TEAM: 2KJFT
Kenya Plenty (kgp2111)
Jennifer Martinez (jm4607)
Karime Robles (kr2484)
Francesco Prospato (flp2111)
The Ngo (tbn2109)

T5: Second Iteration

Part 1:

User Story #1

As a foodie, I want to be shown as much information about restaurants in my vicinity, so I can find a place to eat near me.

My conditions of satisfaction are

- I want to be shown how far away the restaurant is from my current location
- I want to be shown the name of the restaurant

User Story #2

As a lover of food, I want to be able to save a list of restaurants, so I can refer back to them later to find somewhere to eat quickly

My conditions of satisfaction are

- I want to be able to select a restaurant and have it appear on a saved list
- I want to be able to access this list at any time
- I want to be able to remove a saved restaurant at anytime

User Story #3

As an individual who loves food but can be a picky eater at times, I want to be shown what cuisine a restaurant serves and the menu, so I can quickly see if it will fit my tastes.

My conditions of satisfaction are

- I want to see an associated menu with each restaurant
- I want to see an associated cuisine with each restaurant

User Story #4

As someone that tends to frequent a small subset of restaurants, I want to be able to designate up to five restaurants as my all time favorites, so I refer back to these restaurants when I need to find a go to restaurant to get food from.

My conditions of satisfaction are

- I want to see these favorited restaurants under my profile
- I want to be able to remove a favorited restaurant at any time
- I want to be able to favorite a restaurant without swiping on it first
- I want to be able to add a saved restaurant to my favorites quickly

User Story #5

As someone that finds it hard to agree on what restaurant to go to with others, I want to be able to quickly see if I have any overlapping all time favorite restaurants with someone else, so we can go to a place that we both really like.

My conditions of satisfaction are

- I want to be shown the names of restaurants that appear in my and any other user on the platform's all time favorite restaurant list
- If there is more than one restaurant, I want to be shown all the restaurant names that overlap
- I want to be able to search for any other user on the platform to see if we have any matching restaurants

Part 2:

From our group's understanding, a unit test is the smallest piece of code that you can that you pass different parameters to and check the result to make sure that it lines up with what is expected. Because our app primarily focuses on gesture inputs (i.e. swiping, typing, and tapping), there are several difficulties that arose while trying to create unit tests for these methods because we had no way of controlling or knowing the input to these functions while we were coding. Also, unit tests in Xcode can not have any IBOutlet manipulation. IBOutlets are anything visible to the user (e.g. labels, buttons, images). With almost all of our code processing data to affect the IBOutlets we could not make tests for these.

Because of these factors, we realized that it would be easiest to do UI tests that could be broken down to test most of our major subroutines. Below is our testing plan for the UI tests that would mimic unit tests only.

Test Case Name: testSwipeLeft
Description: Ensures that the user can dismiss a restaurant and it will not show up in their saved restaurants or favorites
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No restaurants favorited or saved

Equivalence Class: Valid Dismiss Swipe
Boundary Conditions: N/A

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Swipe left on restaurant card	Restaurant card disappears from the screen	Same as expected outcome	Pass	
2	Tap My Restaurants button	Restaurant does not appear in saved restaurant list	Same as expected	Pass	
3	Close Saved Restaurants	My Restaurants removed from	Same as expected	Pass	

		the screen			
4	Click profile icon	User profile should appear on the screen without the saved restaurant underneath their favorites	Same as expected	Pass	

Test Case Name: testSwipeRight
Description: Ensures that the user can save a restaurant, but it will not show up in their favorites
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No restaurants favorited or saved

Equivalence Class: Valid Save Swipe
Boundary Conditions: N/A

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Swipe right on restaurant card	Restaurant card disappears from the screen	Same as expected outcome	Pass	
2	Tap My Restaurants button	Restaurant appears in saved restaurant list	Same as expected	Pass	
3	Tap close button	My Restaurants removed from the screen	Same as expected	Pass	
4	Click profile icon	User profile should appear on the screen without the saved restaurant underneath their favorites	Same as expected	Pass	

Test Case Name: testInvalidRemoveSavedRestaurant
Description: Ensures that a user cannot remove a saved restaurant by just swiping left on the cell
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Invalid Delete Gesture
Boundary Conditions: N/A

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Swipe right on restaurant card	Restaurant card disappears from the screen	Same as expected outcome	Pass	
2	Tap My Restaurants button	Restaurant appears in saved restaurant list	Same as expected	Pass	
3	Swipe left on restaurant card cell and release	Delete button should appear on the right side of the restaurant cell and restaurant remains in the list	Same as expected	Pass	

Test Case Name: testValidRemoveSavedRestaurant
Description: Ensures that the user can remove a restaurant by swiping left and clicking the delete button
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Valid Remove Gesture
Boundary Conditions: N/A

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Swipe right on restaurant card	Restaurant card disappears from	Same as expected	Pass	

		the screen	outcome		
2	Tap My Restaurants button	Restaurant appears in saved restaurant list	Same as expected	Pass	
3	Swipe left on restaurant card cell and release	Delete button should appear on the left side of the restaurant cell	Same as expected	Pass	
4	Press delete button	Restaurant removed from saved restaurant list	Same as expected	Pass	

Test Case Name: testFavoriteRestaurantWithButtonNoSave
Description: Ensures that the user can tap the Add to Favorites button and automatically add that restaurant to their favorites list, but it is not added to the saved restaurant list.
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Valid Favorite Gesture
Boundary Conditions: N/A

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap Add to Favorites button on restaurant card	The button changes to In Favorites	As expected	Pass	
2	Click profile	See restaurant name under the favorite restaurants associated with your profile	As expected	Pass	
3	Close profile	Profile disappears	As expected	Pass	
4	Tap My	Restaurant does	Same as	Pass	

	Restaurants button	not appear in saved restaurant list	expected		

Test Case Name: testAddFavoriteMax

Description: Ensures that a user cannot add more than 5 favorite restaurants without seeing a warning. The warning should have no effect on their existing favorite restaurants

Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Maximum Favorites

Boundary Conditions: N/A

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap the Add to Favorites Button and swipe right on the restaurant card x 4	The button changes to In Favorites for each favorite and the restaurant cards are removed from the screen	As Expected	Pass	
2	Tap the Add to Favorites Button	Warning should pop up telling you to remove one of your favorite restaurants if you want to add another	As Expected	Pass	
3	Press OK	Remove the warning	As Expected	Pass	

Test Case Name: testInvalidRemoveFavoritedRestaurant

Description: Ensures that a user will not be able to remove a restaurant from their favorites by just swiping on the restaurant cell in their favorites list

Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Invalid Delete Gesture

Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap the Add to Favorites Button	The button changes to In Favorites in the restaurant card	As expected	Pass	
2	Tap profile icon	User profile appears with the restaurant under favorites			
3	Swipe left and release the restaurant's cell	Delete button should appear in the left hand corner of the cell and the restaurant name remains there			

Test Case Name: testValidRemoveFavoritedRestaurant
Description: Ensures that a user can only remove a restaurant from their favorite's list by swiping left on the table cell and pressing the delete button
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Valid Delete Gesture
Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap the Add to Favorites Button	The button changes to In Favorites in the restaurant card	As expected	Pass	
2	Tap profile icon	User profile appears with the restaurant under favorites	As expected	Pass	
3	Swipe left and	Delete button	As expected	Pass	

	release the restaurant’s cell	should appear in the left hand corner of the cell and			
4	Press delete button	Restaurant’s name is removed from the favorites list	As expected	Pass	

Test Case Name: TestFavoriteFromSavedRestaurants
Description: Ensures that a user can favorite a restaurant from their saved restaurant list by swiping right on the cell and clicking on the button.
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Valid Favorite Gesture
Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Swipe right on restaurant	Restaurant disappears from the screen	As Expected	Pass	
2	Tap My Restaurants	Restaurant name appears in the saved restaurant list	As expected	Pass	
3	Swipe right on the restaurant cells and release	Favorite button appears on the left side of the cell	As expected	Pass	
4	Press the Favorite button	A filled in star should appear on the far right of the screen	As expected	Pass	
5	Press close (x) button	Closes the saved restaurant screen	As expected	Pass	
6	Click profile icon	Opens profile	As expected	Pass	

		and see restaurant under favorite restaurants			

Test Case Name: TestInvalidFavoriteFromSavedRestaurants
Description: Ensures that a user cannot favorite a restaurant from the saved restaurant list by just swiping right on restaurant cell in the saved restaurant list
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Invalid Favorite Gesture
Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Swipe right on restaurant	Restaurant disappears from the screen	As Expected	Pass	
2	Tap My Restaurants	Restaurant name appears in the saved restaurant list	As expected	Pass	
3	Swipe right on the restaurant cells and release	Favorite button appears on the left side of the cell and that the restaurant does not have a star on the left side of its cell	As expected	Pass	

Test Case Name:TestUnFavoriteFromSavedRestaurants
Description: Ensures that a restaurant can be unfavorited from the saved restaurant list by swiping left and pressing the Unfavorite button, but the restaurant will remain in the saved restaurant list
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Valid Unfavorite Gesture
Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap Add to Favorites button	The button on the restaurant card should change to In Favorites	As expected	Pass	
2	Swipe right on the restaurant	Restaurant should disappear from the screen	As expected	Pass	
3	Tap My Restaurants	Restaurant should appear in saved restaurant list with a star in the right side of the cell	As expected	Pass	
4	Swipe left on the restaurant cell	Unfavorite button appears on the left side of the restaurant cell	As expected	Pass	
5	Press the Unfavorite button	The star disappears from the right side of the restaurant cell	As expected	Pass	
6	Press the close button	Saved restaurant list is removed from the screen	As expected	Pass	
7	Press the profile button	Restaurant no longer appears under favorited restaurants	As expected	Pass	

Test Case Name:TestInvalidUnFavoriteFromSavedRestaurants
Description: Ensures that a restaurant cannot be unfavorited from the saved restaurant list by just swiping left
Pre-Conditions/Assumptions:

- User logged in and location enabled

- No saved restaurants or favorited restaurants

Equivalence Class: Invalid Unfavorite Gesture
Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap Add to Favorites button	The button on the restaurant card should change to In Favorites	As expected	Pass	
2	Swipe right on the restaurant	Restaurant should disappear from the screen	As expected	Pass	
3	Tap My Restaurants	Restaurant should appear in saved restaurant list with a star in the right side of the cell	As expected	Pass	
4	Swipe right on the restaurant cell	Unfavorite button appears on the left side of the restaurant cell	As expected	Pass	
5	Press the close button	Saved restaurant list is removed from the screen	As expected	Pass	
7	Press the profile button	Restaurant still appears under favorited restaurants	As expected	Pass	

Test Case Name: testRemoveSavedRestaurantDoesNotRemoveFavorite
Description: Ensures that a restaurant can be removed from saved restaurant list, but if it is favorited, it remains in the favorite list.
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Invalid Unfavorite Gesture/Valid Delete Gesture

Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap Add to Favorites button	The button on the restaurant card should change to In Favorites	As expected	Pass	
2	Swipe right on the restaurant	Restaurant should disappear from the screen	As expected	Pass	
3	Tap My Restaurants	Restaurant should appear in saved restaurant list with a star in the right side of the cell	As expected	Pass	
4	Swipe left on the restaurant cell	Delete button appears on the far right of the cells	As expected	Pass	
5	Press the delete button	Restaurant is removed from saved restaurants	As expected	Pass	
7	Press close	Closes the saved restaurant list	As expected	Pass	
8	Press profile	See the restaurant under favorited restaurants	As expected	Pass	

Test Case Name: testFaceOffWithOverlap
Description: Ensures that a user will see overlapping restaurants if they have any favorites in common with another user
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: Overlapping Restaurants
Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap the Add to Favorites button and swipe left on the first 5 restaurants	For each restaurant card, the In Favorites button appears before the restaurant disappears from the screen			
2	Tap the search icon	Have the user search screen show up	`		
3	Type a into the search bar and press enter	Have the list of mock users show up under the search results			
4	Tap the Cam Com profile	Show the Cam Com profile with and notice that there is at least one restaurant in common			

Test Case Name: testFaceOffWithNoOverlap
Description: Ensures that a user will not see any overlapping restaurant if someone does not have the same favorites as them
Pre-Conditions/Assumptions:

- User logged in and location enabled
- No saved restaurants or favorited restaurants

Equivalence Class: No Overlapping Restaurants
Boundary Conditions:

Step No.	Step Description	Expected Outcome	Actual Outcome	Pass/Fail	Additional Notes
1	Tap the Add to	For each	As expected	Pass	

	Favorites button and swipe left on the first 5 restaurants	restaurant card, the In Favorites button appears before the restaurant disappears from the screen			
2	Tap the search icon	Have the user search screen show up	As expected	Pass	
3	Type fake into the search bar and press enter	Have the search results show the Fake User profile in the search results	As expected	Pass	
4	Tap the fake user profile	Notice that there are no overlapping restaurants, so the message “No restaurants in common shows up.”	As expected	Pass	

In terms of boundary conditions, there did not really seem to be any appropriate ones for UI tests. For example, there does not seem to be any single one gesture that seems like it is right on the boundary of the delete/remove gesture or the swiping gesture. Either you swiped or you didn’t. As a result, I would not say that we have traditional boundary conditions like presented in class. Thus, I split up our test cases into equivalence classes and tested inside the equivalence class and outside the equivalence class.

Part 3:
The code coverage reports in our repo are screenshots taken from the XCode built-in code coverage too. We were unable to incorporate our UI Tests and CodeCov into TravisCI mainly due to the location settings for our app. Due to privacy reasons, from our team’s research, there was not a definitive way to locate our elements on the screen and get their values in the UI tests apart from finding them via staticText. Because we don’t know what the location will be during testing, there is no way for us to do our UI testing via Travis CI

If you look at the Code Coverage break down on Github.com, you will see that coverage in some files are considerably smaller than others. There are several reasons for this. When you create a new iOS app in Xcode, there are many functions that are given to you right out of the box in many classes, (i.e. App Delegate), which were not necessary for our application. We can not delete these functions because they're needed by default for any iOS app, so we have to keep them empty. In addition, some of these lower coverage files also have many auto generated comments. Also test setup functions (e.g. adding test users for when we're navigating through the app) are not covered. Since, these out of the box functions and lines of comments are taken into account in XCode's Code Coverage tool, some of our files saw considerably lower coverage.

NOTE: There is one image that has overall code coverage and there is another image that has code coverage broken down.

Github URL: https://github.com/kenyaplenty/Rinder/tree/main/CodeCovReports

Part 4:
After incorporating Travis CI into our project, we could not figure out a way to have it generate reports in the form of files. If you click the x or check mark next to any of the commits, you will be redirected to the Travis CI reports.

Additional Note(s):
Instead of using an external package manager, our groups decided to use the built-in package manager within XCode. In addition, within the XCode platform, there is a built-in static code analysis tool. You will see screenshots of the output of the static analysis tool in the repository. See links below for more information.

Link(s):
Package Manager: https://www.raywenderlich.com/7242045-swift-package-manager-for-ios

Static Code Analysis Tool : https://developer.apple.com/library/archive/documentation/ToolsLanguages/Conceptual/Xcode_Overview/AnalyzingYourCode.html