

# UI/UX Design and Usability Study

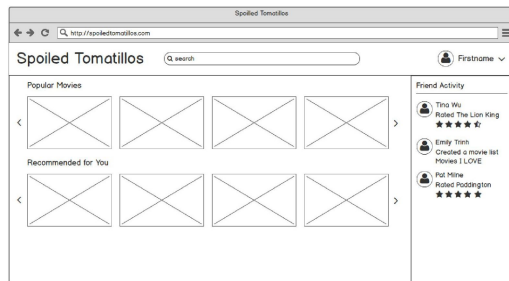
## Introduction

The system under study is the usability of our user interface design. We created paper prototypes of the different interfaces a user will encounter when navigating on our website. We also created different sets of prototypes depending on if the user is an end user or an admin user. The goal of this study is to observe any troubles or errors a user may experience while interacting with our prototype in an effort to improve our product's user interface.

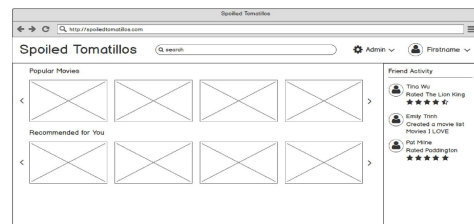
To conduct the study, we had two sets of scenarios, one for end user study and one for admin user study. The scenarios are consecutive so we can observe how the participant navigates through our website from a page other than the home page. We begin each study by explaining our product and the goal of the study, then we state the information that we will be collecting and ask for the participant's consent. After the introduction, we give each participant one scenario at a time and note the time it takes for the participant to navigate through the different pages that we created. We also wrote down errors or troubles that the participant had.

## Paper/Rapid Prototypes

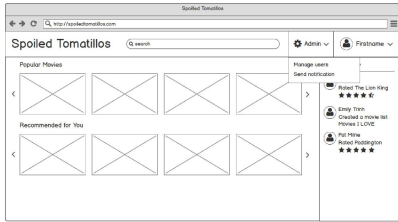
Main Page for End User:



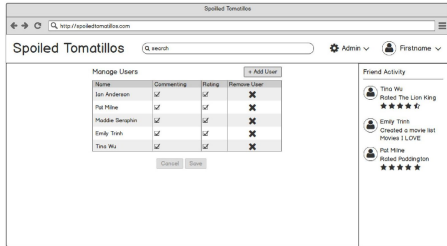
Main Page for Admin:



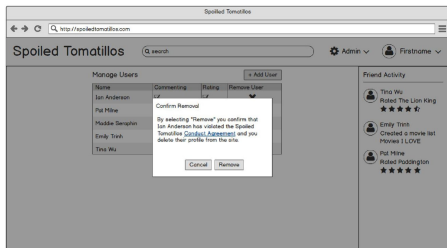
Drop down for Admin section of Main Page:



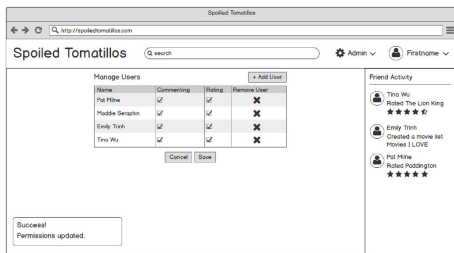
Manage Users section for Admin:



Confirm Removal of User:



Successful Removal of User:



Remove Commenting of End User:

Spooled Tomatillos

http://spoiledtomatillos.com/

# Spoiled Tomatillos

Search

Manage Users

Name	Commenting	Rating	Remove User
Jan Anderson	<input type="checkbox"/>	☆	✕
Pat Hwar	<input checked="" type="checkbox"/>	☆☆	✕
Huckle Sampson	<input checked="" type="checkbox"/>	☆☆	✕
Emily Trish	<input checked="" type="checkbox"/>	☆☆	✕
Tina Wu	<input checked="" type="checkbox"/>	☆☆	✕

Cancel Save

Friend Activity

- Tina Wu Rated The Lion King ★★★★★
- Emily Trish Created a movie list: Movies I LOVE
- Pat Hwar Rated Paddington ★★★★★

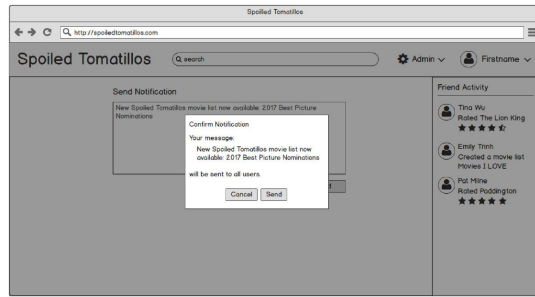
### Successful Removal of Commenting for End User:

[illegible]

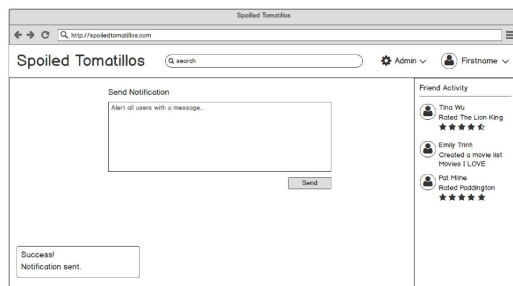
### Writing Notification to Send to End Users:

The screenshot shows a web browser window with the address bar displaying 'http://spoilertomatillos.com'. The website's header features the title 'Spoiled Tomatillos' and a search bar. Below the header, there is a 'Send Notification' section with a text area and a 'Send' button. On the right side, a 'Friend Activity' section lists recent posts from users like 'Tina Wu', 'Rafael The Lion King', 'Emily Tren', 'Drewed a snow last', 'Honey I LOVE', 'Kip Thaw', and 'Auntie Podginton'.

## Sending End Users a Notification from Admin:



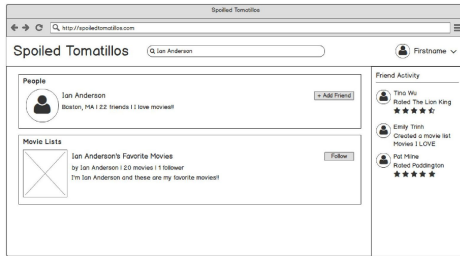
## Successful In Sending Notification:



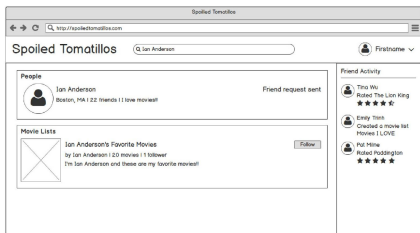
## Results Page of Finding Nemo:



## Results Page for Ian Anderson:



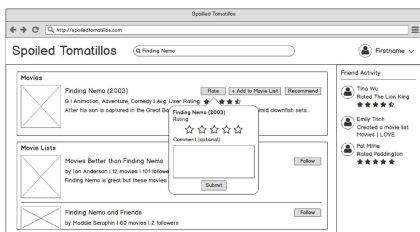
Friend Request to Ian Anderson Sent:



Successful 5-star Rating Submitted for Finding Nemo:



Dialogue Box for Submitting a Rating for Finding Nemo:



Making Recommendation for Finding Nemo:



## Successful Recommendation Sent to Friends



## Participants

We conducted our usability study on six Northeastern University students, ranging from 20 to 22 years of age. There were three male and three female participants. None of our participants had previous exposure to our interface.

Three participants acted as end users and completed the end user tasks:

- Cathy: 22-year-old female with high technical competency pursuing an undergraduate degree in International Affairs
- Jay: 22-year-old male with high technical competency pursuing an undergraduate degree in Computer Engineering and Business
- Jillian: 20-year-old female with high technical competency pursuing an undergraduate degree in Computer Science and CyberOps.

Three participants acted as admin users and completed the admin user tasks:

- Nick: 22-year-old male with moderate technical competency pursuing an undergraduate degree in Chemical Engineering
- Elena: 22-year-old female with low technical competency pursuing an undergraduate degree in Health Sciences
- David: 20-year-old male with high technical competency pursuing an undergraduate degree in Mechanical Engineering

## Tasks

Three of our participants completed three end user tasks:

- 1) Starting from the home page, search for the movie "Finding Nemo" and give it a 5-star rating
- 2) Recommend the movie "Finding Nemo" to your friends Barack Obama, George Bush, and Bill Clinton
- 3) Add a new friend named Ian Anderson

The other three participants completed three admin user tasks:

- 1) Starting from the home page, remove the commenting ability for the user Ian Anderson
- 2) Remove the user Ian Anderson
- 3) Send a notification to all users with the message "New Spoiled Tomatillos movie list now available: 2017 Best Picture Nominations"

## **Measurements**

### Average Time to Complete Tasks

#### Admin Scenario 1:

Time to navigate to *Admin* drop-down: 15s, 4.88s, 11s → **AVG: 10.3s**

Time to select *Manage Users*: 3s, 1.73s, 2s → **AVG: 2.24s**

Time to unselect *Commenting* privilege for Ian Anderson: 3s, 1.95s, 9s → **AVG: 4.65s**

#### Admin Scenario 2:

Time to click *Remove User* for Ian Anderson: 2s, 2.3s, 1s → **AVG: 1.76s**

Time to select *Remove*: 5s, 1.53s, 1s → **AVG: 2.51s**

#### Admin Scenario 3:

Time to navigate to *Admin* drop-down: 2s, 2.25s, 1s → **AVG: 1.75s**

Time to navigate to *Send Notification*: 2s, 2.12s, 1s → **AVG: 1.70s**

Time to navigate to "typing" notification message: 3s, 2.56s, 2s → **AVG: 2.52s**

Time to navigate to *Send* message: 5s, .92s, 1s → **AVG: 2.30s**

#### End User Scenario 1:

Time to navigate to search bar: 2.02s, 5s, 2.85s → **AVG: 3.29s**

Time to navigate to *Rate* button: 2.60s, 4s, 1s → **AVG: 2.53s**

Time to choose five stars on *Rate* drop-down: 2.62s, 3s, 1s → **AVG: 2.21s**

#### End User Scenario 2:

Time to navigate to recommend button: 1.13s, 3s, 1s → **AVG: 1.71s**

Time to select all three users: 4.96s, 6.5s, 1.5s → **AVG: 4.32s**

#### End User Scenario 3:

Time to navigate to search bar: 3.35s, 30s, 1s → **AVG: 11.45s**

Time to add Ian Anderson as a friend: .89s, 4s, 1s → **AVG: 1.96s**

## **Test Results**

For "End User Scenario 1" users had the following results:

- First clicked on "Finding Nemo" title instead of "Rate" button

For “End User Scenario 2” users had the following results:

- Questioned if friend’s names are automatically checked to send recommendation, wireframe was not clear
- Suggested to have the friends list before writing out the message

For “End User Scenario 3” users had the following results:

- Did not initially navigate to homepage
- Did not realize that “Ian Anderson” could be searched in the same search bar that was used to find Finding Nemo
- Recommended to put “Search Movies or Friends” in search bar to be clear that the search bar is used for both

Overall “End User Scenario” comments:

- Average rating was a 4.83 out of 5
- “Simple design, easy to use, all buttons for tasks are immediately available at once and not hidden”
- “Very intuitive”
- “Straightforward and simple to use”
- “There aren’t a lot of excessive buttons on the screen.”
- “I recommend moving the friend activity to the bottom of the screen and making movie recommendations on the side. I would like movie recommendations to be more accessible and this change would help.”

For “Admin User Scenario 1” users had the following results:

- One user forgot the question while performing the task
- Tried to search for Ian Anderson initially instead of going to “Admin” tab
- Thought a next page would appear after clicking “Ian Anderson” instead of being able to directly remove Ian’s commenting abilities
- 

For “Admin User Scenario 2” users had the following results:

- No errors observed

For “Admin User Scenario 3” users had the following results:

- No errors observed

Overall “Admin User Scenario” comments:

- 5/5 user rating from end users
- “Design was well laid out, simple, and easy to use”
- “I recommend adding colors and pictures. Also highlight the notification that a task was completed successfully”
- “Straightforward and simple design”
- “I suggest being able to edit users after finding them from the search bar”
- “Rather search for a user on the ‘Admin’ screen instead of having a list of users. If you have a lot of users, it would be easier for the Admin to just search for the name they need.”

## **Discussion**



Our study showed us that we are on the right track to a user-friendly interface, but there are some improvements we can implement to make Spoiled Tomatillos even greater. The participant responses told us that overall, our interface is simple, straightforward, and easy to use. The average satisfaction score from our participants was a 4.83 out of 5. They also provided feedback on how to improve our interface. Users told us that indicating that the search bar can be used to find users and other content beyond movies would make them more confident in using it. They also said that adding search capability into tasks that deal with a potentially large list of users would make actions such as recommending a movie or finding a user to manage as an admin much easier. These studies helped us learn what changes will be beneficial to our interface moving forward.