



Northeastern University
CS 4500 – Software Development

UI/UX Design and Usability Study

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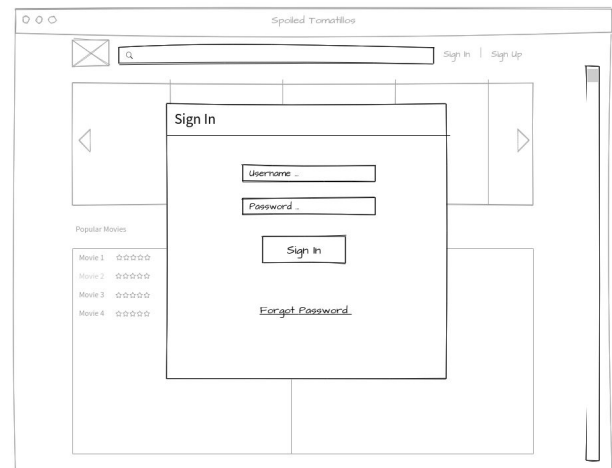
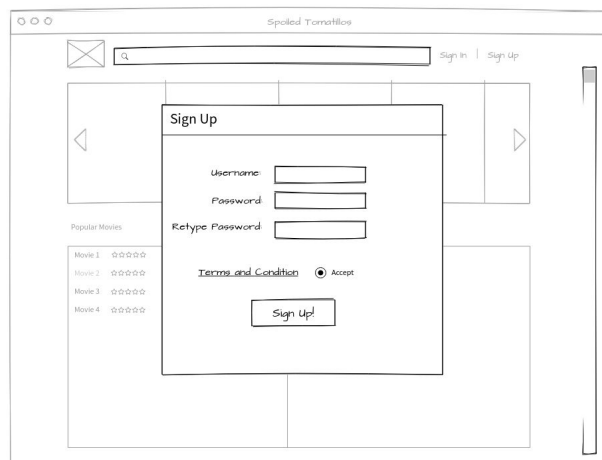
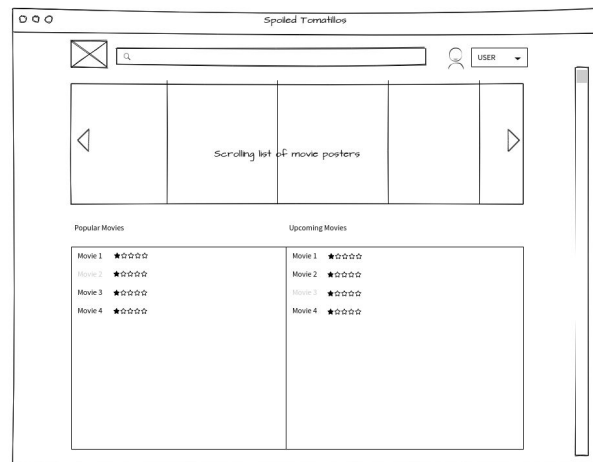
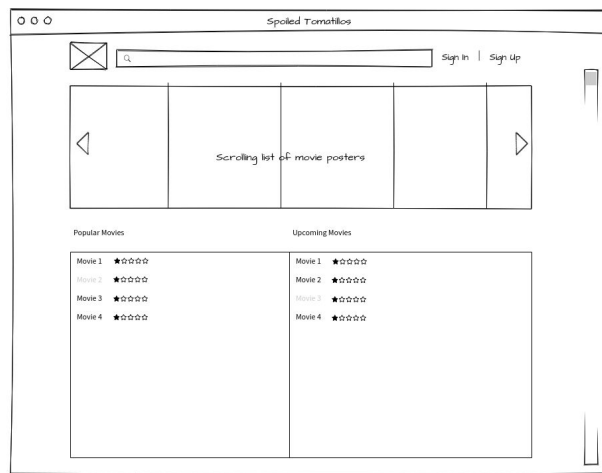
February 2nd, 2018

Introduction

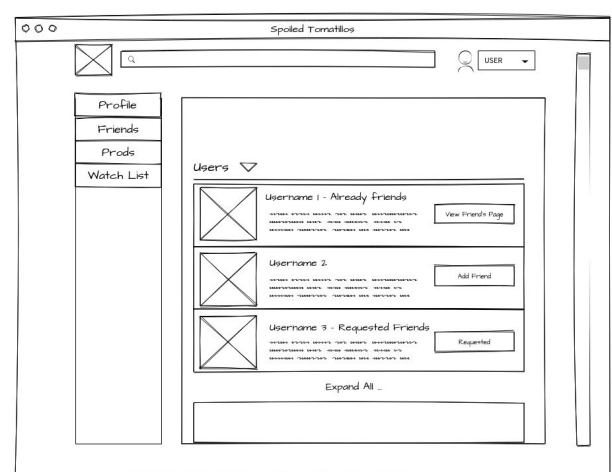
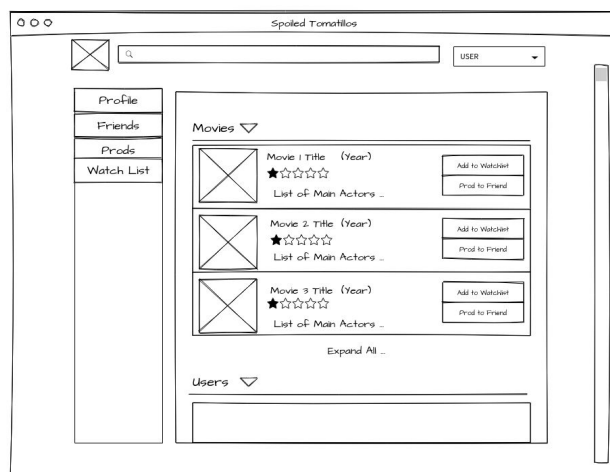
The system under review is an integration of a movie recommendations system and social media built upon a movie database. Users part of the system are able to search for movie information, rate and leave reviews for movies, and recommend movies to friends. During this study, we asked participants to perform specific tasks and solicited feedback from the subjects to gauge the intuitiveness of the system. We observed the reactions of the study subjects to elicit how a potential users would respond to the website. In this study, we interviewed a total of **SIX** individuals. Each interviewer followed the same methodology to conduct the interviews. The interviewers first gave a brief description of the interview to make sure the subject understands the content as well as the goal of the interview. Subjects were asked about their name, age, gender, education, major, and how tech-savvy they feel they are to record data on demographics. The interviewer then assigns a subject a list of tasks one by one. These tasks can range in complexity. The interviewer records the amount of clicks, misclicks, and the total time it took for subjects to complete each task. The subjects were asked to express any questions or confusions they had during the completion of the tasks. After each task, the subjects are asked how intuitive they felt the system was for the task they were ask to complete. At the end of the tasks, the users were given the ability to navigate the system freely and were asked for feedback on the overall experience they had and how they feel about the system.

Paper/Rapid prototypes

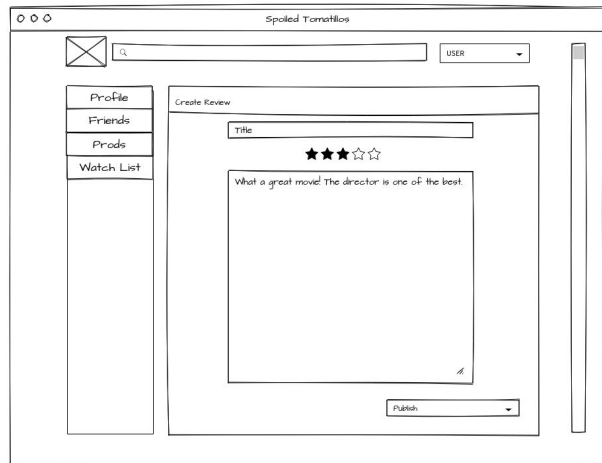
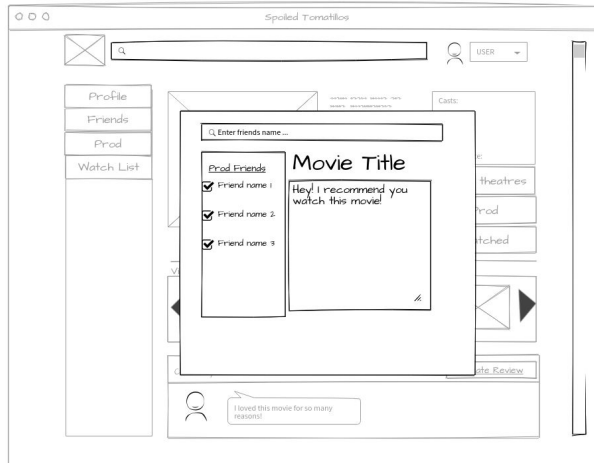
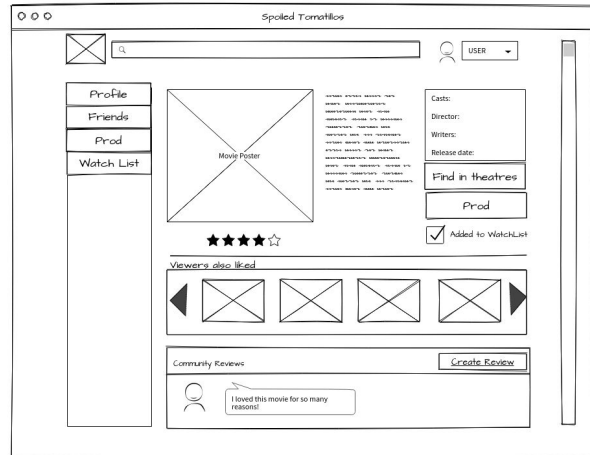
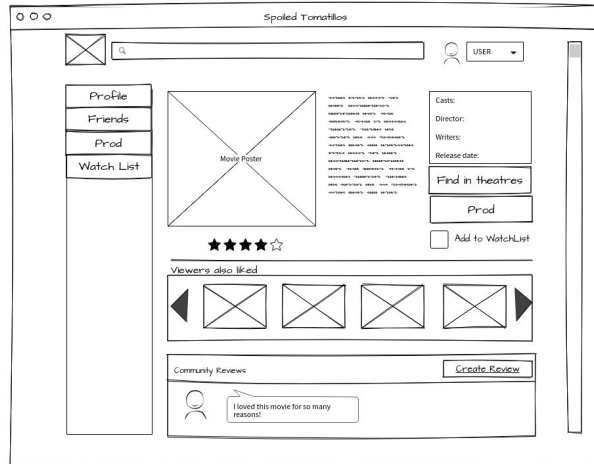
Landing Pages:



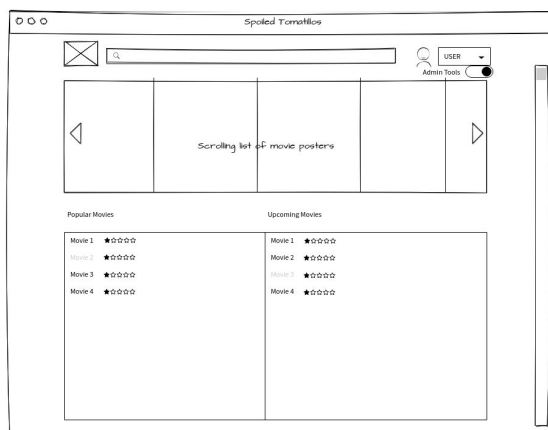
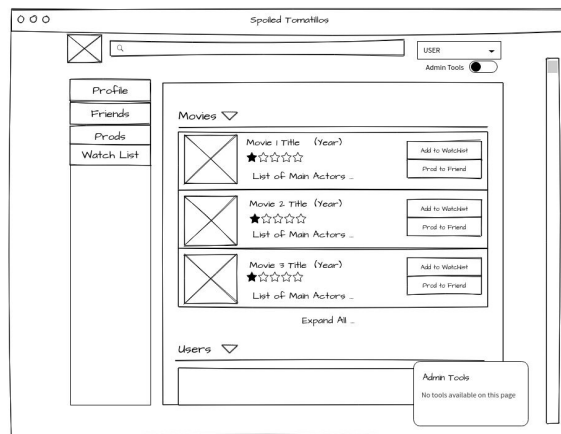
Search Pages:

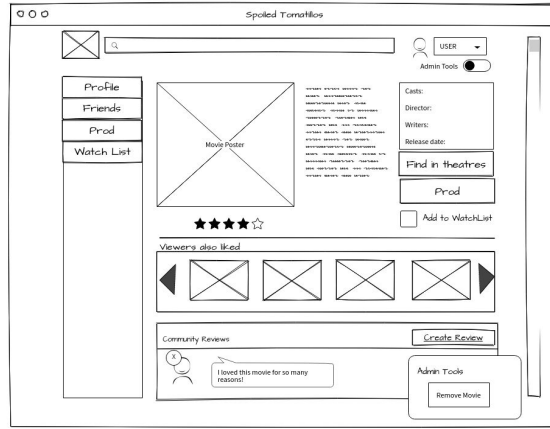
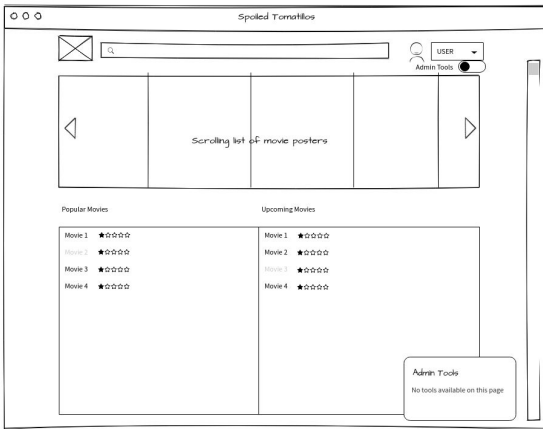


Movie Pages:

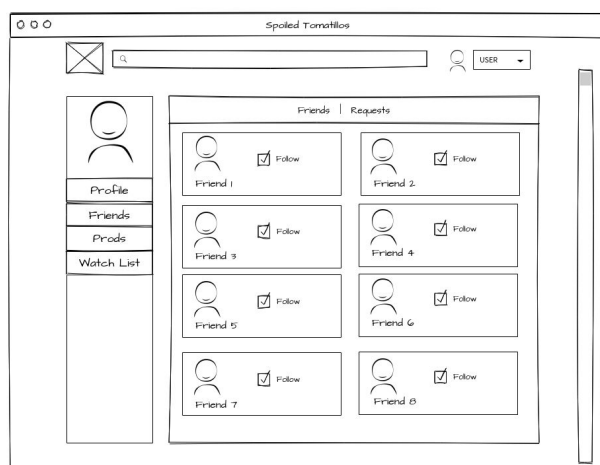
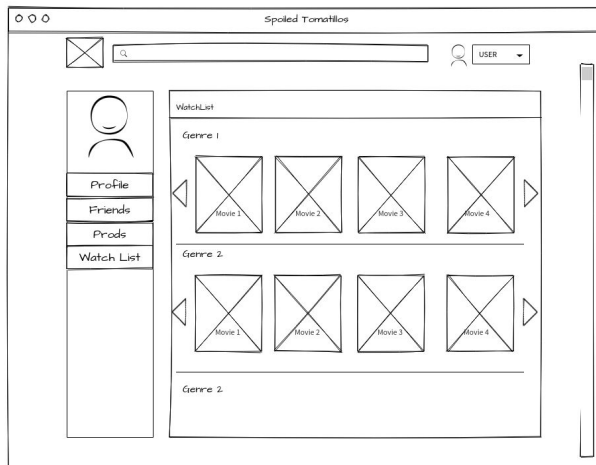
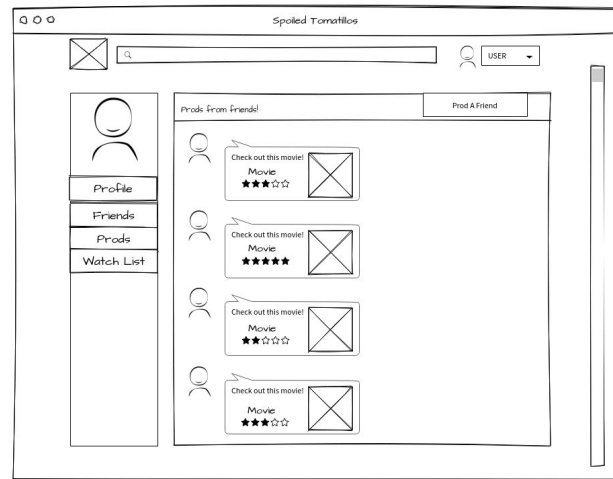
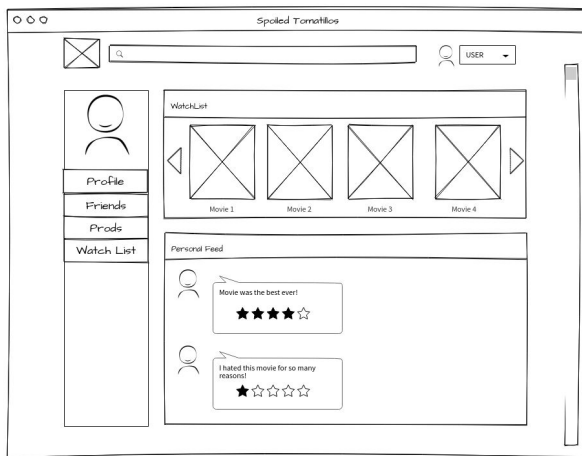


Admin Pages:

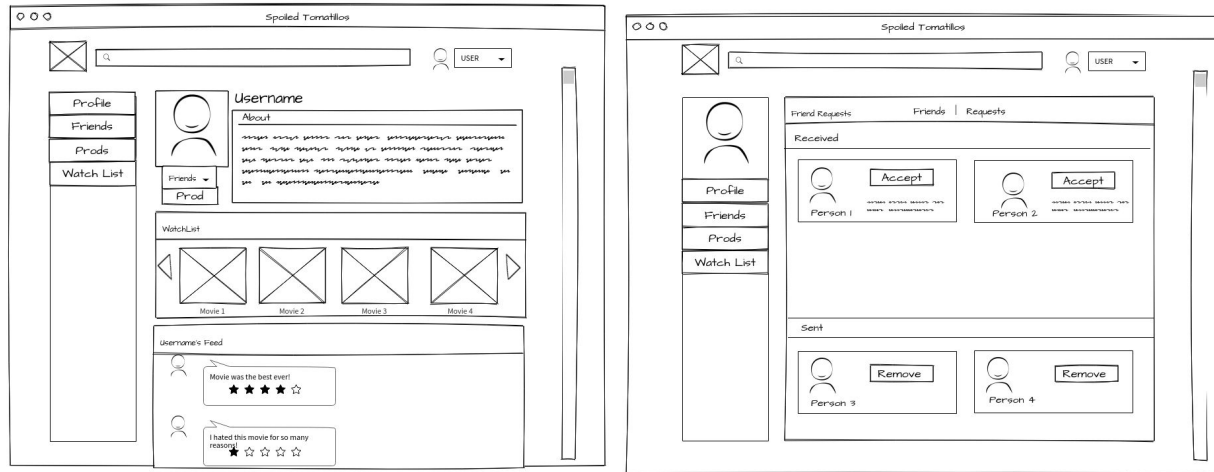




User Pages:



Friends Page:



Participants

Participant Selection Methodology:

Our goal when selecting participants was to create a diversified group to collect to see how a general user might respond to our system. As shown in the table below, we have an even split between male and female participants with both technical and non-technical backgrounds.

Participant Demographics

Participant	Age	Gender	Education	Major	Tech Savviness (yes or no)
1	20	Male	College Education	Mechanical Engineer	yes
2	21	Female	College Education	Computer Science/Finance	yes
3	18	Male	College Education	Mechanical Engineer	Yes
4	22	Female	College Education	Finance and Marketing	No
5	22	Male	College	Finance and	No

			Education	Entrepreneurship	
6	18	Male	College Education	Environmental Science	No

Tasks

1. From the homepage, navigate to movie and prod a user about a movie.
2. From the homepage, navigate to profile and View and Manage prods from friends
3. From the homepage, navigate to profile and View and Manage current watchlists
4. From homepage, navigate to profile and manage friend requests
5. From homepage, navigate to and view a friends profile page
6. From homepage, as an admin, with admin tools turned on, navigate to a movie and remove it from the site
7. From any other page, navigate back to the homepage
8. From the homepage, as a new user, sign up for a new account
9. From the homepage, as a registered but not logged in user, log in
10. From the homepage, as a signed in user, view profile
11. From the homepage, search for another user.
12. From the search results page, add another user as a friend.
13. From profile page, as a signed in user, remove friend.
14. From profile page, navigate to a friends profile and view details
15. From the homepage, navigate to a movie page and read the description
16. From a movie page, create and publish a review and star rating of a movie
17. From a movie page, navigate to friends list and remove a friend
18. From the homepage, as a logged in admin user, turn on admin tools
19. From the homepage, as a logged in admin user with admin tools turned on, navigate to a movie page and remove the top community review

Measurements

During each usability study there were several data points that we were recording:

Quantitative Data

The first data point that we focused on was the ability to complete the task given. This data point would be relevant if any participant had struggled to complete a task and given up, however during our study all participants were able to complete the assigned task.

Another data point we recorded during the study was their time in seconds to complete the task. This data point would give us quantitative usability data. With the task completion time in

seconds we can review tasks with longer times as less intuitive design. We also recognized that some tasks would intuitively take longer than others.

We also recorded any misclicks a participant made while trying to complete an assigned task. This data acted as both a quantitative and qualitative data because we took note of where the participant clicked. Misclicks can be interpreted as more intuitive buttons or links to complete a task.

The last type of quantitative data we recorded was a rating from the user at the end of all the tasks on a scale from 0 to 5, with 5 being very intuitive. The purpose of this rating was to collect an overall usability score from our participants.

Qualitative Data

The first type of qualitative data we recorded was any comments made during the task completion by the participant. The purpose of this data was to observe and record any difficulties or options to make tasks more intuitive.

We asked our participants at the end of the study if there was any task that they had difficulty completing. The purpose of this question was to get user feedback as to how a certain task could be made to be more intuitive.

The last type of qualitative data we recorded was any overall feedback from the participant. The purpose of this question was to gather any last comments and suggestions from the participants.

Test Results

Time Results:

- Average Task Completion Time (seconds) : 16
- Longest Task Completion Time (seconds): 70
 - Why the longest task took so long: A button didn't exist and the user didn't understand what prod meant
- Shortest Task Completion time (seconds): 2

Overall Intuitiveness Results:

- Lowest intuitive rating (1 - 5): 2
 - Why does it have a low rating: Admin functionalities were not as clear or located in the most visible location.
- Number of tasks that were misclicked: 1

Overall user experience

- Overall rating (1 - 5): 4

From a more qualitative perspective, we found that some overall tasks are more intuitive than others. There is a clear distinction between tasks that participants found easy to navigate and complete, but tasks that participants found a lot of issues completing. For example, users who completed the tasks of signing in or finding a movie were able to do it with ease. Tasks that led to issues generally were caused by poor naming convention, functionalities are missing, or pages are poorly formatted. A common theme is that many participants don't know what "Prod" means and this made them confused. Also, while going through the tasks, some participants found that buttons we should have added were missing like deleting a "prod". Also, users had to take more time than necessary understanding what information displayed on profiles were supposed to represent.

Discussion

Overall we were pleased with the results of our study. Many of the participants found it easy to navigate through the prototype and complete the assigned tasks. We were also pleased with the detailed and constructive feedback we received from several of participants. However, there were participants that had trouble completing certain tasks, prodding a friend for example. The information we received from participants who believed that the UI was intuitive as well as the participants who thought the UI was not intuitive will be crucial during the development of Rotten Tomatillos.

The participant that will be the most useful in future development was a student who has background in front-end development work. To our surprise, this participant gave our system a low score in intuitiveness. The participant gave constructive feedback about our system that we believe we should take into consideration during later phases of development. As described by the participant, the term "prod" is confusing. While we overlooked this term when developing the prototype, this participant made it clear that this term needs to be changed. The word "Prod" should be changed to "Recommend" and standardized across the system. The participant felt that the pages on our prototype felt very disconnected and that there didn't seem to be a pattern. We believe this is an issue that we can fix once we polish our design later on. The subject also commented that the system became intuitive only when she got used to it. This is not what we want. Our goal is for the system to be intuitive from the very get go and we will have to change some of the overall design to achieve that goal.