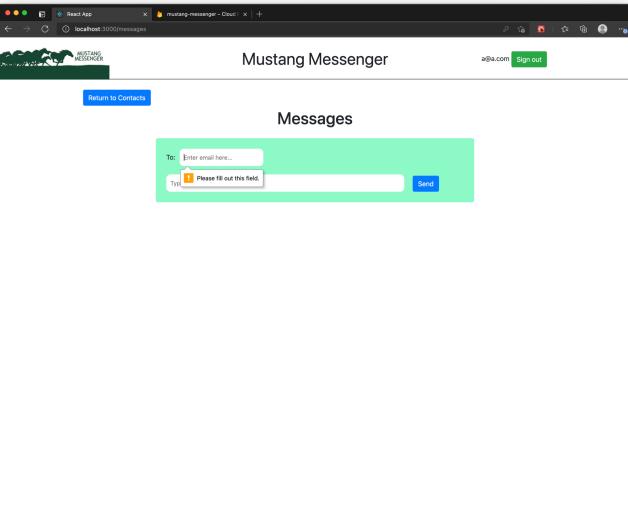


3.1.2

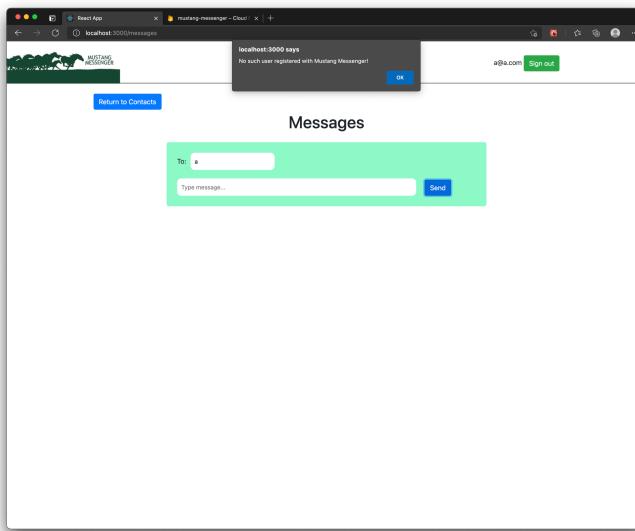


3.1.3**3.2**

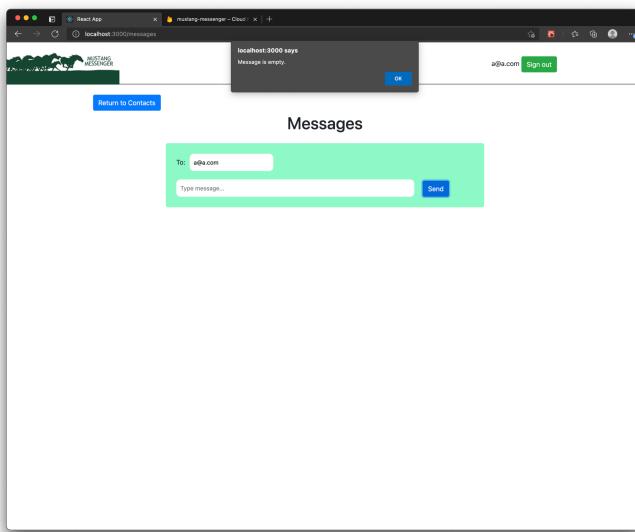
Successfully log in following all specifications, application should forward to the messages page. Active user should appear in the top right, along with sign out button. Verify all layout is correct.

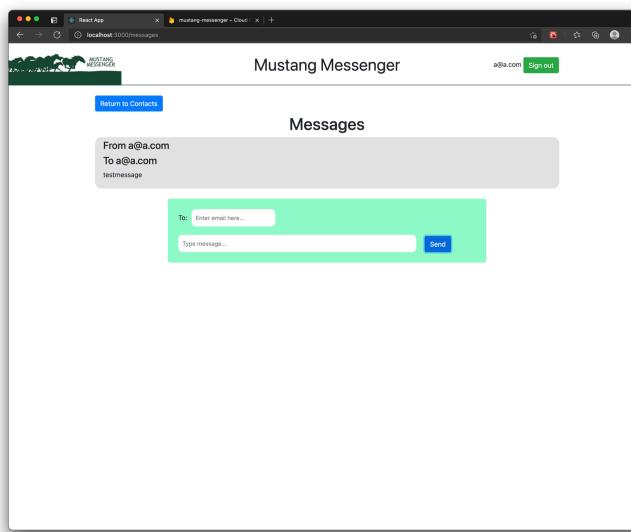
4	Messages Sign up or log in with an account		Verify layout of messages page. <u>Try to send message with:</u> no email no message email of a user that does not exist
4.1.1			

4.1.2



4.1.3

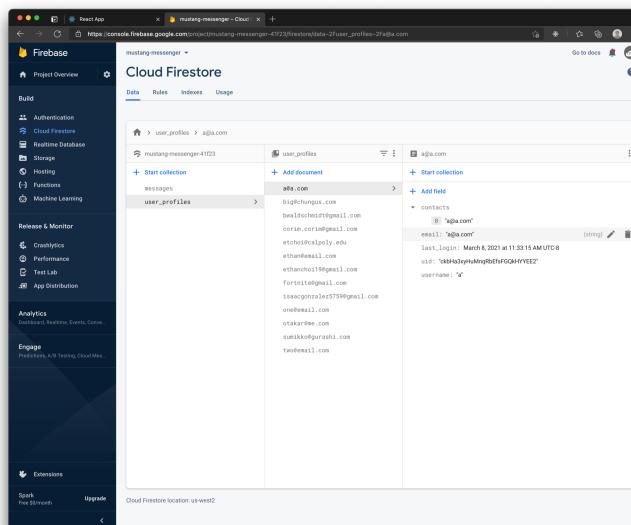


4.2

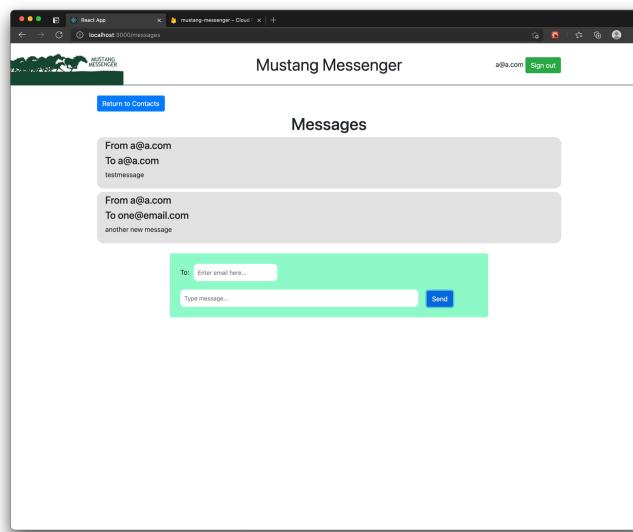
Send a message to a real user who is registered in mustang messenger. Verify that the message appears on the page, check layout.

4.3

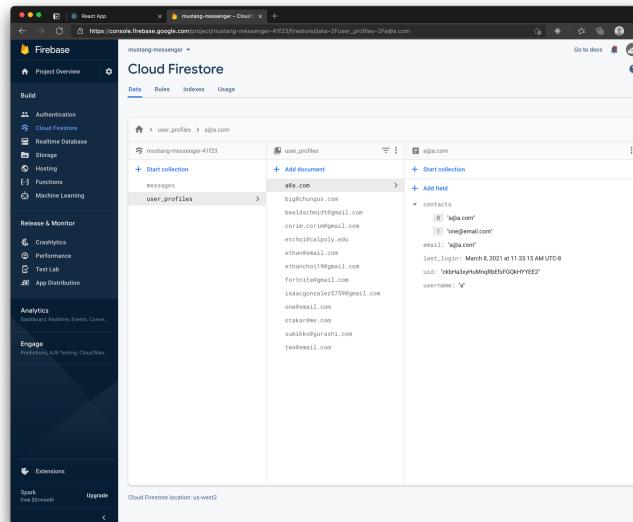
Go to firebase and select cloud firestore from the left menu



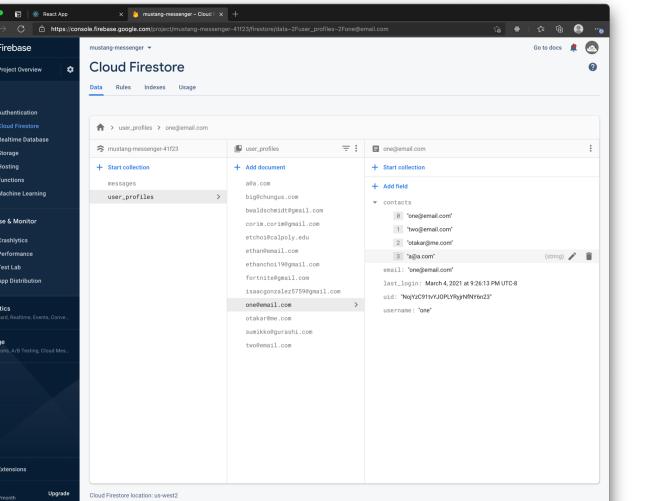
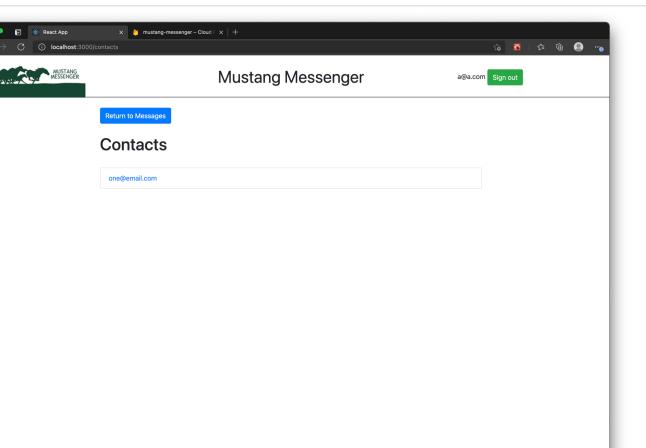
Check that the currently logged in user (the one sending the message) has a new contact based on who the message was sent to.

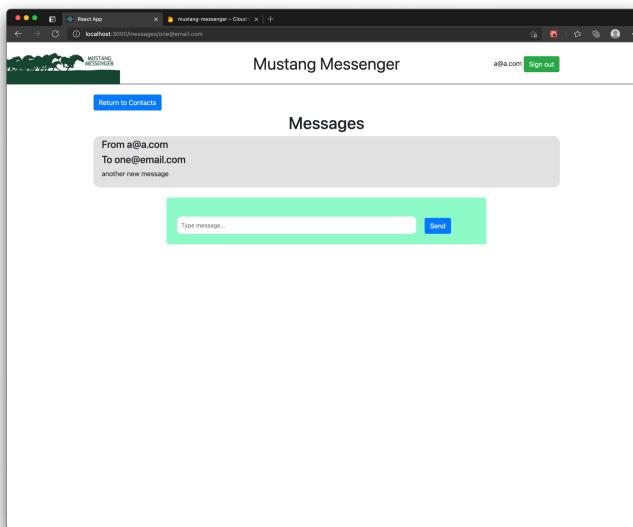
4.4

Try sending more messages to more users

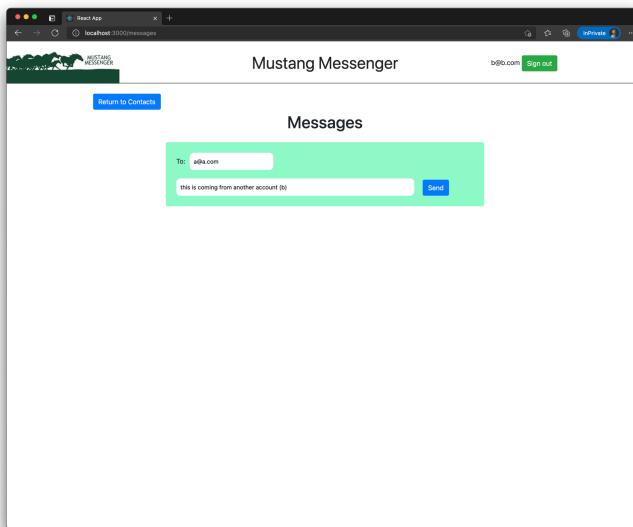
4.5.1

Check that the currently logged in user (the one sending the message) has a new contact based on who the message(s) were sent to.

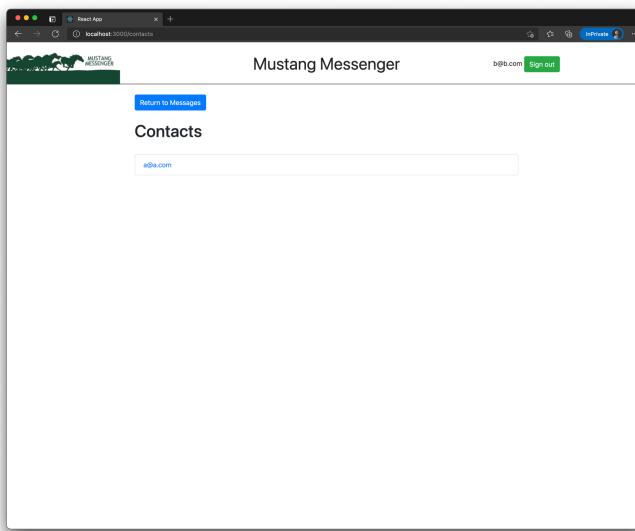
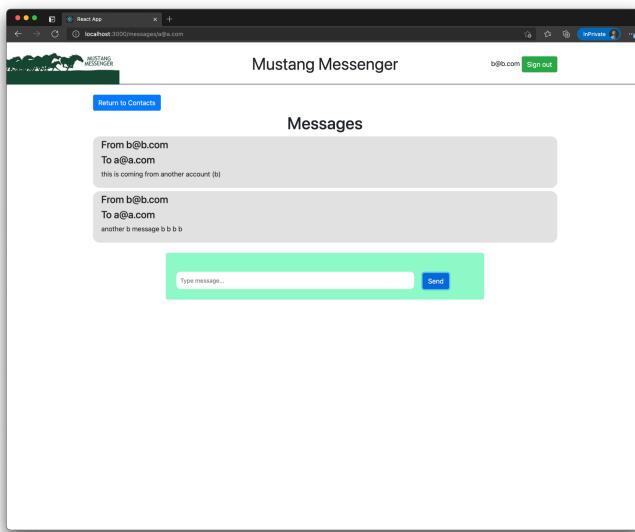
4.5.2		<p>Check that the receiving users have a new contact based on who the message(s) were sent from.</p>
5 Contacts	<p>Click on "Return to contacts" from the messaging page</p>	 <p>Check layout and correct display of contacts on the contacts page.</p>

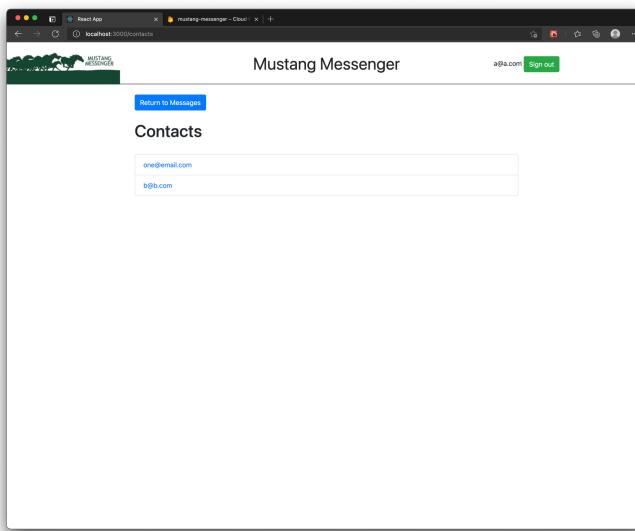
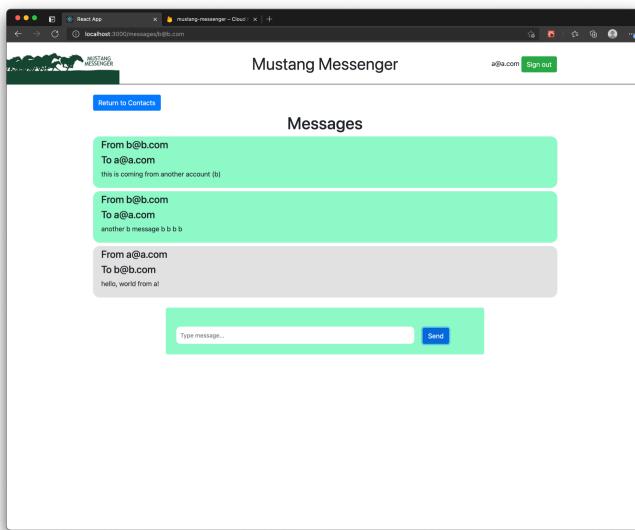
5.1

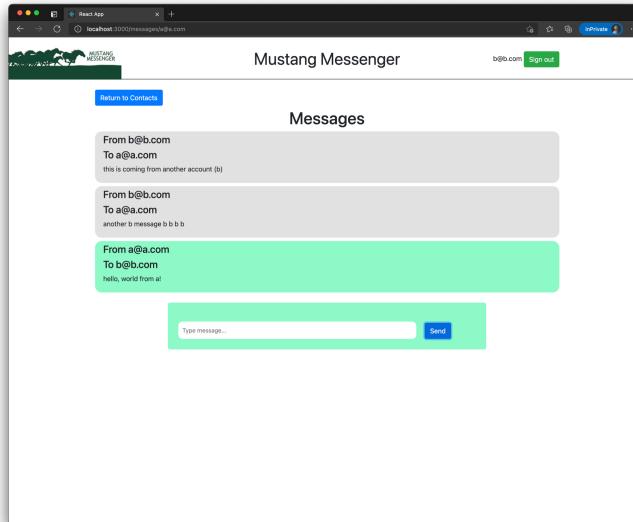
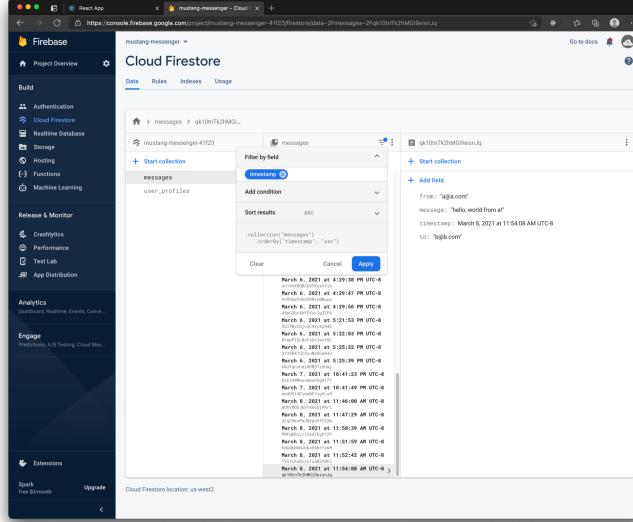
Click on a contact and verify the messages, they should correctly be filtered from only the selected user.

6**Real-time
Messages**

For this stage of testing create another account using instructions in testcase 2. Try sending messages between the two users. Check for proper formatting of the page as more messages appear. Verify the coloring differences between to/from messages.

6.1**6.2**

6.3**6.4**

	 <p>6.5</p>		
<p>6.6.1</p>			<p>Check that the messages are correctly populating in the database, filter by timestamp and click on the lastest few messages.</p>

6.6.2

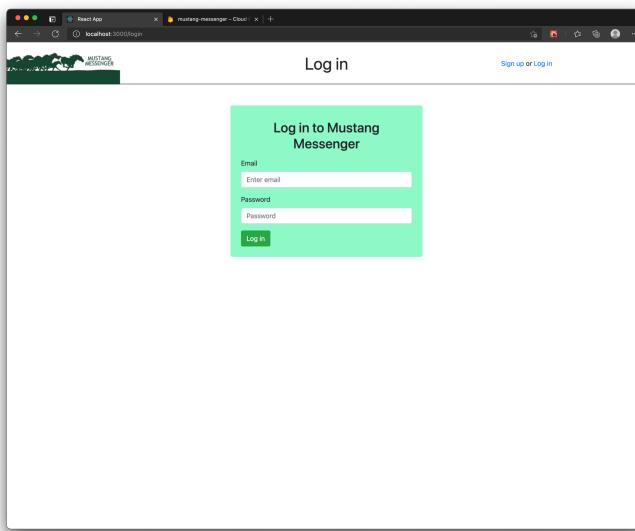
The screenshot shows the Firebase Cloud Firestore interface. On the left, the navigation sidebar includes 'Authentication', 'Cloud Functions', 'Storage', 'Hosting', 'Functions', 'Machine Learning', 'Release & Monitor', 'Analytics', 'Engage', and 'Extensions'. The main area displays a list of documents under the 'messages' collection. One document is expanded, showing fields: 'from' (set to 'a@aa.com'), 'message' (set to 'Hello world from a!'), and 'timestamp' (set to 'March 8, 2021 at 11:54:08 AM UTC-4'). The 'to' field is listed as 'b@bb.com'.

7**Sign out**

The screenshot shows the Mustang Messenger application. At the top, there is a header bar with the title 'Mustang Messenger', a user email 'a@aa.com', and a 'Sign out' button. Below the header is a section titled 'Messages' containing a list of messages. The messages are displayed in green and grey bubbles. The first two messages are from 'b@bb.com' to 'a@aa.com' (green bubbles), with the second one containing the text 'this is coming from another account (b)'. The third message is from 'a@aa.com' to 'b@bb.com' (grey bubble), with the text 'another b message b b b'. At the bottom of the screen is a text input field with placeholder 'Type message...' and a 'Send' button.

Test the sign out button in the top right of the application (only available when signed in). Clicking it should close the session and redirect the user to the welcome page.

7.1



End of test.