Intermediate Submission 2 Group 49

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1 INTERMEDIATE SUBMISSION 2
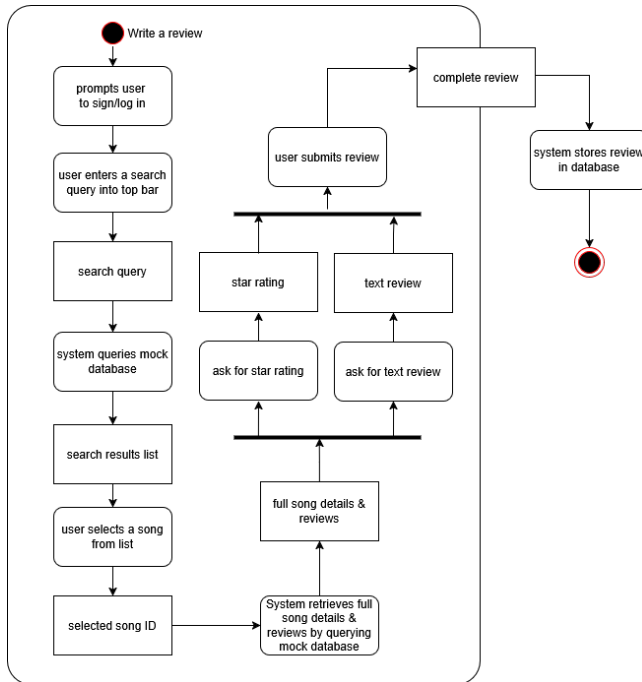
1.1 Activity Diagram

Figure 1: Activity Diagram: Write a review

The "Write a review" activity diagram outlines the process a user follows to review a song. It begins with creating an account or logging into an existing one, then moves to searching for and selecting a song from our database. If song details are retrieved successfully, the user can write a review. Star rating and text input are collected at the same time. After submission, the system checks if either input is provided. If so, it stores the review in the database.

1.2 Testing Strategy

We will apply test-driven development where appropriate and for most of our development process. For our main use case specifically, we will apply the following series of tests to ensure that it functions as intended:

Tests outline:

(1) **Login Functionality:** Test logging in with both valid and invalid credentials and characters. Ensure that valid credentials result in successful login and invalid ones prompt appropriate error messages or guidance for creating a new account.

(2) **Song Search and Details Display:** Search for various songs and verify that results are returned. Confirm that details such as artist, album, and duration are displayed correctly after selection. This involves additional testing of the mock database's I/O operations.

(3) **Review Submission:** Testing expected behaviour when trying to submit various combinations of unexpected data:
- A text review only
- A star rating only (1 to 5)
- etc.

Validate that only non-empty reviews are accepted and correctly stored via database testing.

(4) **Review Visibility:** After submitting a review, log in as another user and verify that the review is visible, correctly displayed and accessible on the song's detail page.

(5) **Performance:** Measure the response time of the song search feature on various devices to mitigate fast/slow hardware bias. Ensure results are delivered within a maximum of 4 seconds after input.

(6) **Responsiveness:** Open the application different platforms (Windows 10/11, MacOS, Arch Linux, Debian-based Linux (Ubuntu). Confirm that the interface adjusts correctly and remains fully usable.

(7) **Database Persistence:** Submit reviews and restart the application. Confirm that reviews and other relevant data are still available, indicating successful persistent storage.