

# ***Totem***

## Incremental Testing and Regression Testing

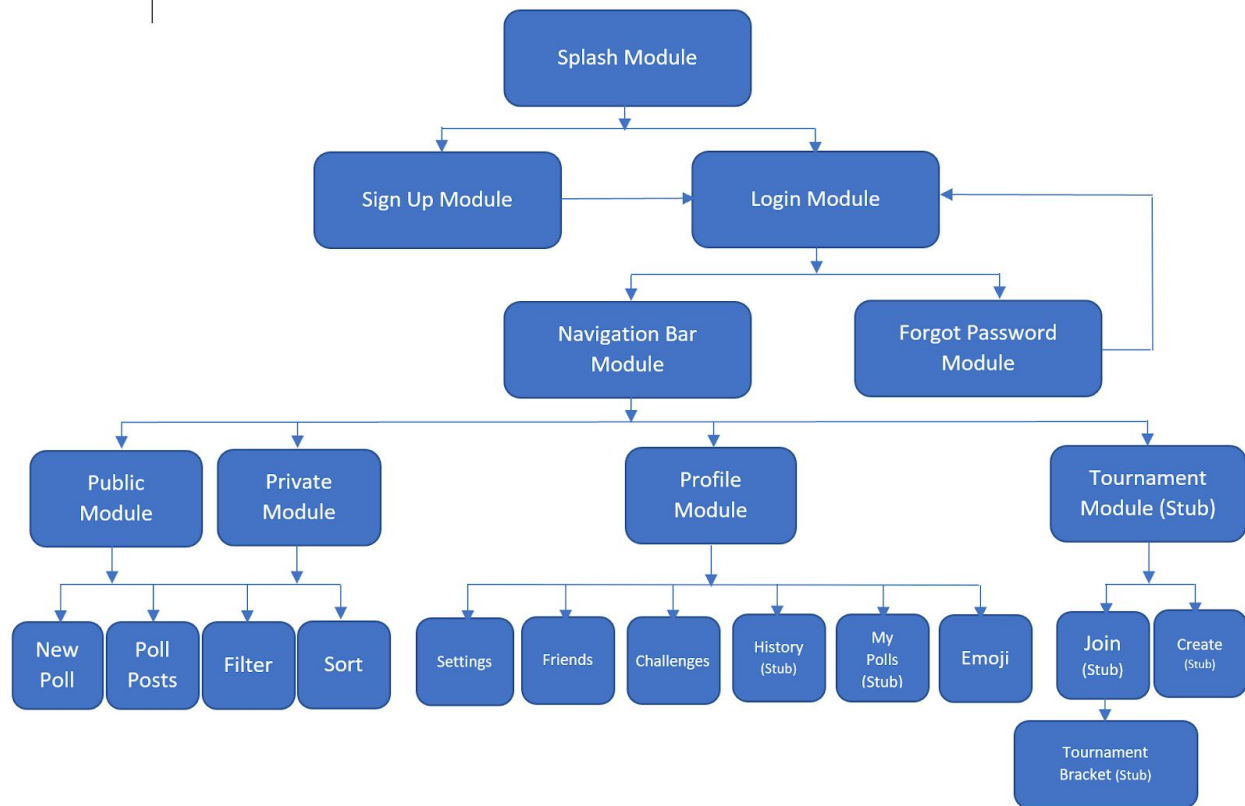
Team 20

Cameron Glass, Todd Griffin, Dominic Miller,  
Nirali Rai, and Rishabh Ramsisaria

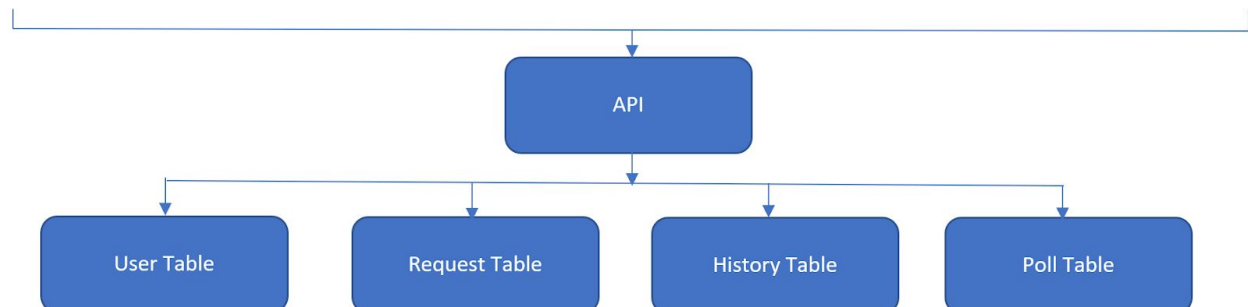
## Classification of Components (25 points)

Define all components - 20 points

Client Structure:



Server Structure:



Component	Input	Output	Dependent
<b>Splash Module</b>	N/A	Login or Sign Up	N/A
<b>Sign Up Module</b>	User/Splash	Login	API/User Table
<b>Login Module</b>	User/Splash	Public	API/User Table
<b>Navigation Bar Module</b>	User/Login	Public/Private/Profile/Tournament	N/A
<b>Forgot Password Module</b>	User/Login	Login	API/User Table
<b>Public Module</b>	User/Nav Bar	New Poll/Poll Posts/Sort/Filter	API/User Table
<b>Private Module</b>	User/Nav Bar	New Poll/Poll Posts/Sort/Filter	API/User Table
<b>Profile Module</b>	Nav Bar	Settings/History/Friends/Challenges/Emoji/My Polls	API/User Table
<b>Tournament Module (Stub)</b>	Nav Bar	Join/Create	API/User Table
<b>New Poll Modal</b>	Public/Private Module	My Polls Modal	API/Poll Table
<b>Post (in Feed)</b>	Public/Private Module	Public/Private Module/History Modal	API/Poll Table
<b>Sort Modal</b>	Public/Private Module	Public/Private Module	API/Poll Table
<b>Filter Bar</b>	Public/Private Module	Public/Private Module	API/Poll Table
<b>Settings Module</b>	Profile Module	N/A	API/User Table
<b>Friends Modal</b>	Profile Module	N/A	API/Request Table
<b>Challenges Modal</b>	Profile Module	N/A	API/Polls Table
<b>History Modal (Stub)</b>	Profile Module	N/A	API/History Table
<b>My Polls Modal (Stub)</b>	Profile Module	N/A	API/Polls Table

<b>Emoji Modal</b>	Profile Module	N/A	API/User Table
<b>Join Tournament (Stub)</b>	Tournament Module (Stub)	Tournament Bracket (Stub)	N/A
<b>Create Tournament (Stub)</b>	Tournament Module (Stub)	Join Tournament (Stub)	N/A
<b>Tournament Bracket (Stub)</b>	Join Tournament (Stub)	N/A	N/A
<b>API Module</b>	All Client Components	All Client Components	All Tables in the Database
<b>User Table</b>	API	API	N/A
<b>Requests Table</b>	API	API	N/A
<b>History Table</b>	API	API	N/A
<b>Poll Table</b>	API	API	N/A

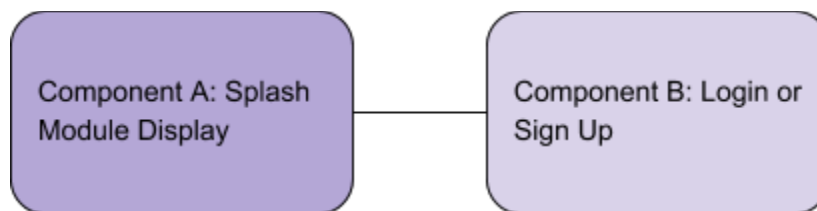
Which form of incremental testing did you follow - 5 points

We implemented the **top-down** testing strategy in our project. Using this method we were able to locate and fix the critical design flaws in the beginning before moving on, allowing us to stay up to date with our working prototype. This also allowed us to simulate the workings of the backend when testing the frontend, and frontend when testing the backend, without having to be concerned with their functionality at this time. This worked well for us because we wanted to be able to independently test the program as we go, before completely linking both components. On the contrary, we avoided the route of bottom-up testing. We decided to do that because we wanted to identify and fix the design flaws early in the process, working on the critical modules later. This also worked well with our agenda because with bottom-up testing we would not have any form of a working application till everything has been tested, whereas with top-down we were able to provide a working application early in the process. In a fast paced software development process, top-down testing seemed to be the best fit for our application.

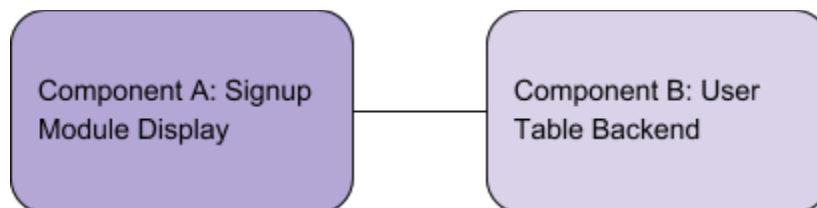
## Incremental and Regression Testing (70 points)

- Incremental and regression testing should be conducted on a per module basis. We will be looking for testing to be completed on each of your modules.
- We expect you to list down the defects found during incremental testing and regression testing of each module. The defects will be evaluated based on how well the defect is described, the severity assignment and the solutions provided.
- Given below is a sample regression test case example for a calculator:

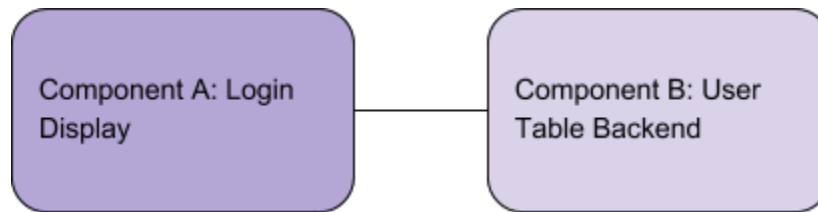
### Incremental Testing



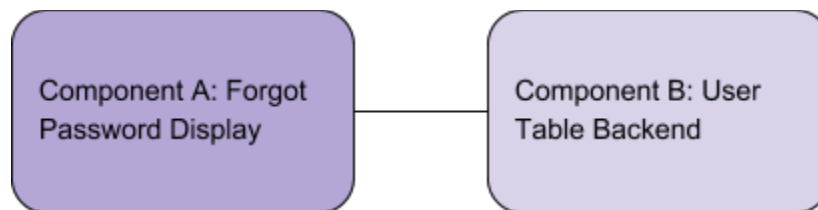
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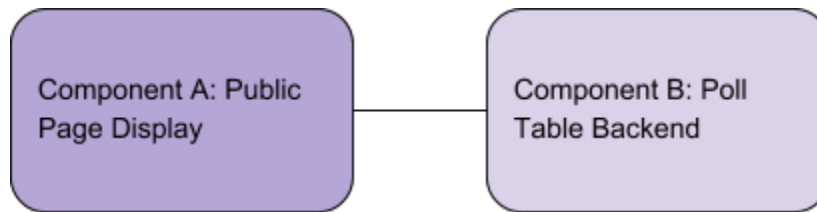
Defect No.	Description	Severity	How To Correct
1	When Signing up, the application should not accept any usernames that already taken.	1	Return an error code and an error message signifying that the username is taken.
2	When signing up, the same email cannot be used to create 2 accounts.	1	Return an error code and an error message signifying that the email is taken.
3	When signing up, if the information entered is wrong or needs revision, the login page shouldn't be displayed since the sign up was unsuccessful	2	Return an error code for unsuccessful sign up.



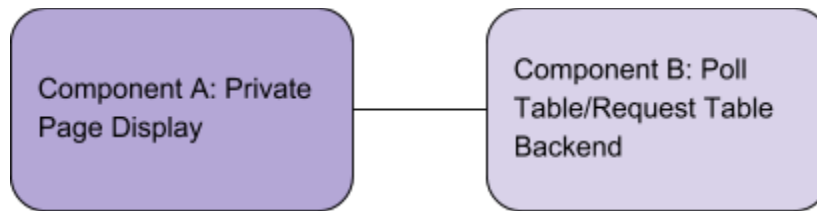
Defect No.	Description	Severity	How To Correct
1	When logging in, a username that isn't associated with an account in the database (Component B) cannot be used to log in to the application.	2	Created and returned a specific error code for when a user does not exist
2	An incorrect username and password combination cannot be used to log in to the application.	2	Separated and returned error codes for users that did not exist and for users that do with incorrect entered password.
3	The profile page mustn't be displayed until the user is correctly authenticated.	1	Return desired error codes and shift required transition software from HTML to js in the middleware.



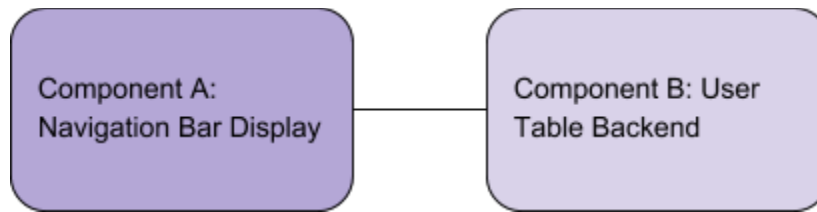
Defect No.	Description	Severity	How To Correct
1	The application should not accept a username that is not associated with an previously created user account in the User Table (Component B)	2	Return an error code for incorrect username entered from the backend (Component B)
2	The application should not accept an email that is not associated with an previously created user account in the User Table (Component B)	2	Return an error code for incorrect email entered from the backend (Component B)



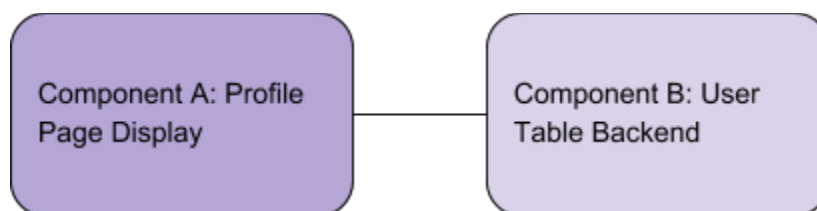
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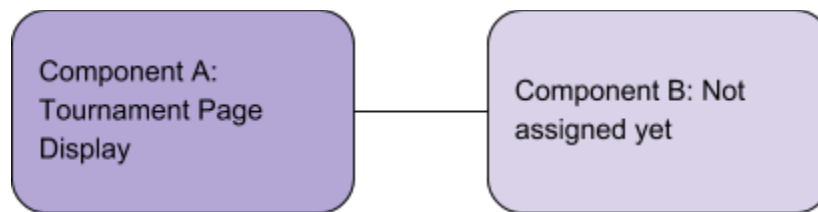


Defect No.	Description	Severity	How To Correct
1	Clicking on profile option, should load the user's information when page is loaded from Component B.	1	Component B must return all the user's information when the Profile page is opened.
2	Clicking the Logout button on Component A should logout the user from the backend authentication on Component B.	2	Component B must remove authentication of the user when logout is invoked.

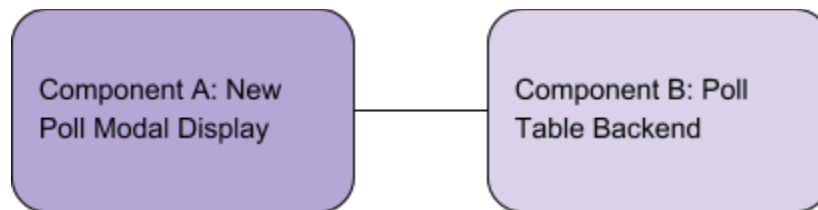


Defect	Description	Severity	How To Correct
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No.			
1	When Component A is loaded, the user's emoji only loaded the default value set.	2	An API call to retrieve the user's emoji from Component B must be made.
2	Component A could not populate with user information due to user authentication error.	1	Authentication added to component B prior to retrieving user information

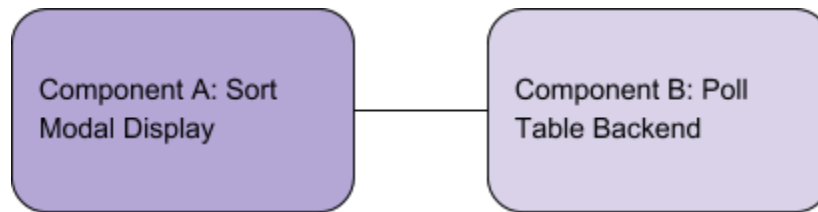


Planned for sprint 2

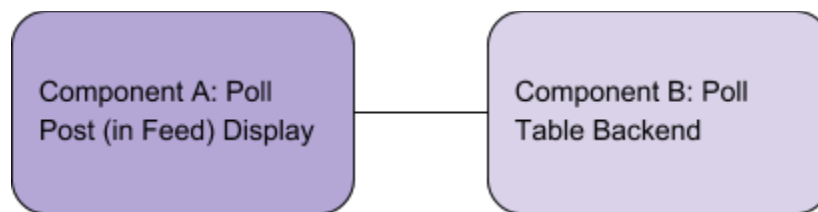


Defect No.	Description	Severity	How To Correct
1	The application shouldn't accept negative input values for duration of a new poll being created.	1	Component A cannot allow negative inputs using the scroll option when setting duration using HTML. An error code is returned if a negative value is entered by Component B.
2	The application must be able to properly interpret the information for duration as entered by the user to be stored and acted upon by the server.	2	Component B formats Component A's inputs before sending it to the API.

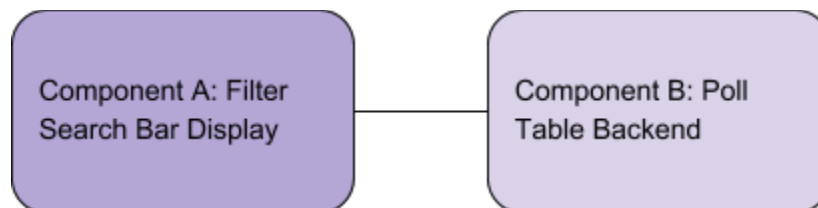




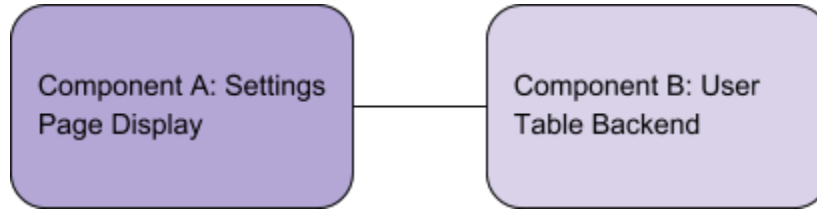
Defect No.	Description	Severity	How To Correct
1	The application shouldn't allow the user to select multiple sorting options for one request.	2	Component A's selection buttons were changed from checkboxes to radio buttons.
2	The application should not store sorting option until 'Sort' button is clicked and the results must be sorted in the selected order.	2	Component A should only send selected sorting option to Component B when 'Sort' button is clicked.



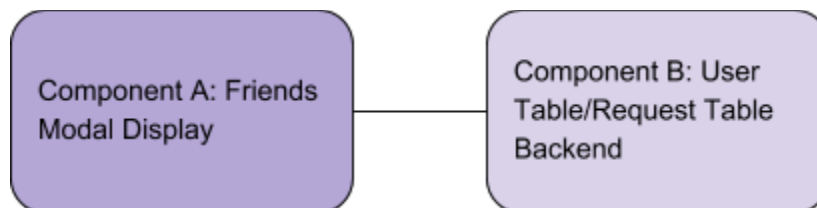
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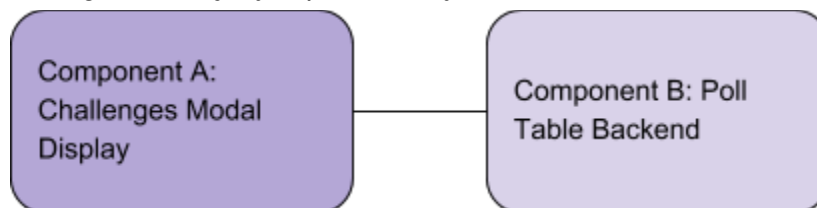
Defect No.	Description	Severity	How To Correct
1	The application should allow for posts related to multiple themes to be searched for in a filter request.	2	Added front end capabilities to have multiple theme search options selected in Component A.
2	The application did not remove deselected themes from search results .	2	Added search button to Component A. Component B refresh search results each time the search button is clicked.



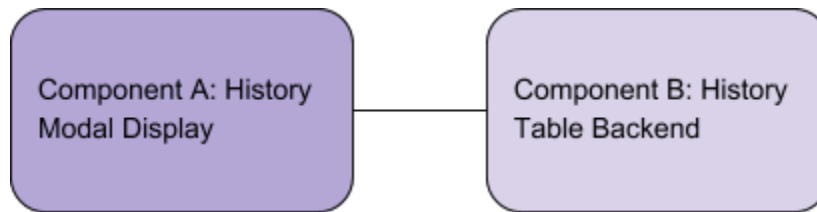
Defect No.	Description	Severity	How To Correct
1	The application didn't clear the respective input box when the Display name was successfully changed.	3	Returned a successful code from the User Table Backend (Component B) to signify that the Display name was successfully changed.
2	The application did not clear the respective input box when the password was successfully changed.	3	Returned a successful response code from the User Table backend (Component B) to signify that the password was successfully changed.
3	Password and Display name could not be changed due to user authentication error	1	Authentication added to component B prior to accessing User Table Backend (Component B)



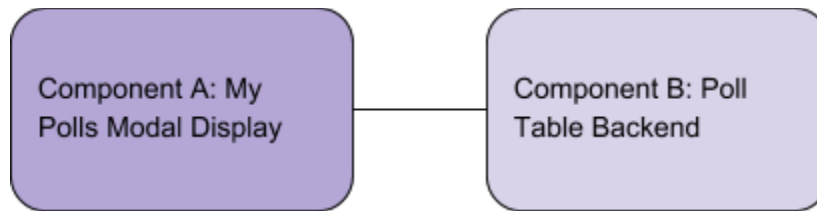
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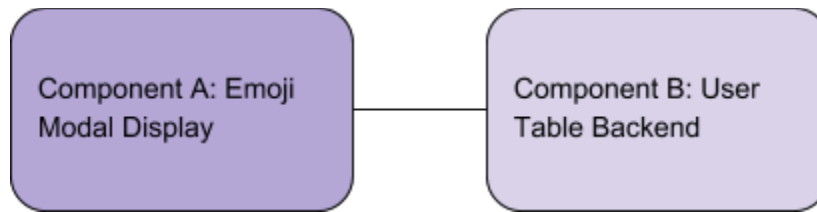
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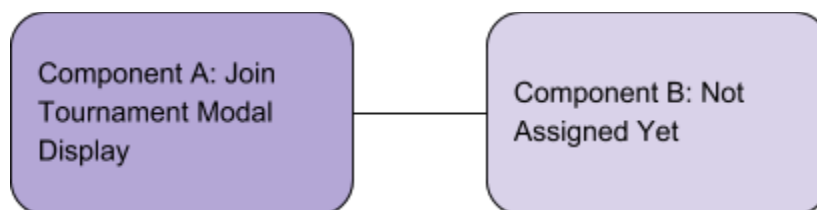
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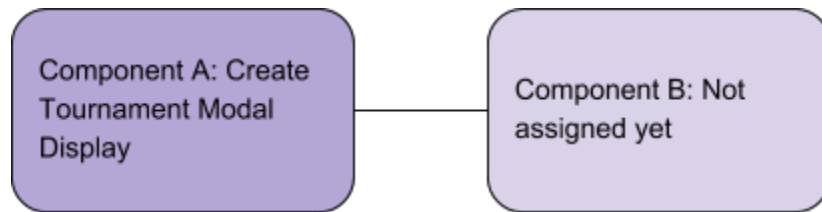
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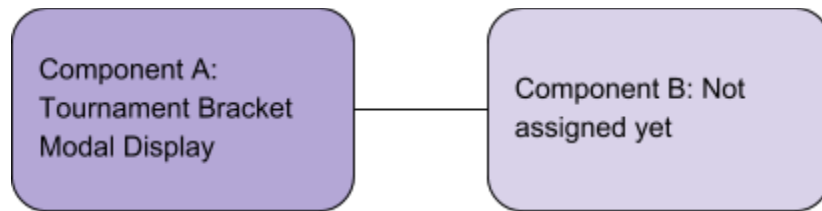
Defect No.	Description	Severity	How To Correct
1	The application mustn't allow a change in the emoji on Component A until a request is sent to Component B for the same.	2	Returned a successful response code from the User Table Backend (Component B) to signify that the emoji change was successful or error response if unsuccessful.



Planned for sprint 2

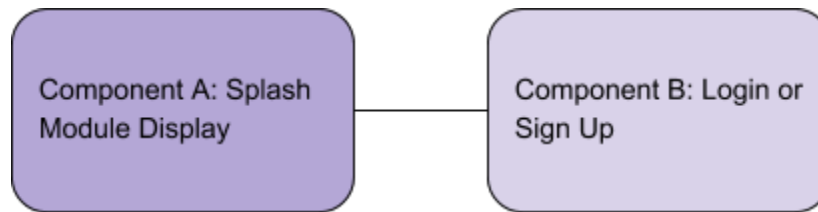


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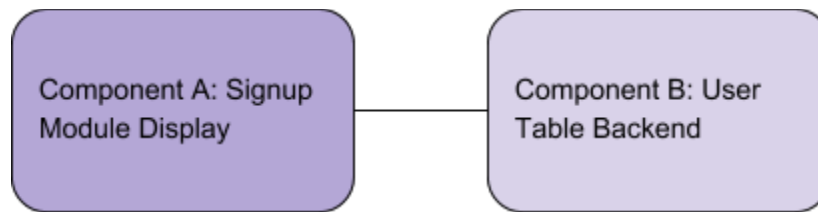


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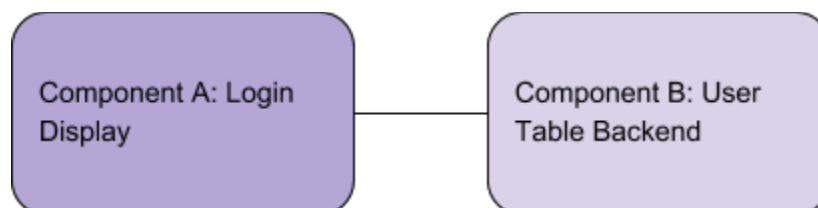
## Regression Testing



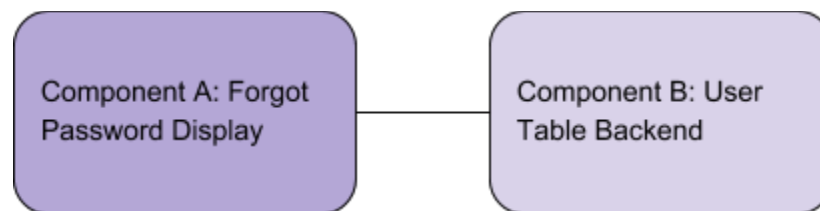
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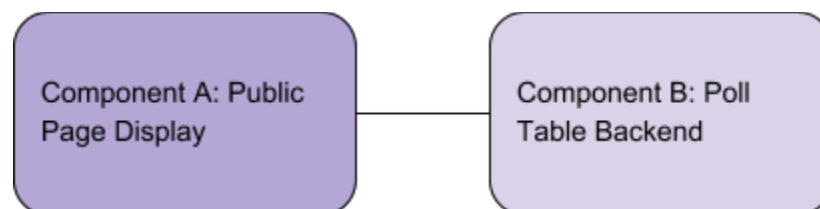
Defect No.	Description	Severity	How To Correct
1	Fixing an existing username error after checking information from the User Table (Component B) causes the display (Component A) to remain unchanged.	1	Check for error codes returned and if the error code is present, print USERNAME ALREADY EXISTS message on display.
2	Fixing an existing email error after checking information from the User Table (Component B) causes the display (Component A) to remain unchanged.	1	Check for error codes returned and if the error code is present, print EMAIL ALREADY EXISTS message on display.
3	Fixing the shift to login page error after checking information from the User Table (Component B) causes the display (Component A) to remain unchanged.	3	Check for error codes returned and if the error code is present, print the designated message on display.



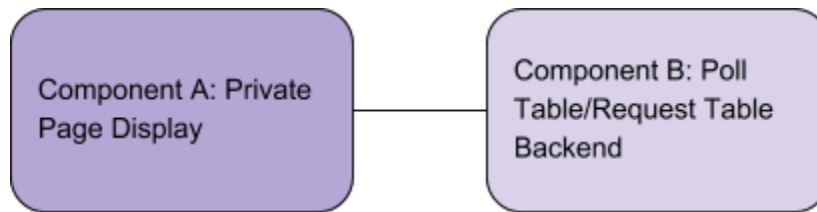
Defect No.	Description	Severity	How To Correct
1	Fixing the no username exists error in the User Table Backend (Component B) causes no change in the display (Component A)	2	Check for error codes returned and if the error code is present, print INVALID USERNAME on display.
2	Fixing the username-password mismatch error in the User Table Backend (Component B) causes no change in the display (Component A)	2	Check for error codes returned and if the error code is present, print INVALID PASSWORD on display.
3	Fixing the shift to profile page error in the User Table Backend (Component B) causes no change in the display (Component A)	1	Check for error codes returned and if the error code is present, print the designated message on display.



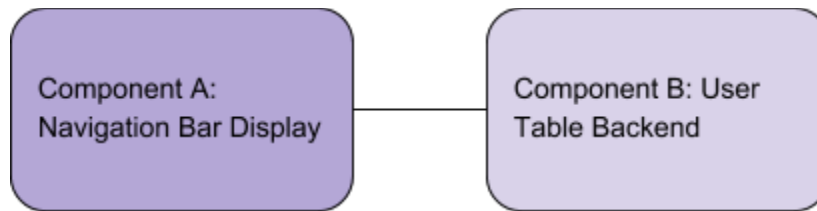
Defect No.	Description	Severity	How To Correct
1	Error code returned for non-created user by Component B didn't cause a change in the display (Component A)	1	Check for error codes returned and if the error code is present, print INVALID USERNAME on display.
2	Error code returned for non-created email by Component B didn't cause a change in the display (Component A)	2	Check for error codes returned and if the error code is present, print INVALID EMAIL on display.



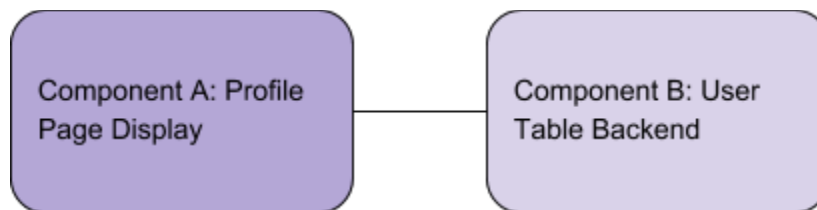
In Progress: Not fully implemented yet



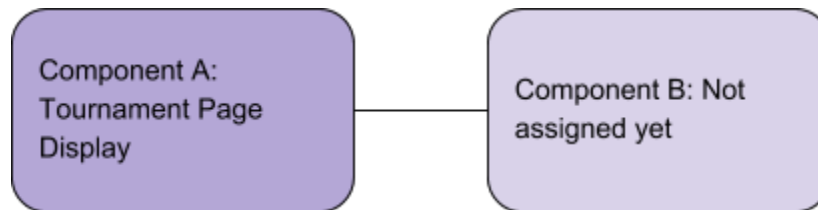
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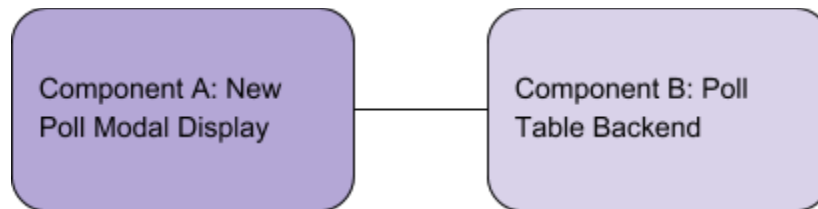
Defect No.	Description	Severity	How To Correct
1	Clicking on profile option, and navigating to profile did not display the user information onto the profile page from Component B	1	Added an 'onload' functionality. When window is loaded, user information populates the page automatically.
2	Component B logs the user out but there is no change in the display. The display should be moved to the splash screen.	1	After successful logout notification from Component B, the display is moved to the Splash Page.



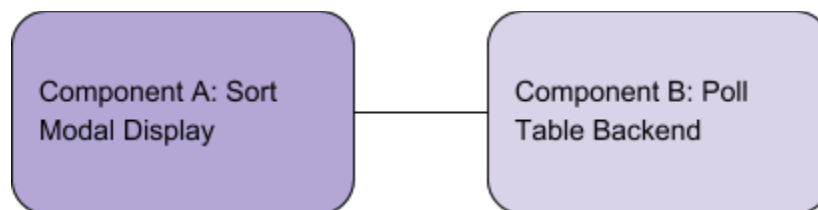
Defect No.	Description	Severity	How To Correct
1	After retrieving the emoji from Component B, the display (Component A) still did not reflect the change.	2	Added an update js command to load in the correct emoji retrieved from Component B to Component A.



Planned for sprint 2

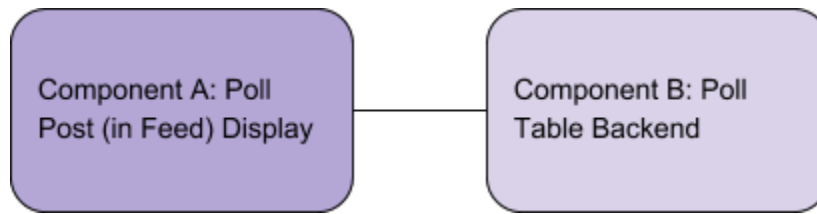


Defect No.	Description	Severity	How To Correct
1	Time input accepted negative inputs from the user in Component A even if scroller doesn't go below 0. Error code is not displayed (Component A)	1	Added both an API and middleware check for error code in (Component B) preventing user from being able to submit a negative time value. The error code is accounted for and displayed on Component A.
2	Component B received incorrectly formatted input from Component A and was unable to store the information properly.	2	Added a parser in the middleware to correctly parse the duration to a string as desired by the API.

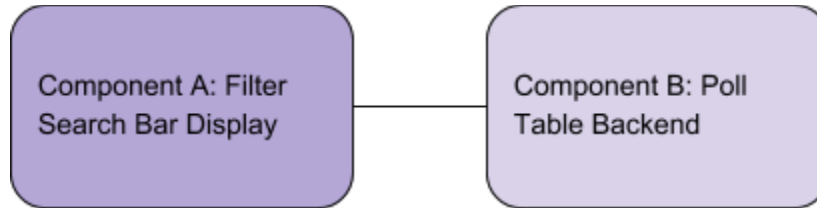


Defect No.	Description	Severity	How To Correct
1	After the sort button was clicked the display (Component A) did not change.	2	The request results from Component B (The Poll Table Backend) to retrieve the required polls in the correct order were updated in Component A (Display)

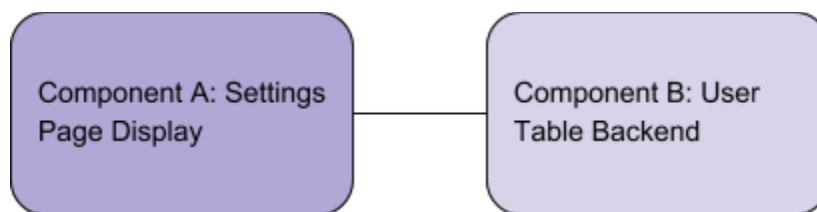




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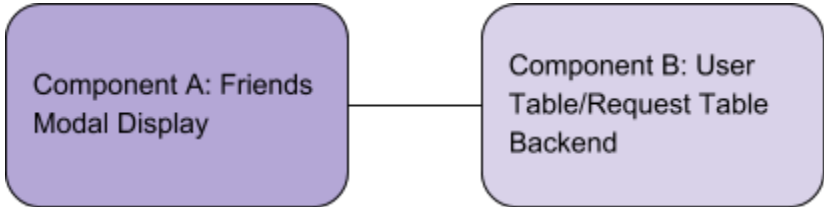


Defect No.	Description	Severity	How To Correct
1	Even after allowing multiple themes in searching, the results from Component B were not displayed in Component A.	2	Added middleware to receive results from the request and update the display accordingly (Component A)
2	After the addition of the search button, the display (Component A) was not changed after a request was sent.	2	Added middleware to receive results from the request and update the display accordingly (Component A)

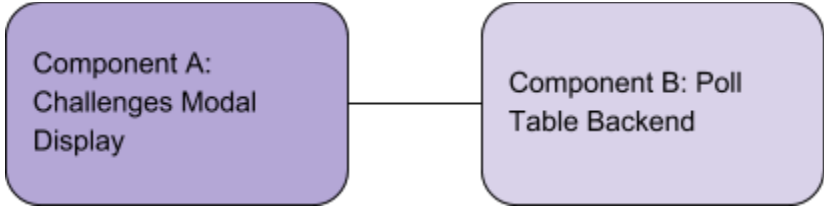


Defect No.	Description	Severity	How To Correct
1	When display was successfully changed (User Table backend), the input boxes for new display name and verify new display name were not cleared (Settings Display)	3	Added a middleware command to check for successful error code and clear the input boxes in the display (Component A)
2	When password was successfully	3	Added a middleware command to

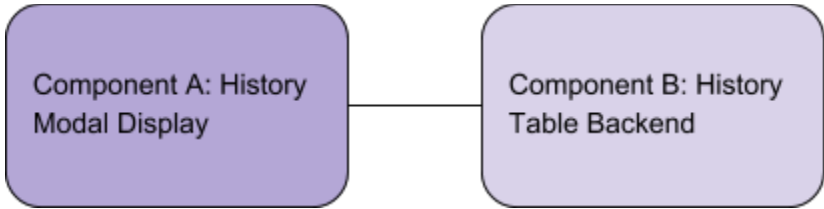
	changed (User Table backend), the input boxes for new password and verify new password were not cleared (Settings Display)		check for successful error code and clear the input boxes in the display (Component A)
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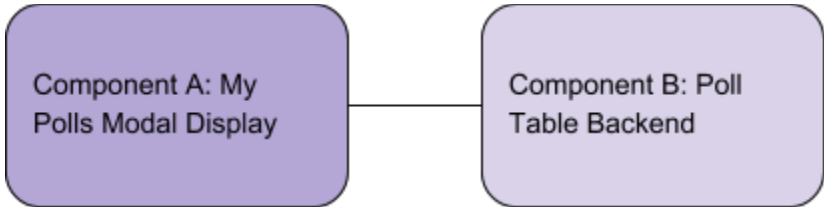
In Progress: Not fully implemented yet



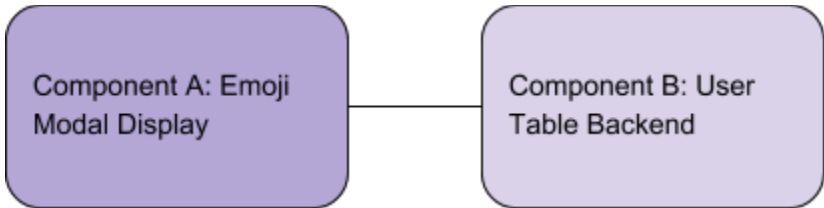
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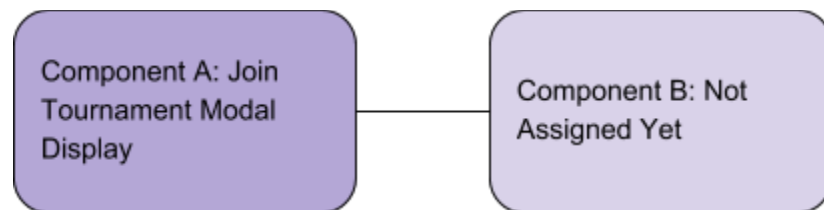
Planned for sprint 2



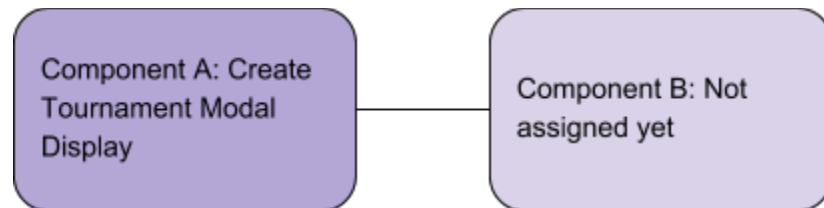
Planned for sprint 2



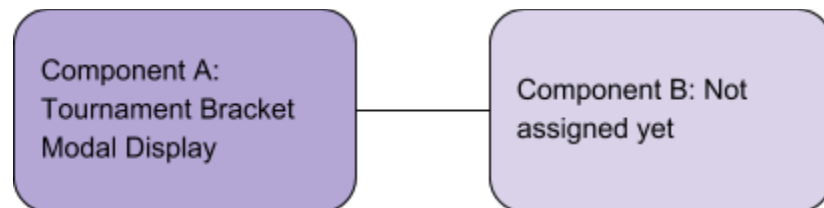
Defect No.	Description	Severity	How To Correct
1	The Emoji must be changed on the display (Component A) after receiving a favouring reply from Component B	2	Added conditional clause preventing the emoji to change if the emoji was not changed successfully in the API, via receiving a 200 response code from the backend API call on the display (Component A)



Planned for sprint 2



Planned for sprint 2



Planned for sprint 2

## Update Product Backlog (5 points)

Backlog Id	Functional Requirement	Hours	Status
1	As a user, I would like to be presented with a splash page	5	Completed in Sprint 1
2	As a user, I would like to see a brief description of the website on the splash page	5	Completed in Sprint 1
3	As a user, I would like to be able to create an account on the sign-up page	5	Completed in Sprint 1
4	As a user, I would like to login with an existing account on the login page	5	Completed in Sprint 1
5	As a user, I would like to be able to change my password from the settings page	5	Completed in Sprint 1
6	As a user, I would like to be able to change my display name from the settings page	5	Completed in Sprint 1
7	As a user, I would like to be able to logout of my account from any page	5	Completed in Sprint 1
8	As a user, I would like to find friends via searching usernames	5	In Progress: Moved to Sprint 2
9	As a user, I would like to send a friend request	5	In Progress: Moved to Sprint 2
10	As a user, I would like to accept a friend request	5	Planned for Sprint 2
11	As a user, I would like to reject a friend request	5	Planned for Sprint 2
12	As a user, I would like to be able to view a list of my current friends	5	In Progress: Moved to Sprint 2
13	As a user, I would like to see a list of all my polls	5	Planned for Sprint 2

14	As a user, I would like to see all the polls I voted on	5	Planned for Sprint 2
15	As a user, I would like to see the the number of polls I have won	5	In Progress: Moved to Sprint 2
16	As a user, I would like to see the number of polls I have lost	5	In Progress: Moved to Sprint 2
17	As a user, I would like to create a challenge poll	5	In Progress: Moved to Sprint 2
18	As a user, I would like to send an invite to a friend for a challenge poll.	5	In Progress: Moved to Sprint 2
19	As a user, I would like to create a personal poll	5	In Progress: Moved to Sprint 2
20	As a user, I would like to be able to upload image(s) into the poll	5	Completed in Sprint 1
21	As a user, I would like to be able to select image options for the poll through other means, such as movie posters, album artwork, and GIFs	5	Completed in Sprint 1
22	As a user, I would like to confirm that the image has been uploaded before I submit.	5	Completed in Sprint 1
23	As a user, I would like to be able to set the title of the poll	5	Completed in Sprint 1
24	As a user, I would like to be able to add a theme to a poll	5	Completed in Sprint 1
25	As a user, I would like to be able to set the privacy of the poll	5	Completed in Sprint 1
26	As a user, I would like to be able to set a time limit or expiration for my poll	5	Completed in Sprint 1
27	As a user, I would like to start the poll once the invited friend has uploaded their image	5	Planned for Sprint 2

28	As a user, I would like to accept a friend poll	5	In Progress: Moved to Sprint 2
29	As a user, I would like to reject a friend poll	5	In Progress: Moved to Sprint 2
30	As a user, I would like to upload a photo to a friend poll	5	Completed in Sprint 1
31	As a user, I would like to approve the poll to be launched	5	Completed in Sprint 1
32	As a user, I would like to accept a challenge poll	5	Planned for Sprint 2
33	As a user, I would like to reject a challenge poll	5	Planned for Sprint 2
34	As a user, I would like to upload a photo to a challenge poll	5	Completed in Sprint 1
35	As a user, I would like to approve the poll to be launched	5	Completed in Sprint 1
36	As a user, I would like to see public polls on the public page	5	In Progress: Moved to Sprint 2
37	As a user, I would like to see private polls from my friends on the my private page	5	In Progress: Moved to Sprint 2
38	As a user, I would like to sort polls by expiration date on both public and private pages	5	In Progress: Moved to Sprint 2
39	As a user, I would like to to sort polls from oldest to newest and newest to oldest on both public and private pages	5	In Progress: Moved to Sprint 2
40	As a user, I would like to filter polls by searching for multiple themes.	5	Planned for Sprint 2
41	As a user, I would like to filter polls by themes on both public and private pages	5	Completed in Sprint 1

42	As a user, I would like to vote for an option on a poll	5	Planned for Sprint 2
43	As a user, I would like to see the current results of the poll after a vote is submitted	5	Planned for Sprint 2
44	As a user, I would like to see notifications of my complete polls	5	Planned for Sprint 2
45	As a user I would like to access the public, private and personal pages from the navigation bar	5	Completed in Sprint 1
46	As a user, I would like to navigate to the tournament page	5	Completed in Sprint 1
47	As a user, I would like to create a tournament	5	Planned for Sprint 2
48	As a user, I would like to set a theme and title for my tournament	5	Planned for Sprint 2
49	As a user, I would like to start my tournament	5	Planned for Sprint 2
50	As a user, I would like to select a tournament to join	5	Planned for Sprint 2
51	As a user, I would like to upload or select a image to be used during the tournament	5	Planned for Sprint 2
52	As a user, I would like to see the my competitors in the waitroom prior to the start of the tournament	5	Planned for Sprint 2
53	As a user, I would like to see a list of active tournaments	5	Planned for Sprint 2
54	As a user, I would like to see the progress and current state of a selected active tournament	5	Planned for Sprint 2
55	As a user, I would like to vote in each bracket	5	Planned for Sprint 2
56	As a user, I would like to see the score of the poll, after i have voted	5	Planned for Sprint 2

57	As a user, I would like to see the winning image at the end of each round.	5	Planned for Sprint 2
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