Date

December 1, 2024

Coffee Spot

Team 3 Members

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Alan Yu - Scrum Master | Diane Bilse - Front End |

Halia Tavares - Front End | John Bagwell - Back End |

Su Tun (Emily Su) - Git Master | Timmy Tram - Back End

Lead

Milestone 4

Unit Testing,

Integration Testing,

Coding Styles,

Documentation

Generation

SW Engineering CSC648/848 - Section 01



History	Date
V0.1	12.01.2024

1. QA Testing

Unit Testing: Testing Overview

Github Test Cases Directory	Test Cases Directory Link
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Tested Features	Purpose		
Admin Analytics API	This should return the count of items we have in the database.		
Bookmarks API	This should make sure we can get all the bookmarks from the database so we can show it to the users.		
Locations API	This gets all the locations so we can display it on the home page or search pages.		
Reviews API	This should get all the reviews addressed to the locations.		
Users API	This should make sure we can get the user's details and create users.		

Unit Testing: Coverage Summary

Admin Analytics API

Functional Coverage: 100%Statement Coverage: 100%

Summary:

- o This API has complete coverage on both functional and statement levels.
- o Confidence Level: We can be 100% sure this API is working as intended.

Bookmarks API

Functional Coverage: 100%Statement Coverage: 90%

Summary:

- While statement coverage is slightly below full, functionality is fully covered.
- Confidence Level: We can be confident this API is working as intended.

Locations API

Functional Coverage: 71%Statement Coverage: 78%

Summary:

- This API covers getting and creating locations.
- \circ $\,$ Test cases for $editing\ locations$ have not yet been added.
- Note: Integration tests confirm that editing functionality works.

Reviews API

Functional Coverage: 100%Statement Coverage: 100%

Summary:

 Full coverage ensures all functionality, including fetching reviews, is verified.

Users API

Functional Coverage: 75%Statement Coverage: 50%

Summary:

- This API covers getting users and creating users—the most frequently used functions.
- o Test cases for **editing user information** are not yet written.

Running the Tests:

- git clone
 https://github.com/Miguel-Antonio-Logarta/csc648-01-fa24-csc648-01-fa24-tea
 m03-duplicate.git
- 2. cd '.\CSC 648\csc648-01-fa24-csc648-01-fa24-team03-duplicate\application\'
- 3. git checkout dev | This step is only necessary if we tests aren't in main branch
- 4. npm install
- 5. npx prisma generate
- 6. npm run test

```
tramt ► application ↑ dev = © 22.9.0 ► 🖫 16ms → 🐧 npm run test
> csc648-01-2024-team03-coffee-spot@0.1.0 test
> jest --silent --coverage
          test__/api.bookmarks.test.ts
          test__/api.locations.test.ts
_test__/api.reviews.test.ts
_test__/api.analytics.test.ts
 PASS
 PASS
 PASS
 PASS
          test /api.users.test.ts
                                                                 % Funcs
File
                                        % Stmts |
                                                    % Branch
                                                                             % Lines
                                                                                          Uncovered Line #s
All files
                                           63.79
                                                        43.85
                                                                                63.74
                                                                                  100 İ
                                                                                          11
 src/app/api/analytics
src/app/api/auth/[...nextauth]
authOptions.ts
src/app/api/bookmarks
                                                                                15.38
15.38
90.9
                                           15.38
15.38
                                                                                          15-54
                                            90.9
                                                        66.66
                                            90.9
                                                        66.66
 src/app/api/locations
                                           78.04
                                                                    71.42
 route.ts
                                           78.04
                                                                    71.42
                                             100
                                                                                   50
                                           50.79
                                                                       75
 src/app/api/users
                                           50.79
                                                                        75
                                                                                    50
  route.ts
Test Suites: 5 passed, 5 total
               18 passed, 18 total
Tests:
               0 total
Snapshots:
               3.353 s, estimated 4 s
application → ♠ ∤dev ■ → ® 22.9.0 → ■ 5.274s → ♦ |
Time:
```

Integration Testing

Test C	ase ID	1	Test Case Description	Test Login Functionality			lity	
Creat	ed By	Timmy Tram	Reviewed by	Alan \	⁄u	Vers	sion	1.0
Tester's	s Name	Timmy Tram	Date Tested	12/1/2024		Case s/Fail)		Pass 🗸
S#		Prereq	uisites	S#			Test Data	a
1	Acc	ess to inte	ernet browser	1		use	rname = E	Benas
' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	7100		JJ. DIO WOO!	2		pass	sword = 1	23456
Test	Verify on entering valid username and password, the customer can login							
Step #	Step [Details	Expected Results	Actu	al Resu	lts	PAS	S 🗸 / FAIL 🗙
1	Navig https://cs -fa24-csc fa24-tear icate-w5:	sc648-01 c648-01- m03-dupl	Site should open	As Expected			V	
2	Click th button, t	e Login top right	Should show Login Page	As I	As Expected			V
3	Enter Crede	User entials	Credentials are able to be entered	As Expected		V		
4	Click th	ne login o submit	Should flash Welcome \${username}! and redirect to home page	As I	Expecte	d		V

Test Case ID	2	Test Case Description	Test Signup Functionality		
Created By	Timmy Tram	Reviewed by	John Bagwell	Version	1.0

Tester's	s Name Timmy Tram	Date Tested	12/1/2024 Test Case (Pass/Fail)		Pass 🗸
S#	Prere	quisites	S#		Test Data
			1	userr	name = testuser1
1	Access to in	ternet browser	2	email =	testuser1@test.com
			3	passwo	ord = testpassword
Test		Verify that the c	ustomer car	n create a new ac	count
Step #	Step Details	Expected Results	Actu	al Results	PASS 🗸 / FAIL 🗙
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dup icate-w53a.vercel .app/	Site should open	As I	Expected	~
2	Click Sign up button the top right	Should redirect to Signup Page	As I	Expected	V
3	Enter user Credentials	Credentials are able to be entered	As Expected		~
4	Click the sign in button to submit	Should flash User Created Successfully and redirect to Login Page	As Expected		~

Test Case ID	3	Test Case Description	User can view all locations				
Created By	Timmy Tram	Reviewed by	John Bag	well	Vers	sion	1.0
Tester's Name	Timmy Tram	Date Tested	12/1/2024		t Case ss/Fail)		Pass 🗸

S#	Prereq	uisites	S#		Test Data			
1	Access to into	ernet browser	1					
Test	Verify that any user can view all locations and individual location information							
Step #	Step Details	Expected Results	Actua	ıl Results	PASS 🗸 / FAIL 🗙			
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/	Site should open	As Expected		~			
2	Stay in Home directory	If user scrolls they should see all locations our site has to offer.	As Expected		~			
3	Click on any of the view Details button	It should take you to /locationInfo/{loca tionId} and you should be able to see the unique information of that place as well as any comments	As Expected		~			

Test C	ase ID	4	Test Case Description	User can leave behind reviews on places				
Creat	ed By	Timmy Tram	Reviewed by	Alan Y	′ u Vers		sion	1.0
Tester's	s Name	Timmy Tram	Date Tested	12/1/2024		Test Case (Pass/Fail)		Pass 🗸
S#		Prereq	uisites	S#			Test Data	a
1	Acc	ess to inte	ernet browser	1	Rev	Review = "This is a test review for the integration test"		
2	User is lo	ogged in. ((Refer to Test Case)	2	Rating = 5		5	

Test	User clicks on a location and wants to leave a review							
Step #	Step Details	Expected Results	Actual Results	PASS 🗸 / FAIL 🗙				
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/	Site should open	As Expected	V				
2	Click on any of the view Details button	It should take you to /locationInfo/{loca tionId} and you should be able to see the unique information of that place as well as any comments	As Expected	~				
3	Click on the Write a Review! button	It should take you to /writeReview/{loc ationId} and you should be able to see a section where you can write a review	As Expected	~				
4	Enter Test Data	Should be able to enter in data	As Expected	V				
5	Click submit	It should flash a "review successfully created!" and redirect you back to locationInfo/{locat ionId}	As Expected	~				

Test Case ID	5	Test Case Description	User can bookmark a location			
Created By	Timmy Tram	Reviewed by	John Bagwell	Version	0.1	

Tester's	s Name Timmy Tram	Date Tested	12/1/2024	Test Case (Pass/Fail)	Pass 🗸
S#	Prerec	quisites	S#		Test Data
1	Access to int	ernet browser	1		
2		(Refer to Test Case 1)	2		
Test		User wa	ants to book	mark a location	
Step #	Step Details	Expected Results	Actu	ial Results	PASS 🗸 / FAIL 🗙
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/	Site should open	As Expected		~
2	Click on any of the view Details button	It should take you to /locationInfo/{loca tionId} and you should be able to see the unique information of that place as well as any comments	As Expected		~
3	Click on the Bookmark button	It should flash a toast saying "Bookmark Created!" and the bookmark button now says Unbookmark	As	Expected	~

Test Case ID	6	Test Case Description	User can view their bookmarks				
Created By	Timmy Tram	Reviewed by	Alan Yu		Version		1.0
Tester's Name	Timmy Tram	Date Tested	12/1/2024		Case s/Fail)		Pass 🗸

S#	Prereq	uisites	S#		Test Data				
1	Access to inte	ernet browser	1						
2	1	Refer to Test Case	2						
3	User already has to Test	bookmarks (Refer Case 5)	3						
Test	User wants to view their bookmarked locations								
Step #	Step Details	Expected Results	Actu	al Results	PASS 🗸 / FAIL 💢				
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/	Site should open	As Expected		~				
2	Click on My Profile in the navbar	Should redirect to User's Profile Page	As	Expected	~				
3	Stay on profile Page	Should be able to scroll through all bookmarked locations if you have many locations bookmarked	As Expected		~				
4	Click on any of the bookmark location cards	Should redirect to that specific location's details page	As	Expected	V				

Test Case ID	7	Test Case Description	User can unbookmark locations				
Created By	Timmy Tram	Reviewed by	John Bagwell		Vers	sion	1.0
Tester's Name	Timmy Tram	Date Tested	12/1/20 24	Test ((Pass			Pass 🗸

S#	Prerequisites	S#	Test Data
1	Access to internet browser	1	
2	User is logged in. (Refer to Test Case 1)	2	
3	User already has bookmarks (Refer to Test Case 5)	3	

Test

User wants to remove bookmarked locations

Step #	Step Details	Expected Results	Actual Results	PASS ✔/FAIL 🗙
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/	Site should open	As Expected	>
2	Go to any location details page that you have bookmarked either through your profile page or home page or any other methods	Location details page is shown, should see a unbookmark button	As Expected	✓
3	Click on unbookmark button	Should flash a message saying "Bookmark deleted successfully!" and the As Expected		~
4	Click on My Profile in the navbar	Should redirect to User's Profile Page	As Expected	V
5	Stay on profile Page	Should see that bookmark location is no longer listed	As Expected	~

Test C	ase ID	8	Test Case Description	User can Logout							
Creat	ed By	Timmy Tram	Reviewed by	John E	Bagwell Vers		sion	1.0			
Tester's	s Name	Timmy Tram	Date Tested	12/1/20 24	Test (Pass			Pass 🗸			
S#		Prereq	uisites	S#			Test Data	est Data			
1	Acc	ess to inte	ernet browser	1							
2	User is logged in. (Refer to Test Case 1)			2							
Test			U	Jser wants	s to logou	t					
Step #	Step [Details	Expected Results	Ac	tual Resu	lts	PAS	S ✓/FAIL 🗙			
1	Navig https://cs -fa24-csc fa24-tear icate-w5:	6648-01 6648-01- m03-dupl 3a.vercel	Site should open	As Expected			~				
2	Click L button o	_ogout n navbar	Logout button now shows Login and signup ensuring user is logged out	А	As Expected 🗸			~			

Test C	ase ID	9	Test Case Description	Ensure User cannot write a review if not logged in				
Creat	ed By	Timmy Tram	Reviewed by	John B	hn Bagwell		sion	1.0
Tester's	s Name	Timmy Tram	Date Tested	12/1/20 24	Test Case (Pass/Fail)		Pass 🗸	
S#	S# Prerequisites		S#	Test Data				
1	Acc	ess to inte	ernet browser	1				

Test	Say the user is not logged in and they click on the write a review button							
Step #	Step Details	ep Details		PASS 🗸 / FAIL 🗙				
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/	Site should open	As Expected	V				
2	Click on any of the view Details button	It should take you to /locationInfo/{loca tionId} and you should be able to see the unique information of that place as well as any comments	As Expected	V				
3	Click on the Write a Review! button	It should take you to /writeReview/{loc ationId}, however, user is met with a page saying, "YOU ARE NOT AUTHORIZED TO VIEW THIS PAGE"	As Expected	V				

Test C	ase ID	10	Test Case Description	Ensure User cannot bookmark a location if not logged in				
Create	ed By	Timmy Tram	Reviewed by	Alar	Alan Yu		sion	1.0
Tester's	s Name	Timmy Tram	Date Tested	12/1/20 24	Test Case (Pass/Fail)		Pass 🗸	
S#	Prerequisites			S#	Test Data			
1	Access to internet browser			1				

Test	Say the user	clicks on the login	to bookmark button because	they aren't logged in
Step #	Step Details	Expected Results	Actual Results	PASS 🗸 / FAIL 🗙
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/	Site should open	As Expected	V
2	Click on any of the view Details button	It should take you to /locationInfo/{loca tionId} and you should be able to see the unique information of that place as well as any comments. Bookmark button should say "Login to Bookmark"	As Expected	
3	Click on Login to Bookmark button	Should redirect you to the Login Page	As Expected	V

Test C	ase ID	11	Test Case Description	Admin User can view Admin Dashboard					
Creat	ed By	Timmy Tram	Reviewed by	Alar	n Yu	Version		1.0	
Tester's	s Name	Timmy Tram	Date Tested	12/1/20 24		Test Case (Pass/Fail)		Pass 🗸	
S#		Prereq	uisites	S#	Test Data				
1	Acc	ess to inte	ernet browser	1	username = "CoffeeSpotAdmin"				
2				2		password	d = "admii	n123456"	
Test	Test Admin logs in and wants to view how many locations, users, bookmarks, and reviews there are								

Step #	Step Details	Expected Results	Actual Results	PASS 🗸 / FAIL 💢
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/	Site should open	As Expected	~
2	Click the Login button, top right	Should show Login Page	As Expected	V
3	Enter User Credentials	Credentials are able to be entered	As Expected	✓
4	Click the login button to submit	Should flash Welcome \${username}! and redirect to home page	As Expected	✓
5	Stay in Home Page and look in navbar for Dashboard/Analyt ics	Should be able to see this if logged in with admin account	As Expected	✓
6	Click on Dashboard/Analyt ics	Should redirect to /admin and see the number of locations, users, reviews and bookmarks	As Expected	~

Test Case ID		12	Test Case Description	Admin User wants to create a location				
Created By		Timmy Tram	Reviewed by	Alan Yu		Version		1.0
Tester's Name		Timmy Tram	Date Tested	12/1/20 24	Test ((Pass			Pass 🗸
S#	S# Prerequisites		S#	Test Data				
1	Access to internet browser		1	Name = "Test"				
2	User is logged into Admin User and is on admin dashboard page (Refer to Test Case 11)			2	Address = "Test"			

3			3	Category = LIBRARY		
4			4	Image = image of location.png or .jpg		
Test	Admin user gets requested to create a new location, so they go and create one					
Step #	Step Details	Expected Results	Ac	tual Results	PASS 🗸 / FAIL 🗙	
1	Navigate to https://csc648-01 -fa24-csc648-01- fa24-team03-dupl icate-w53a.vercel .app/admin	Site should open	As Expected		~	
2	Click Create Location button	Should show form for creating a location	As Expected		~	
3	Fill in with relevant information		As Expected		✓	
4	Click on Upload Image Image Image Image Image upload successfu		As Expected		✓	
5	Click on Create Location button	Should get a flash saying "Location Created Successfully"	As Expected		~	

Features Tested	PASS V / FAIL X
Login Functionality	V
Signup Functionality	~
User can view all Locations on Home Page	~
Users can leave behind Reviews on Locations	~

Users can Bookmark a Location	>
Users can view their Bookmarks	~
Users can Unbookmark Locations	V
User can Logout	V
Users must be logged in to write Reviews	V
Users cannot make Bookmarks unless they login	V
Admins can view Admin Dashboard	V
Admins can create a Location	V

- o The Integration Test file is: Coffee Spot Integration Tests.xlsx
- Link to Download Integration Test Spreadsheet: Milestone 4 Folder Link

2. Coding Practices

I. Coding Style

Coding Standards

- File and Variable Naming Conventions:
 - o React Components must use PascalCase (e.g., MyComponent.tsx).
 - All React component files need to follow the PascalCase naming convention.
 - An example: SearchForm.tsx contains a SearchForm component

- An exception to the PascalCase rule would be for Next.js routes. Next.js routes should be **lowercase**. Examples of these would include page.tsx, loading.tsx, layout.tsx, etc...
 - https://nextis.org/docs/app/api-reference/file-conventions
- Variables should be named in camelCase (e.g., userInput).
 - Example: [count, setCount] = useState<number>(0);
- Constants must use **ALLCAPS** with underscores for separation (e.g., API_ENDPOINT).

Exports:

- Only one React component per file. Use a **default export** instead of a named export.
 - An example:

```
const MyComponent = (props: MyComponentProps) => {
    ...
}
export default MyComponent
```

• Styling and Formatting:

• Use **Tailwind classes** for styling and avoid inline styles unless necessary.

- Example: When you're using a preset color for a background, use
 the name instead of the hex value
 - className="bg-tea-green" over className="bg-[#D1DAAF]"
- Keep Tailwind classes in a logical order, grouping similar utilities (e.g., layout, spacing, typography).

• Indentation:

• Use **2 spaces** for indentation; tabs must be replaced with 2 spaces.

• Code Formatting:

- Ensure consistent formatting with Prettier, adhering to the .prettierrc configuration. Use VSCode's "Format Document" (Ctrl+Shift+P) to automatically have Prettier format your code.
- Additional rules can be found in eslintrc.json and tsconfig.json

React-Specific Rules:

- o Functional components are preferred over class components.
- Destructure props and avoid using any as a type (follow TypeScript conventions).
- Hooks like useState and useEffect should be declared at the top of the component.

Code Readability:

- Write self-documenting code with clear, meaningful variable and function names.
- Include inline comments for non-obvious logic and JSDoc for complex functions.

File Structure:

- Prefer placing custom React components inside of the /components folder.
- Next.js routes should only contain files relevant to the route itself.

The /search route contains components that are not relevant to the route itself. FilterOptions, Listing, Map, and MapMarker components should be moved to the /components folder

The above images show that components have been moved to /components and the search route now contains all the relevant files.

Testing:

 All components and utility functions should include tests if possible, using the team's preferred testing framework Jest.

These standards promote readability, maintainability, and consistency across the codebase.

Some P1 features that use these coding standards:

1. Search Results:

https://github.com/Miguel-Antonio-Logarta/csc648-01-fa24-csc648-01-fa24-tea m03-duplicate/blob/dev/application/src/app/search/page.tsx

2. Login Feature:

https://github.com/Miguel-Antonio-Logarta/csc648-01-fa24-csc648-01-fa24-tea m03-duplicate/blob/dev/application/src/app/login/page.tsx

3. Make Reviews:

https://github.com/Miguel-Antonio-Logarta/csc648-01-fa24-csc648-01-fa24-tea m03-duplicate/blob/dev/application/src/app/api/reviews/createReview/%5Bloca tionId%5D/route.ts

4. Admin Dashboard:

https://github.com/Miguel-Antonio-Logarta/csc648-01-fa24-csc648-01-fa24-tea m03-duplicate/blob/dev/application/src/app/admin/page.tsx

5. Searchbar:

https://github.com/Miguel-Antonio-Logarta/csc648-01-fa24-csc648-01-fa24-tea m03-duplicate/blob/dev/application/src/app/components/NavSearch.tsx

II. (Extra Credit of 10 Pts) Documentation Generation

While we did not generate HTML documentation, we did create markdown files that documents our backend API and Frontend Hooks.

 For the Backend API Documentation, we listed all the possible endpoints and their HTTP Actions. We also provided a description of what it does and what their expected Request or Response Body is. Additionally, we list if

Authentication is required and what level of Authorization is required to reach
this endpoint.

- For the Frontend Hooks Documentation, we list all the hooks which the frontend team can use to easily interact with the backend. We provide a description of what each hook does, expected parameters, special notes if any, and an example of how you would use the hook in a Page file.
 - In other words, these hooks abstract away the logic when it comes to fetching data from the backend. This allows the frontend to focus mostly on the UI aspect of the frontend and not worry about the backend.

Documentation	Github URL		
Backend API Documentation	Backend API Documentation Link		
Frontend Hooks Documentation	Frontend Hooks Documentation Link		

In addition to the documentation, the backend and hook related files have comments similar to the documentation shown to make it easier to understand what the endpoints

or hooks expect.

```
/**
    * @Notes - Use this hook in the frontend to edit a location.
    * @param {any} formData - The data used to edit a location. You, yesterday • backend now actu
    * @param {Session} session - The session object.
    * @description - A custom hook that edits a location.
    * @returns {Object} - Returns an object containing the editLocation function and a loading state.

*/
const useEditLocation = (()) => {
    const [loading, setLoading] = useState(false);

    /**

    * @param locationId id of location to edit
    * @param formData form data to edit location
    * @param session used to check if user is admin
    */
    const editLocation = async (locationId: string, formData: any, session: Session) => {
```

Bookmark Endpoints

Get All Bookmarks

- Endpoint: /api/bookmarks
- Method: GET
- Description: Get all the bookmarks from the database
- Response Body:

```
[
{
    "id": "bookmark-id",
    "user": {
        id": "user-id",
        "username": "username",
        "email": "example@example.com"
    }
    "creationDate": "2024-10-08T18:58:32.977Z"
},
...
]
```

Create a Bookmark

- Endpoint: /api/bookmarks/createBookmark/\${locationId}
- Method: POST
- Description: Create a bookmark when signed in.
- Authentication: REQUIRED
- Authorization: MUST BE CUSTOMER OR HIGHER ROLE
- Request Body:

```
{
  "userId": session.user.id
}
```

Hooks Documentation

Overview

This folder contains CUSTOM React hooks. These hooks serves as a way to abstract away a lot of the boilerplate when it comes to safely fetching data from the backend api.

Hook Details

useCreateBookmark.ts

- Purpose: Handles creation of a bookmark for a location assuming the user is logged in.
- Parameters:
 - o locationId: The id of the given location to bookmark
 - o session: The session object from useSession()
- Special Note: This uses window.location.reload()
- Usage Example:

```
const { createBookmark, loading } = useCreateBookmark();

const handleClick = async () => {
   if (session) {
      await createBookmark(locationId, session);
   }
}
```

useCreateLocation.ts

- Purpose: Handles the creation of a location
- Parameters