**CS3300-003 MOVIE ROULETTE TEST REPORT**

Project Title: Movie Roulette

Test Report Scope:

Testing the following increments associated with Release 1 and 2:

* Increment 1: User input and functionality with adding users and movies.
* Increment 2: Random movie assignment using a spinning wheel.
* Increment 3: User interface, readability, and usability.
* Increment 4: Error handling with edge cases.

Test Team:

* Lead Tester: Rayne Guinta
* Tester(s):
  + Gavin Stierstorfer

Test Schedule:

* Unit and Increment Testing:
  + Initial Test: November 5, 2024
  + Revision Test: November 12, 2024
  + Revision Test: November 29, 2024
* Component and Release Testing:
  + Initial Test: November 14, 2024
  + Revision Test: November 21, 2024
  + Revision Test: November 29, 2024
* System Testing:
  + Tested On: November 26, 2024
  + Revision Test: November 29, 2024

Test Description:

* Unit/Increment Testing:
  + Test 1: Verify the ability to add different users and movies.
    - Outcome: Passed; both users and movies can be added without errors occurring.
  + Test 2: Tested the random movie generator with the spinning wheel.
    - Outcome: Failed; movies were not correctly assigned with issues coming from the spinning wheel.
  + Test 3: Check the user interface to ensure it is usable and readable.
    - Outcome: Passed; the interface was both user-friendly and responsive.
  + Test 4: Validate error handling for invalid inputs.
    - Outcome: Passed; the system correctly prevented invalid inputs from being entered and displayed a message to prompt the user for correct input.
  + Test 5: Test of user profile creation
    - Outcome: Passed; user account is created successfully, and information is stored to be used for login.
  + Test 6: Re-test of failed outcome (wheel)
    - Outcome: Passed; correct movie was assigned based on genre, works for all genre types.
* Component/Release Testing:
  + Test 1: Test the integration of user input with assignment functionality.
    - Outcome: Passed; all components interact with each other as they should and have proper data flow.
  + Test 2: Validation of boundary cases such as large groups
    - Outcome: Failed; the system was not able to hold a large group containing 100 people.
  + Test 3: Data saved during site navigation
    - Outcome: Passed; while navigating through site, inputs (for example, preferences) are saved when moving into a different section of the software
* System Testing:
  + Test 1: Beginning to end software testing.
    - Outcome: Passed; System functioned as intended for all workflows.
  + Test 2: Usability testing with external users.
    - Outcome: Passed; external tester found the system to be easy to navigate with little to no confusion.

Final Product Feature and Quality:

* Features:
  + User-friendly interface for adding both users and movies.
  + Random movie generator functionality.
  + Error handling for invalid input.
  + Handle large groups and large movie lists.
  + Prompted User login page
* Quality
  + The final product meets the functional requirements and can perform well under normal boundary conditions.
  + Flaws: The random movie generator has some issues, including generating movie genres outside of the user’s preferences. This can be improved so it may be suitable for more people. Another flaw is the lack of ability for users with saved profiles to log into their accounts. This will be added before final release due to its easy implementation.

Test Flags and Risk Management:

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| --- | --- | --- | --- |
| **Flag** | **Description** | **Risk Level** | **Mitigation Plan** |
| User Interface Scaling | Layout issues on mobile devices. | Low | Optimize UI so it an be used on mobile devices as well. |
| Large Group Handling | Slower performance when groups start to exceed 100+ people. | Low | Optimize backend processing for larger groups. |
| Movie Generation | Movie genres are being chosen that does not meet user preferences. Which means movie selection can offend certain users. | High | Update the algorithm to create a better generator to comply with user preferences. |

Lessons Learned from Testing:

1. While doing boundary testing it helped catch potential flaws before later testing stages were started.
2. User feedback was crucial while testing we reached out to a few individuals outside of the class, so we were able to get an insight into what they thought about the UI.
3. Scalability planning was a major part of ensuring that our system could handle much larger inputs than intended for most groups, so we can make sure we don’t run into issues post-launch.
4. Some of our algorithms that seemed functional during our unit testing may still need to fine-tuned so it can be tested at scale.
5. Small additions that we can add to the project, to help with user ease of use and continued use.