

Lorem Ipsum – Assignment 2:

Student Conduct Tracker

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COMP 3613: Software Engineering (Semester I – 2024/2025)

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Links

GitHub Repo:

- <https://github.com/Lorem-Ipsum-Scholars/COMP-3613-Assignment-2>

Feature List

Most Critical Features:

- Add Student
- View Student
- Review Student
- View Student Reviews

Sub-Features:

- Add Student
 - Edit Student
- View Student
 - Search Student
 - Search by ID
 - Filter search

- View the profile of a specific student
- List all students in the database
- Review Student
 - Edit Review
- View Student Reviews
 - List all reviews in the database
 - Sort reviews
 - List all reviews for an individual student
 - (Also falls under *View Student* as a given student's reviews can be listed directly under their profile.)
 - View a specific student review from the list

(Assume an authentication page as the landing page for logged out users.)

Member Contributions

Skyler Almarales:

- General Planning
- Test Plans (User Acceptance, Unit, Integration, API)

Kadie Bisnath:

- General Planning
- Wireframes

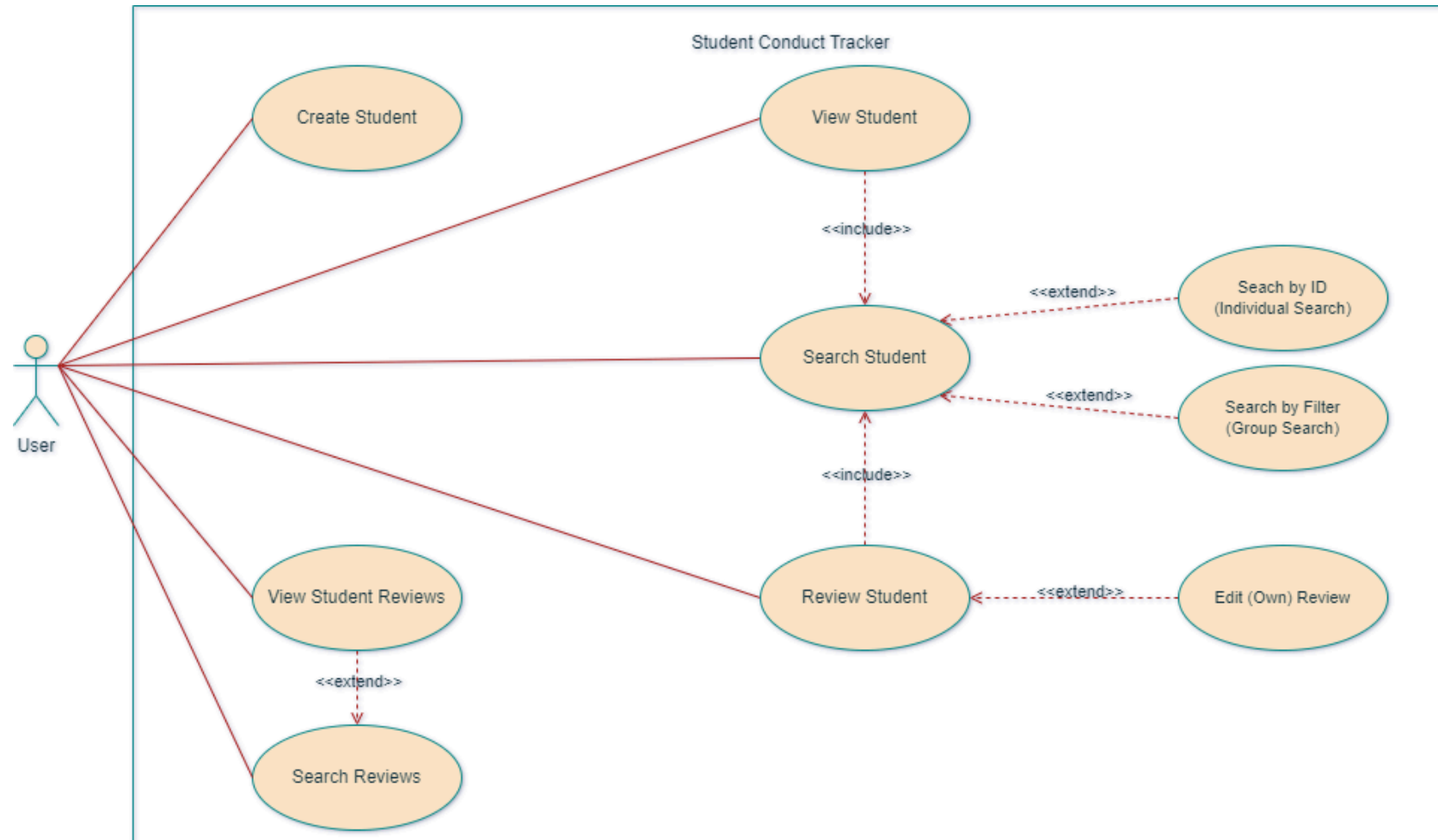
Jaheim Caesar:

- General Planning
- Views
- Test Plans (Unit., Integration)
- Test Implementation (Unit, Integration, API)

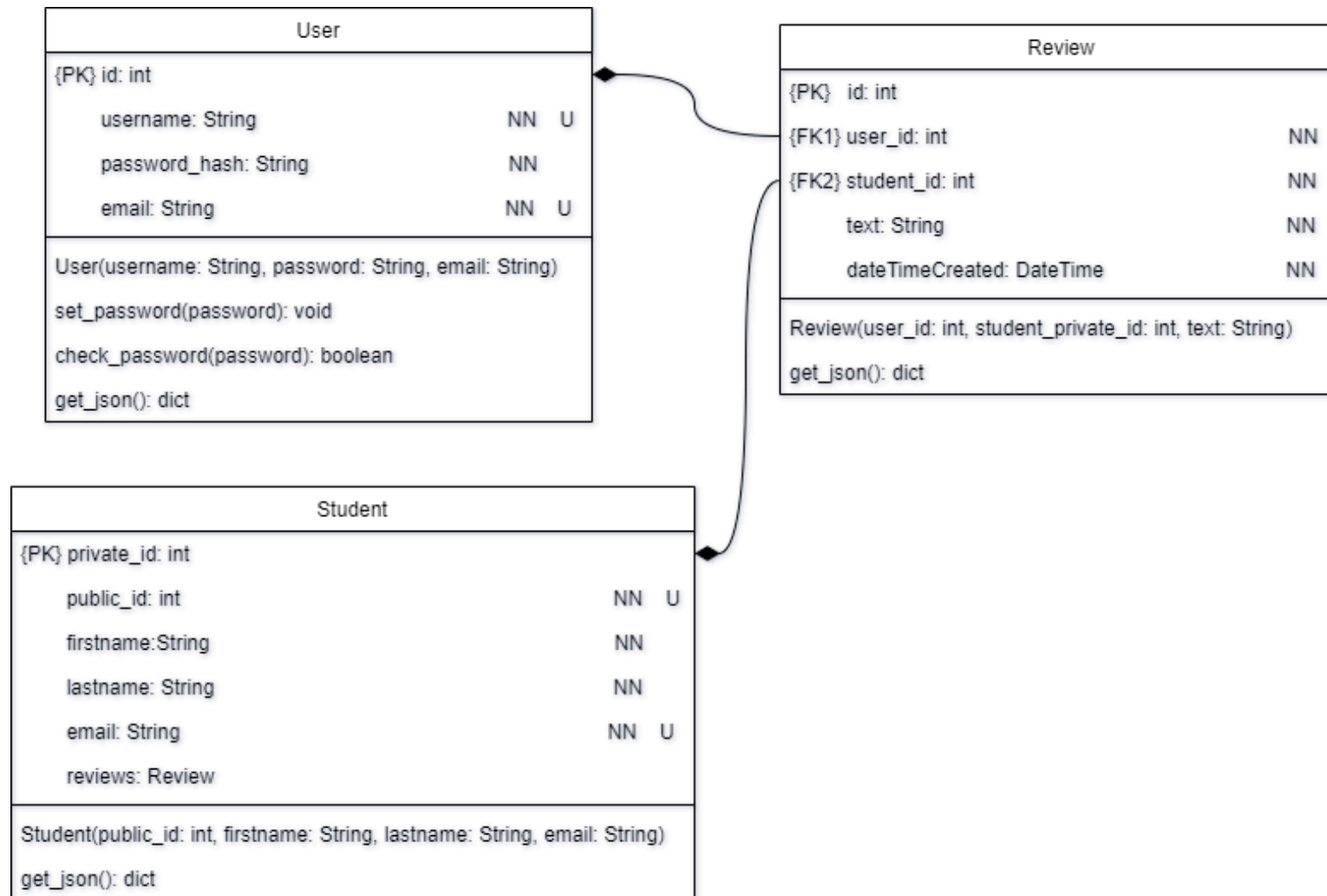
Ronaldo Walker:

- General Planning
- Views
- Test Implementation
- Test plans (User Acceptance)

Use Case Diagram (Updated)



Model Diagram (Updated)



Wireframes

General Schema



Individual Frames

Landing and Login Page

Student Conduct Tracker

Please log in or create an account to track your students' conduct

Login

Username:

Password:

Login

Lost your password? Click here

Create Account

Name:

Password:

Confirm Password:

Email:

Create Account

Home Page

HomeStudentReviewSearch

Account name

Account email

Account type

Log out

Course Listing

Course Code and Title

View Course

Course Code and Title

View Course

Course Code and Title

View Course

Course Code and Title

View Course

Course Code and Title

View Course

Course Code and Title

View Course

Add Student

Home

Student

Add Student

Student Details

Review

Search

Add Student

Student ID:

First Name:

Last Name:

Email:

Courses:

Course 1

Course 2

Add Course:

Search Course

Register

Search Student

HomeStudentReview

Search

Search StudentSearch Review

Search Student

Student Search

Student ID:

First Name:

Last Name:

Course Code:

Search

Search Results

Home

Student

Review

Search

Search Results

Name

Email@sct.swen.uwi

View Student

Name

Email@sct.swen.uwi

View Student

View Student

View Student

Student Details

Home

Student

Add Student

Student Details

Review

Search

Student Details

Student ID

Student Full Name

Email@sct.swen.uwi

Courses:

Course 1

Course 2

Course 3

Review:

Add Review

Edit Review

Show all Reviews

Edit Student Details

Review Student

HomeStudentReviewSearch

Review Student

Course Code:

Course▼

Course Title:

(Autofill based on Course Code)

Review Type/ Rating:

−

Choose from 1 to 10

+

Review Details:

Submit Review

View All Reviews

HomeStudentReviewSearch

Review StudentView All Reviews

All Reviews

Sort by Course:

Course▼

Student Name	Review Description
Student Name	Review Description
Student Name	Review Description
Student Name	Review Description
Student Name	Review Description
Student Name	Review Description
Student Name	Review Description
Student Name	Review Description
Student Name	Review Description

Search Reviews

HomeStudentReview

Search

Search Student

Search Review

Search Reviews

Student Review Search

First Name:

Last Name:

Course Code:

Rating:

Search

Student Reviews

HomeStudentReviewSearch

Student Reviews

Course Code and Title

View Review

Course Code and Title

View Review

Course Code and Title

View Review

Course Code and Title

View Review

Course Code and Title

View Review

Course Code and Title

View Review

User Profile (Upper)

HomeStudentReviewSearch

User Profile

Login Info

Username

Change password

User Profile (Lower)

Account Info

Student ID:

First Name:

Last Name:

Email:

Courses:

Course 1

×

Course 2

×

Add Course:

Search Course

▼

Register

Test Plans

User Acceptance Tests

User Account Creation

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Successful</i>	<ul style="list-style-type: none">• None	<ul style="list-style-type: none">• Access the authentication page via URL or redirect.• Fill in the sign-up form's required fields, including a unique username and email.• Submit the form.	<ul style="list-style-type: none">• Alert the user to a successful account creation.• Redirect the user back to the authentication page to login to their new account.
<i>Missing required fields</i>	<ul style="list-style-type: none">• None	<ul style="list-style-type: none">• Access the authentication page via URL or redirect.• Partially fill in the sign-up form's required fields.• Submit the form.	<ul style="list-style-type: none">• Alert the user to a failed sign up due to incomplete data.• Redirect the user back to the authentication page to try again.
<i>Invalid username format</i>	<ul style="list-style-type: none">• None	<ul style="list-style-type: none">• Access the authentication page via URL or redirect.• Use a non-alphanumeric username for the sign-up form.• Submit the form.	<ul style="list-style-type: none">• Alert the user to a failed sign up due to an invalid username.• Redirect the user back to the authentication page to try again.

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Invalid email format</i>	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Use an invalid email address for the sign-up form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed sign up due to an invalid email address. Redirect the user back to the authentication page to try again.
<i>Duplicate username</i>	<ul style="list-style-type: none"> A valid user profile that shares the target username must already exist. 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Use a pre-existing username for the sign-up form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed sign up due to a duplicate username. Redirect the user back to the authentication page to try again.
<i>Duplicate email address</i>	<ul style="list-style-type: none"> A valid user profile that shares the target email address must already exist. 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Use a pre-existing email for the sign-up form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed sign up due to a duplicate email. Redirect the user back to the authentication page to try again.
<i>Password and password confirmation do not match</i>	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Enter a password pre-existing username for the sign-up form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed sign up due to a duplicate username. Redirect the user back to the authentication page to try again.

User Login

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Successful</i>	<ul style="list-style-type: none"> A valid user profile must already exist. 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Fill in the required fields for the login form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a successful login. Navbar now displays user profile and logout buttons. Redirect the user to the home page.
<i>Missing required fields</i>	<ul style="list-style-type: none"> A valid user profile must already exist. 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Partially fill in the form's required fields. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed login due to incomplete data. Redirect the user back to the authentication page to try again.
<i>Invalid username or password</i>	<ul style="list-style-type: none"> A valid user profile must already exist. 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Use an invalid username/password for the login form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed login due to invalid data. Redirect the user back to the authentication page to try again.
<i>User already logged in</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access the authentication page via URL. 	<ul style="list-style-type: none"> Redirect the user to the home page.
<i>Duplicate username</i>	<ul style="list-style-type: none"> A valid user profile that shares the target username must already exist. 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Use a pre-existing username for the sign-up form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed sign up due to a duplicate username. Redirect the user back to the authentication page to try again.

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Duplicate email address</i>	<ul style="list-style-type: none"> A valid user profile that shares the target email address must already exist. 	<ul style="list-style-type: none"> Access the authentication page via URL or redirect. Use a pre-existing email for the sign-up form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed sign up due to a duplicate email. Redirect the user back to the authentication page to try again.

User Logout

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Successful</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Press the logout button in the navbar. 	<ul style="list-style-type: none"> Alert the user to a successful logout. Navbar no longer displays user profile and logout buttons. Redirect the user to the authentication page.
<i>User <u>not</u> logged in</i>	<ul style="list-style-type: none"> The user is <i>not</i> currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access the logout page via URL. 	<ul style="list-style-type: none"> Redirect the user to the authentication page to log in.

Add Student Profile

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Successful</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Fill in the form's required fields including both a unique student ID and email. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a successful student record creation. Redirect the user to the new student's profile page.
<i>User not logged in</i>	<ul style="list-style-type: none"> The user is <i>not</i> currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access the student record creation page via URL. 	<ul style="list-style-type: none"> Redirect the user to the authentication page to log in.
<i>Missing required fields</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Partially fill in the form's required fields. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed student record creation due to incomplete data. Redirect the user back to the student record creation page.
<i>Invalid student ID format</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Use an invalid student ID for the form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed student record creation due to an invalid student ID. Redirect the user back to the student record creation page.

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Invalid name format</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Use a non-alphabetic name for the form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed student record creation due to an invalid name. Redirect the user back to the student record creation page.
<i>Duplicate student ID</i>	<ul style="list-style-type: none"> The user is currently logged in to their account A valid user profile that shares the target username must already exist. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Use a pre-existing student ID for the form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed student record creation due to an invalid student ID. Redirect the user back to the student record creation page.
<i>Duplicate email</i>	<ul style="list-style-type: none"> The user is currently logged in to their account A valid user profile that shares the target email address must already exist. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Use a pre-existing email for the form. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed student record creation due to an invalid email address. Redirect the user back to the student record creation page.

Search Student

Test Case	Pre-conditions	Test Steps	Test Criteria
Successful - Empty Search	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the student search page via the navbar or URL. Submit the form without providing any filters. 	<ul style="list-style-type: none"> Redirect the user to the student search result page listing <u>all</u> students in the database.
Successful - Student found	<ul style="list-style-type: none"> The user is currently logged in to their account. At least one student profile matching the provided filters must already exist. 	<ul style="list-style-type: none"> Access the student search page via the navbar or URL. Provide the desired filters in the search form. Submit the form. 	<ul style="list-style-type: none"> Redirect the user to the student search result page listing all student profiles that match the provided filters.
Successful - Student not found	<ul style="list-style-type: none"> The user is currently logged in to their account. No student profiles matching the provided filters currently exist. 	<ul style="list-style-type: none"> Access the student search page via the navbar or URL. Provide the desired filters in the search form. Submit the form. 	<ul style="list-style-type: none"> Redirect the user to the student search result page stating there were no results found.
User not logged in	<ul style="list-style-type: none"> The user is <u>not</u> currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access the student search/search results page via URL. 	<ul style="list-style-type: none"> Redirect the user to the authentication page to log in.
Invalid student ID format	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Provide a non-numeric student ID. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed student record creation due to an invalid student ID. Redirect the user back to the student search page.

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Invalid name format</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Provide a non-alphabetic first/last name. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed student record creation due to an invalid name. Redirect the user back to the student search page.

View Student Profile

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Successful</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. The target student profile must already exist. 	<ul style="list-style-type: none"> Access a student's profile (e.g., from search results, student listings, URL). 	<ul style="list-style-type: none"> Redirect the user to the target student's profile page.
<i>User not logged in</i>	<ul style="list-style-type: none"> The user is <i>not</i> currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access a student's profile page (e.g., from search results, student listings, URL). 	<ul style="list-style-type: none"> Redirect the user to the authentication page to log in.
<i>Student not found</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to directly access a non-existent student profile page via URL. 	<ul style="list-style-type: none"> Redirect the user to the "404 - Not Found" page.

Review Student

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Successful</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. A valid student profile must already exist. 	<ul style="list-style-type: none"> Access the student review creation page via the given student's profile or URL. Fully complete the form with valid data (including both a unique student ID and email). Submit the form. 	<ul style="list-style-type: none"> Alert the user to a successful review creation. Redirect the user to the new review's page.
<i>User not logged in</i>	<ul style="list-style-type: none"> The user is <i>not</i> currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access the student review creation page via URL. 	<ul style="list-style-type: none"> Redirect the user to the authentication page to log in.
<i>Missing required fields</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the student record creation page via the navbar or URL. Partially fill in the form's required fields. Submit the form. 	<ul style="list-style-type: none"> Alert the user to a failed student record creation due to incomplete data. Redirect the user back to the student record creation page.
<i>Student not found</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access the review page for a non-existent student via URL. 	<ul style="list-style-type: none"> Redirect the user to the "404 - Not Found" page.

Search Reviews

Test Case	Pre-conditions	Test Steps	Test Criteria
Successful - Empty Search	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Access the review search page from the navbar or via URL. Submit the form without providing any filters. 	<ul style="list-style-type: none"> Redirect the user to the reviews list page, listing all reviews in the database.
Successful - (At least one review has been made)	<ul style="list-style-type: none"> The user is currently logged in to their account. At least one (1) valid student profile must already exist. At least one (1) valid student review for any given student must already exist. 	<ul style="list-style-type: none"> Access the review search page from the navbar or via URL. Fill in the desired fields of the filter search form. Submit the form. 	<ul style="list-style-type: none"> Redirect the user to the reviews list page, listing all reviews in the database that match the given filters.
Successful - (No reviews have been made)	<ul style="list-style-type: none"> The user is currently logged in to their account. No valid student reviews have yet been made. 	<ul style="list-style-type: none"> Access the review search page from the navbar or via URL. Fill in the desired fields of the filter search form. Submit the form. 	<ul style="list-style-type: none"> Redirect the user to the reviews list page, with a message saying no reviews currently exist.
User not logged in	<ul style="list-style-type: none"> The user is <i>not</i> currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access the reviews search/search results page via URL. 	<ul style="list-style-type: none"> Redirect the user to the authentication page to log in.

View Review

Test Case	Pre-conditions	Test Steps	Test Criteria
<i>Successful</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. A valid student profile must already exist. A valid review for the given student must already exist. 	<ul style="list-style-type: none"> Access a specific student review from the student's profile, search results, or via URL. 	<ul style="list-style-type: none"> Redirect the user to review for a given student.
<i>User not logged in</i>	<ul style="list-style-type: none"> The user is <i>not</i> currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access the review page via URL. 	<ul style="list-style-type: none"> Redirect the user to the authentication page to log in.
<i>Review not found</i>	<ul style="list-style-type: none"> The user is currently logged in to their account. 	<ul style="list-style-type: none"> Attempt to access a non-existent review page via URL. 	<ul style="list-style-type: none"> Redirect the user to the "404 - Not Found" page.

Unit Tests

Unit Test	Module Tested	Expected Output
test_create_user	User("bob", "bobpass", bob.smith@mail.com)	<ul style="list-style-type: none"> • user.username == "bob" • user.email == "bob.smith@mail.com"
test_user_check_password	User.check_password("bobpass")	<ul style="list-style-type: none"> • user.check_password("bobpass") == True • user.check_password("FAKEpass") == False
test_user_set_password	User.set_password("newpass")	<ul style="list-style-type: none"> • user.password_hash != generate_password_hash("bobpass")
test_user_get_json()	User.get_json()	<pre>{ "id": 1, "username": "bob" "email": "bob.smith@mail.com" }</pre>
test_create_student()	Student(816012345, "jane", "smith", jane@mail.com)	<ul style="list-style-type: none"> • student.public_id == 816012345 • student.firstname == "jane" • student.lastname == "smith" • student.email == "jane@mail.com"
test_student_to_json()	Student.to_json()	<pre>{ "private_id": None, "public_id": 816012345 "firstname": "jane", "lastname": "smith", "email": "jane@mail.com" "reviews": [] }</pre>

Unit Test	Module Tested	Expected Output
test_create_review()	Review(1, "Test Review", 1)	<ul style="list-style-type: none">• review.user_id == 1• review.student_private_id == 1• review.text == "Test Review"
test_review_to_json()	Review.to_json()	<pre>{ user_id: 1, student_private_id: 1, 'text': "Test Review" }</pre>

Integration Tests

User Operations

Test	Dependencies	Description
test_create_user	<ul style="list-style-type: none"> • create_user() • get_user() 	Creates a user record in the database and ensures it has the correct values.
test_get_user()	<ul style="list-style-type: none"> • create_user() • get_user_by_id() 	Ensures that a user record with a specific ID can be successfully retrieved from the database.
test_get_user_by_username()	<ul style="list-style-type: none"> • create_user() • get_user_by_username() 	Ensures that a user record <i>with a specific username</i> can be successfully retrieved from the database.
test_user_to_json()	<ul style="list-style-type: none"> • create_user() • get_user_json() <ul style="list-style-type: none"> ◦ User.to_json() 	Ensures that a given user record can be properly converted to JSON format.
test_get_all_users()	<ul style="list-style-type: none"> • create_user() • get_all_users() 	Ensures that the data of all user records in the database can be retrieved.
test_get_all_users_json()	<ul style="list-style-type: none"> • create_user() • get_all_users_json() <ul style="list-style-type: none"> ◦ User.to_json() 	Ensures that all user records in the database can be collectively converted to JSON format.

Student Operations

Test	Dependencies	Description
test_create_student()	<ul style="list-style-type: none"> • create_student() • get_student() 	Creates a student record in the database and ensures it has the correct values.
test_student_to_json()	<ul style="list-style-type: none"> • get_student_json() <ul style="list-style-type: none"> ◦ Student.to_json() 	Ensures that a given student record can be properly converted to JSON format.
test_search_by_public_id_no_results	<ul style="list-style-type: none"> • create_student() • search_student() 	Verifies that searching with no results returns None
test_search_student_by_public_id()	<ul style="list-style-type: none"> • create_student() • search_student() 	Ensures that the public ID search filter returns matching values.

Review Operations

Test	Dependencies	Description
test_create_review	<ul style="list-style-type: none"> • create_user() • create_student() • get_student() • create_review() • get_review() 	Ensure the review record in the database has the correct values.
test_review_to_json()	<ul style="list-style-type: none"> • create_review() • get_review_json() <ul style="list-style-type: none"> ◦ Review.to_json() 	Ensure a given review record can be correctly converted to JSON format. }

API Tests

Actually Implemented

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status
Test Sign Up	POST	/api/users	None	{ "username": "bob", "password": "bobpass", "confirm_password": "bobpass", "email": "bob.smith@mail.com" }	{ "message": "user bob created with id 1" }	201
Test Sign Up Missing Fields	POST	/api/users	None	{ "username": "bob", "password": bobpass, "confirm_password": "bobpass", "email": "bob.smith@mail.com" }	{ "error": "Missing field email" }	400
Test Sign Up Taken Username/Email	POST	/api/users	None	{ "username": "b21f@lob}", "password": "bobpass", "confirm_password": "bobpass", "email": "bob.smith@mail.com" }	{ "error": "Username/Email already taken" }	400
Test Login	POST	/api/login	None	{ "username": "bob", "password": "bobpass", "confirm_password": "bobpass", "email": "2bob.mal" }	{ "access_token": {{ access token }} }	200

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status
Test Create Student	POST	/students	User is logged in	Authorization: Bearer <jwt_token> { "public_id": 816012345, "firstname": "jane", "lastname": "smith", "email": "jane.smith@mail.com" }	{ "email": "jane.smith@mail.com", "firstname": "jane", "id": 1, "lastname": "smith", "public_id": 816012345, "reviews": [] }	201
Test Get Student By ID	GET	students/{Public ID}	User is logged in; valid student exists	{}	{ "email": "jane.smith@mail.com", "firstname": "jane", "id": 1, "lastname": "smith", "public_id": 816012345, "reviews": [] }	200
Create Review	POST	/reviews	User is logged in; valid student exists	{ "text": "Sample Text", "student_id": "816012345", "user_id": "1" }	{ "id": 1, "student_id": 1, "text": "Sample Text", "user_id": 1 }	201
Test Login Invalid Credentials	POST	/api/login	None	{ "username": "bob", "password": "janepass" }	{ "message": "invalid credentials" }	400
Test Login Missing Fields	POST	/api/login				

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status

Future Plans

User Account Creation

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Account Creation: Successful	POST	/api/users	None	{ "username": "bob", "password": "bobpass", "confirm_password": "bobpass", "email": "bob.smith@mail.com" }	{ "message": "account created" }	201	User is redirected to the /home page.
Test Account Creation: Missing Required Fields	POST	/api/users	None	{ "username": "bob", "password": None, "confirm_password": "bobpass", "email": "bob.smith@mail.com" }	{ "error": "missing required fields" }	400	User is redirected back to the /auth page.
Test Account Creation: Invalid Username	POST	/auth	None	{ "username": "b21f@!ob}", "password": "bobpass", "confirm_password": "bobpass", "email": "bob.smith@mail.com" }	{ "error": "invalid username" }	400	User is redirected back to the /auth page.
Test Account Creation: Invalid Email	POST	/auth	None	{ "username": "bob", "password": "bobpass", "confirm_password": "bobpass", "email": "2bob.mal" }	{ "error": "invalid email" }	400	User is redirected back to the /auth page.

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Account Creation: <i>Duplicate Username</i>	POST	/api/users	A valid user with the target username exists.	{ "username": "bob", "password": "bobpass", "confirm_password": "bobpass", "email": "bob.smith@mail.com" }	{ "error": "username already taken" }	400	User is redirected back to the /auth page.
Test Account Creation: <i>Duplicate Email</i>	POST	/api/users	A valid user with the target email exists.	{ "username": "jane", "password": "janepass", "confirm_password": "janepass", "email": "bob.smith@mail.com" }	{ "error": "email already taken" }	400	User is redirected back to the /auth page.

User Login

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Login: <i>Successful</i>	POST	/api/login	A valid user exists.	{ "username": "bob", "password": "bobpass" }	{ "message": "login successful", "access_token": <jwt_token> }	200	User is redirected to the /home page.
Test Login: <i>Missing Required Fields</i>	POST	/api/login	A valid user exists.	{ "username": "bob", "password": None }	{ "error": "missing required fields" }	400	User is redirected back to the /auth page.

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Login: <i>Invalid Username or Password</i>	POST	/api/login	A valid user exists.	{ "username": bob, "password": janepass }	{ "error": "invalid credentials" }	401	User is redirected back to the /auth page.
Test Login: <i>User Already Logged In</i>	GET	/auth	User is already logged in.	Authorization: Bearer <jwt_token>	{ "error": "invalid email" }	302	User is redirected to the /home page.

User Logout

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Logout: <i>Successful</i>	POST	/api/logout	User is logged in.	Authorization: Bearer <jwt_token>	{ "message": "logout successful", "access_token": <jwt_token> }	200	User is redirected to the /auth page for login.
Test Logout: <i>Still Logged In</i>	POST	/api/logout	User is logged in but the server fails to log them out.	Authorization: Bearer <jwt_token>	{ "error": "logout failed" }	500	User is redirected back to the /home page.

Add Student Profile

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Add Student: <i>Successful</i>	POST	/students	Pre-condition: User is logged in.	Authorization: Bearer <jwt_token> { "public_id": 816012345, "firstname": "jane", "lastname": "smith", "email": "jane.smith@mail.com" }	{ "message": "student created" }	201	User is redirected to the new student's /students/<public_id> page.
Test Add Student: <i>Missing Required Fields</i>	POST	/students	User is logged in.	Authorization: Bearer <jwt_token> { "public_id": 816012345, "firstname": "", "lastname": "smith" }	{ "error": "missing required fields" }	400	User is redirected back to the /students/add page.
Test Add Student: <i>Invalid Student ID Format</i>	POST	/students	User is logged in.	Authorization: Bearer <jwt_token> { "public_id": "bad_id", "firstname": "jane", "lastname": "smith", "email": "jane.smith@mail.com" }	{ "error": "invalid student id format" }	400	User is redirected back to the /students/add page.

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Add Student: <i>Invalid Name Format</i>	POST	/students	User is logged in.	Authorization: Bearer <jwt_token> { "public_id": 816012345, "firstname": "14jane", "lastname": "s}mi_+th", "email": "jane.smith@mail.com" }	{ "error": "invalid name format" }	400	User is redirected back to the /students/add page.
Test Add Student: <i>Duplicate Student ID</i>	POST	/students/add	User is logged in.	Authorization: Bearer <jwt_token> { "public_id": 816012345, "firstname": "jane", "lastname": "smith", "email": "alice.smith@mail.com" }	{ "error": "Email/ID already taken" }	400	User is redirected back to the /students/add page.
Test Add Student: <i>Duplicate Email</i>	POST	/students/add	User is logged in.	Authorization: Bearer <jwt_token> { "public_id": 816012345, "firstname": "jane", "lastname": "smith", "email": "jane.smith@mail.com" }	{ "error": "Email/ID already taken" }	400	User is redirected back to the /students/add page.

Search Student

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Search Student: <i>Empty Search</i>	GET	/students/<id>	User is logged in; no filters are provided.	Authorization: Bearer <jwt_token>	List all students in the database. Include links to individual profiles: /students/profile/<public_id>	200	User is redirected to the search results page.
Test Search Student: <i>Student Not Found</i>	GET	/search/students?q={filters}	User is logged in; no students match the given filters.	Authorization: Bearer <jwt_token> {<filters>}	{ "message": "no results found" }	200	User is redirected to the search results page.
Test Search Student: <i>Student Found</i>	GET	/search/students?q={filters}	User is logged in; at least one student matches the given filters.	Authorization: Bearer <jwt_token> {<filters>}	List all students that match the given filters. Include links to individual profiles: /students/profile/<public_id>	200	User is redirected to the search results page.
Test Search Student: <i>User Not Logged In</i>	GET	/search/students?q={filters}	User is not logged in.	None	{ "error": "authentication required" }	302	User is redirected back to the /auth page.

View Student Profile

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test View Student Profile: <i>Success</i>	GET	/students/{student_public_id}	User is logged in.	Authorization: Bearer <jwt_token> {}	(Student profile data)	200	User is redirected to the student's profile page.
Test View Student Profile: <i>User Not Logged In</i>	GET	/students/{student_public_id}	User is not logged in.	None	{ "error": "authentication required" }	302	User is redirected to the /auth page.
Test View Student Profile: <i>Student Not Found</i>	GET	/students/{invalid_student_public_id}	User is logged in.	Authorization: Bearer <jwt_token> {}	{ "error": "student not found" }	404	User is redirected to the '404 - Not Found' page.

Review Student

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Review Student: Success	POST	/reviews	User is logged in; valid student profile exists.	Headers: Authorization: Bearer <jwt_token> Body: { "student_id": 1, "user_id": 1, "text": "Sample Text" }	{ "Message": "review created" }	201	User is redirected to the new review's page.
Test Review Student: User Not Logged In	GET	/reviews	User is not logged in.	None	{ "error": "authentication required" }	302	User is redirected to the /auth page.
Test Review Student: Missing Required Fields	POST	/reviews	User is logged in; valid student profile exists.	Authorization: Bearer <jwt_token> { "student_id": "", "user_id": "816012345", "text": "Sample Text" }	{ "error": "Missing text or student_id or user_id" }	400	Redirect the user back to /reviews/add.
Test View Student Profile: Student Not Found	POST	/reviews	User is logged in; valid student profile exists.	Authorization: Bearer <jwt_token>	{ "error": "student not found" }	404	User is redirected to the '404 - Not Found' page.

Search Reviews

Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test Search Reviews: <i>Empty Search</i>	GET	/search/review	User is logged in; no filters are provided.	Authorization: Bearer <jwt_token>	List all reviews in the database. Include link to individual reviews: /reviews/<review_id>	200	User is redirected to the search results page.
Test Search Reviews: <i>Reviews Not Found</i>	GET	/search/review?q={filters}	User is logged in; no reviews match the given filters.	Authorization: Bearer <jwt_token>	{ "message": "no results found" }	200	User is redirected to the search results page.
Test Search Reviews: <i>Review Found</i>	GET	/search/review?q={filters}	User is logged in; at least one review matches the given filters.	Authorization: Bearer <jwt_token> {<filters>}	List all reviews that match the given filters. Include link to individual reviews: /reviews/<review_id>	200	User is redirected to the search results page
Test Search Review: <i>User Not Logged In</i>	GET	/search/review?q={filters}	User is not logged in.	{<filters>}	{ "error": "authentication required" }	302	User is redirected to the /auth page.

View Review

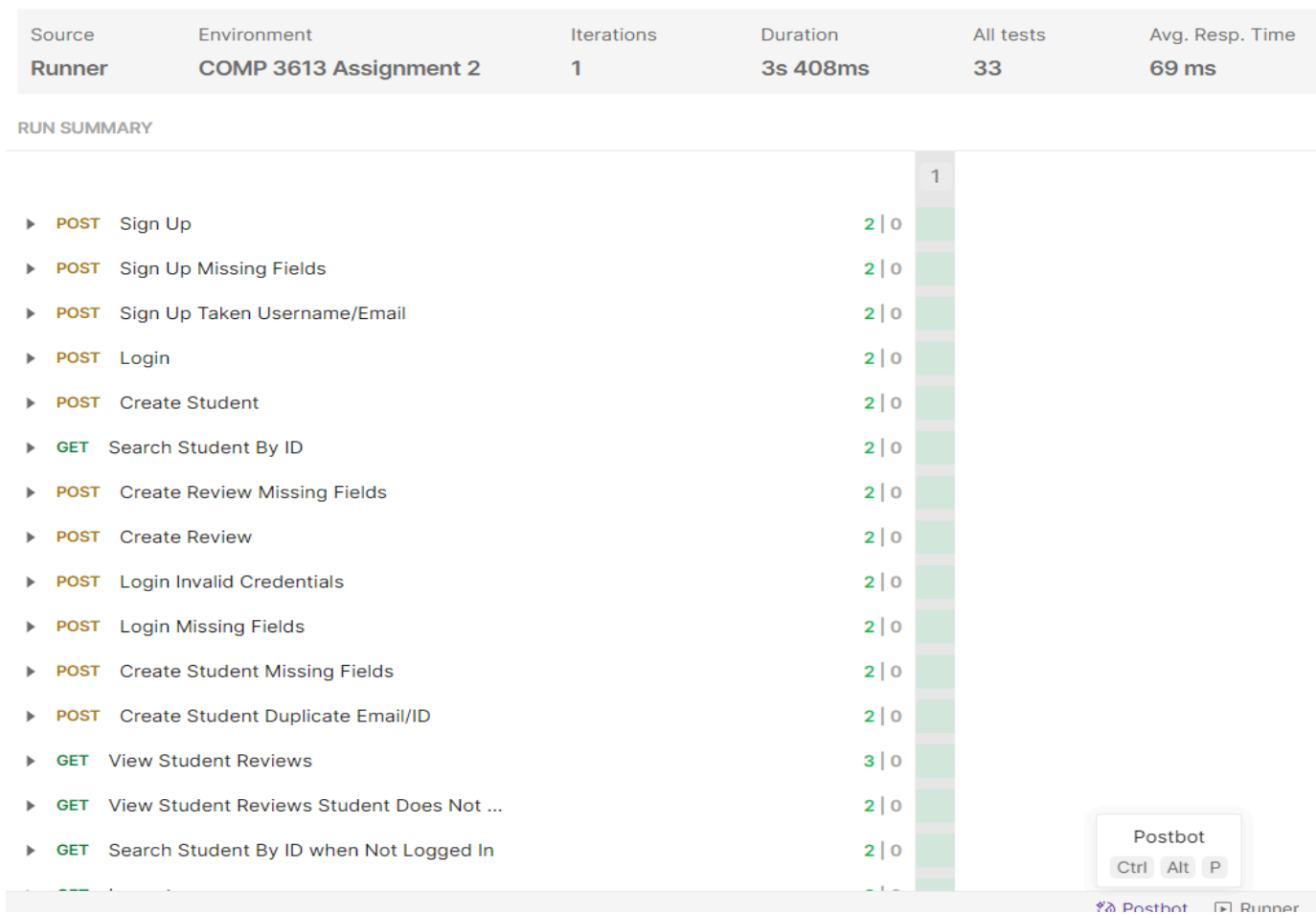
Test Case	Method	URL	Pre-condition:	Request Headers, Body	Response Body	Status	UI Flow
Test View Review: Success	GET	/reviews/view/{review_id}	User is logged in; valid student and review exist.	Authorization: Bearer <jwt_token>	(Review data)	200	User is redirected to the review page.
Test View Review: User Not Logged In	GET	/reviews/view/{review_id}	User is not logged in.	None	{ "error": "authentication required" }	302	User is redirected to the /auth page.
Test Search Reviews: Review Not Found	GET	/search/review/{invalid_review_id}	User is logged in; review does not exist	Authorization: Bearer <jwt_token>	{ "message": "no results found" }	200	User is redirected to the search results page.

Unit and Integration Tests

```
@TheLegend1011101 → /workspaces/COMP-3613-Assignment-2 (main) $ pytest
===== test session starts =====
platform linux -- Python 3.9.10, pytest-7.0.1, pluggy-1.5.0
rootdir: /workspaces/COMP-3613-Assignment-2, configfile: pytest.ini, testpaths: App/tests
collected 22 items

App/tests/test_app.py::StudentUnitTests::test_new_student PASSED [ 4%]
App/tests/test_app.py::StudentUnitTests::test_to_json PASSED [ 9%]
App/tests/test_app.py::ReviewUnitTests::test_new_review PASSED [ 13%]
App/tests/test_app.py::ReviewUnitTests::test_to_json PASSED [ 18%]
App/tests/test_app.py::UserUnitTests::test_create_user PASSED [ 22%]
App/tests/test_app.py::UserUnitTests::test_get_json PASSED [ 27%]
App/tests/test_app.py::UserUnitTests::test_hashed_password PASSED [ 31%]
App/tests/test_app.py::UserUnitTests::test_user_check_password PASSED [ 36%]
App/tests/test_app.py::UserUnitTests::test_user_set_password PASSED [ 40%]
App/tests/test_app.py::test_authenticate PASSED [ 45%]
App/tests/test_app.py::ReviewsIntegrationTests::test_create_review PASSED [ 50%]
App/tests/test_app.py::ReviewsIntegrationTests::test_review_to_json PASSED [ 54%]
App/tests/test_app.py::StudentsIntegrationTests::test_create_student PASSED [ 59%]
App/tests/test_app.py::StudentsIntegrationTests::test_search_by_public_id PASSED [ 63%]
App/tests/test_app.py::StudentsIntegrationTests::test_search_by_public_id_no_results PASSED [ 68%]
App/tests/test_app.py::UsersIntegrationTests::test_create_user PASSED [ 72%]
App/tests/test_app.py::UsersIntegrationTests::test_get_all_users PASSED [ 77%]
App/tests/test_app.py::UsersIntegrationTests::test_get_all_users_json PASSED [ 81%]
App/tests/test_app.py::UsersIntegrationTests::test_get_user PASSED [ 86%]
App/tests/test_app.py::UsersIntegrationTests::test_get_user_by_username PASSED [ 90%]
App/tests/test_app.py::UsersIntegrationTests::test_update_user PASSED [ 95%]
App/tests/test_app.py::UsersIntegrationTests::test_user_to_json PASSED [100%]
```

Postman Collection Screenshots



Source	Environment	Iterations	Duration	All tests	Avg. Resp. Time
Runner	COMP 3613 Assignment 2	1	3s 408ms	33	69 ms

RUN SUMMARY

<div> <div>▶</div> <div>POST</div> <div>Sign Up</div> </div>	2 0	1
<div> <div>▶</div> <div>POST</div> <div>Sign Up Missing Fields</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Sign Up Taken Username/Email</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Login</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Create Student</div> </div>	2 0	
<div> <div>▶</div> <div>GET</div> <div>Search Student By ID</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Create Review Missing Fields</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Create Review</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Login Invalid Credentials</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Login Missing Fields</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Create Student Missing Fields</div> </div>	2 0	
<div> <div>▶</div> <div>POST</div> <div>Create Student Duplicate Email/ID</div> </div>	2 0	
<div> <div>▶</div> <div>GET</div> <div>View Student Reviews</div> </div>	3 0	
<div> <div>▶</div> <div>GET</div> <div>View Student Reviews Student Does Not ...</div> </div>	2 0	