To ensure the quality and functionality of SilverFrame website, I conducted a comprehensive round of testing based on the IPO (Input, Process, Output) chart. This helped me identify any issues across key features and validate the usability and performance of the entire prototype. Below is a summary of the tested actions, observed outputs, and improvements made.

Page/Feature	Input	Process	Output
Home Page	User lands on homepage	Fetch trending, top-rated, and upcoming movies from database or API	Display featured banners, movie carousels, and navigation
Search Function	User enters keywords in search bar	Query database/API for matching titles, actors, genres, etc.	Display list of matching movies or "no results" message
Browse Movies	User selects filters (genre, year, etc.)	Apply selected filters to fetch relevant movies	Display filtered movie cards
Movie Detail Page	User clicks on a movie card	Fetch movie data (title, cast, summary, rating, etc.)	Display movie information, trailer, and reviews
Login/Register	User enters login details or registers	Authenticate or create user record in database	Redirect to profile/dashboard, or show login error
Genres Page	User selects a genre	Filter movies by genre	Show movies of that specific genre
Responsive Layout	User accesses site from various devices	Detect screen size and apply layout rules	Optimized viewing experience (mobile/tablet/desktop)

Starting with the Home Page, the goal was for it to display trending, top-rated, and upcoming movies using an eye-catching carousel format. While the carousel itself functioned smoothly allowing users to scroll through featured films it was missing an essential element: a play button. This meant users couldn't directly access or watch trailers or previews from the carousel itself. This was a usability concern, and I plan to implement a visible and intuitive play button overlay for future iterations.

Next, I tested the Search Function, which is designed to allow users to search for movies using keywords like title, genre, or actor names. Overall, the search bar worked as expected and returned accurate results. The feature was responsive and provided useful output.

The Browse Movies section, which enables users to filter movie listings by genre and year, partially failed during testing. Although the genre filter was correctly implemented and worked well, the year filter had been planned but was never fully developed in the codebase. As a result, selecting a year had no effect on the displayed results. This will require additional implementation of logic in both the filter UI and backend query process.

The Movie Detail Page worked as expected. Upon clicking a movie card, play button users were shown the film with no problems This feature passed without any issues.

When testing the Login/Register feature, I discovered a flaw in the login validation process. Although users could register successfully, entering incorrect credentials during login resulted in no feedback leaving the user unaware of the issue. Additionally, there were no restrictions on what data users could enter (e.g., email or password format), which could cause issues with account creation or security. To improve this, error handling and input validation must be added to provide appropriate user feedback.

The Genres Page was also tested and worked as expected. Users could select a specific genre and view a filtered list of movies belonging to that category. All functionality in this section passed without any issues.

Finally, I tested the Responsive Layout across different devices. The website displayed well on desktop and tablet screens. However, on mobile devices, the navigation bar overlapped page content, making some elements difficult to access. I corrected this by refining media queries and adjusting layout spacing to ensure proper responsiveness and visibility on smaller screens.

In conclusion, this round of testing revealed several areas for improvement such as missing buttons, incomplete filters, and limited validation but also demonstrated that the core functionality of the prototype is solid. All issues identified were either fixed or documented for future development using GitHub commits. Overall, the project meets a high standard of usability and aligns well with UX best practices, offering a stable and user-friendly experience across multiple platforms.

To validate my code, I used industry-standard validation tools including the W3C HTML Validator and W3C CSS Validator. I copied and pasted the relevant sections of my code into these tools to check for syntax errors, missing tags, or structural issues. The HTML validator helped ensure that all elements were properly nested and closed, while the CSS validator checked for any incorrect property declarations or typos. Any warnings or errors were reviewed and corrected immediately to maintain clean, standards-compliant code. This process helped improve the overall functionality, accessibility, and cross-browser compatibility of the website.

Currently, there are a few issues within the website that need attention to enhance both functionality and user experience. One of the main issues is the missing play button on the movie carousel on the homepage, which limits user interaction and prevents direct access to trailers from that section. To fix this, an intuitive overlay play button should be added to each carousel slide, allowing users to watch previews without navigating away.

Another issue is the lack of feedback on incorrect login attempts. Users who enter wrong credentials are not notified of the error, which could cause confusion. This can be addressed by adding clear, styled error messages and implementing proper input validation to guide users through the login process.

The filter by year option in the Browse Movies page is currently non-functional. This needs to be coded into the filtering logic, ensuring that it fetches and displays movies based on the selected year, just like the genre filter already does.

On mobile devices, the navbar overlaps the content, making navigation difficult. Although initial media queries helped improve layout responsiveness, further refinements are needed such as collapsing the navbar into a hamburger menu to save space and improve usability.

As for future improvements, adding user reviews and ratings on the Movie Detail Page would encourage user engagement and provide helpful insights for other visitors. Integrating API-based real time data for movie updates could also make the content more dynamic and current. Lastly, implementing dark mode and accessibility features like font resizing and keyboard navigation would make the site more inclusive and comfortable for a broader range of users.

By addressing these issues and implementing future enhancements, the website can provide a much more polished, accessible, and engaging user experience.