A Design Critique of Video on Demand Web Applications

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ABSTRACT

A project proposal and software survey is presented here. The proposed project is a design of a video on demand web application. The project proposal will provide an overview of the software and an idea of how we will improve the design of video on demand web applications. The software survey will introduce four existing web applications. Each web application will be critiqued based on its navigation and organization.

INTRODUCTION

An increasing number of consumers in Canada are supplementing their media entertainment through online video on demand services. As such, more competition is emerging to meet the demand of this new market. Some services are free, while others require a subscription fee.

PROJECT PROPOSAL

We propose to design a better user interface for a video on demand web application. We want to improve on the design of existing web applications because we believe their sites are poorly organized, and the applications in general are frustrating to navigate. More specifically, we feel the navigation of these services is inefficient because it takes too long for a user to navigate from the main page to their desired content. It takes too many mouse clicks to find what you are looking for, and often it is unclear how to begin the search for what you want. It is a confusing process plagued by the lack of organization of the overall site and its content. The layout of web applications is not intuitive and there are too many methods to go about reaching the same goal. On some applications, the user is not able to personalize the organization of content. This is especially troublesome and tedious for a user browsing for content with specific preferences in mind.

Watching media should be a source of entertainment, not frustration. Users want a fast and simple process to access what they want whenever they want. Users of all ages and experience with computers should be able to easily understand the organization of the site, and how to navigate.

Ergo, our unique design will improve on two high-level goals of video on demand web applications: searching for specific content and browsing for content with preferences. These goals are universal amongst all video on demand applications. The tasks the user must perform to achieve these goals include navigating the site and an understanding of the site's organization of content.

Our software survey will introduce four popular video on demand web applications. They are Crackle, Netflix, Plex, and Shomi. Each survey will be critiqued on its ability to address what we believe to be two important features of the software: navigation and organization. Attached to the end of this report are eight hierarchical task analyses (HTA). For each software, we have created an HTA for the two high-level goals of the software: browsing for a specific movie genre to illustrate organization, and playing an episode from a specific media series to illustrate navigation.

SOFTWARE SURVEY

Crackle

Crackle is an online distributor of movies and TV shows. It is a free video on demand web application with commercials. The navigation of the Crackle interface is overall straightforward. As shown in Figure 1, there is a simple, uncluttered navigation bar at the top of every web page that contains a search bar and quick links to the TV shows library and the movies library. The titles are displayed in rows that span the width of the screen. A user browses all titles by scrolling vertically down the page. The scroll is a never-ending scroll. A user can also opt to use the search bar to quickly find a desired title, actor or genre. Playing a title is simple; a user clicks on the icon and the user is redirected to a page that immediately begins playing the title in a player. See the HTA attached titled "Crackle – Navigation" that shows the navigation process to play an episode from a specific television series.

The organization of the Crackle interface is cluttered and not intuitive. Media titles can be browsed by categories and genres displayed on the main page, or by media type via the navigation bar. The organization of the media on the main page of Crackle is not intuitive (see Figure 1). Across the top of the main page is a large carousel showcasing movies and shows from random genres. The carousel fills the majority of

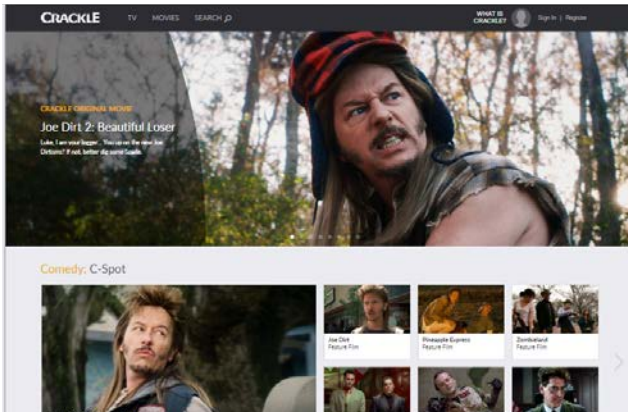


Figure 1. Crackle's home page.

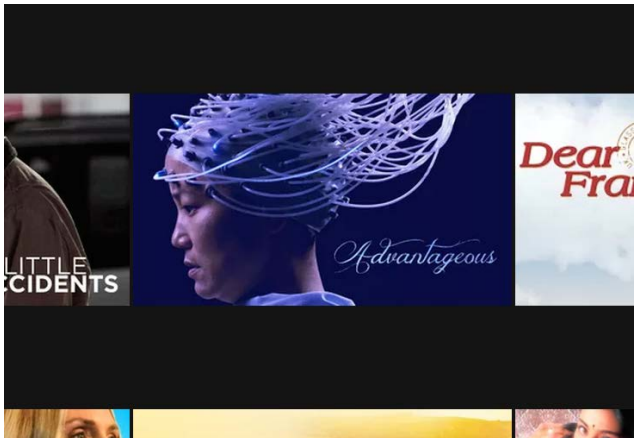


Figure 2. How titles are displayed on Netflix.

the screen. It is not clear to the user why these media items were selected to be showcased. Below the carousel are horizontal sections of different media categories and genres. There is no obvious organization in the listing of the categories, and it is unclear as to whether the categories and titles displayed represent the extent of Crackle's library. Some category titles are in a different colour font than the rest, for no apparent reason. Due to the large sizing and layout of the icons, the variety of selection displayed is limited. As a result, the user is forced to do a lot of scrolling to view the selection of items. Aside from the main page, users can restrict their browsing using the navigation bar to movies or TV shows. Pull-down menus on the library page allow the user to narrow their search by genre and length, however, a user can only choose one genre and one length to search as opposed to multiple genres and lengths. The user can then sort the titles alphabetically or by date added. There is no option to sort by popularity, trending, year or rating. Once a user selects an item to watch, they are redirected to a new page with the player. Below the player are facts about the movie or show, in addition to "You Might Like This" and "All New This Month" sections. These sections are only found on the player page, and nowhere else on the website. This new page is cluttered and full of content that is distracting to a viewer who has already chosen what to watch. See the HTA attached titled "Crackle – Organization" that illustrates the organization of movies.

Netflix

Netflix is an online provider of on-demand streaming media to viewers across the globe. The organization of the Netflix user interface is simple and straightforward to navigate. The top of the webpage consists of a menu bar that allows users to browse media titles by genre. There is also a search bar for browsing by a particular title, actor or genre. On the main page, titles are organized by genre in the form of subsequent rows. Clicking on a genre will redirect you to another page consisting of media titles displayed in rows. To watch a video, the user has to click on a media title to be redirected to a page that will begin playing the video. To view a full detailed overview of Netflix navigation and organization please see the HTAs attached.

The organization of media on the main page attempts to appeal to audience interest, but lacks ingenuity. From top to bottom are rows of genres consisting of a carousel of media titles. A few of these rows depict titles that Netflix assumes will appeal to the user. Most often, these do not. This is because they are based on titles watched, rather than titles liked by a user. Netflix lacks proper functionality to display media that appeals to the user's interests. This poor design choice results in the user having to search through the user interface, as no significant titles are made visible at first glance.

Netflix organizes and displays media titles by use of pictures. To view the actual title, the user has to place their cursor over the picture and a prompt will appear showcasing the name. This is a poor design choice, as some media pictures do not clearly display their title (see Figure 2). This leaves the user constantly moving his/her cursor from picture to picture just to view the name. Netflix does not provide an option to display title names.

Media titles are displayed in a single page format. To navigate through titles the user simply has to scroll down the page. Titles will keep populating until there are no more to display. Although this method minimizes the number of clicks for the user, it has its limitations. Given a slow Internet connection, a lot of time is spent rendering these media titles. As a result, an endless loop is displayed to the user. This is a poor design choice as it leaves the user at a standstill. Additionally, having all these titles presented at once creates latency issues for feedback in terms of navigating titles.

Plex

Plex organizes personal media and provides streaming to multiple platforms. This platform efficiently transcodes the video and audio so playback can occur on any device. Plex organizes and populates common meta-data for television series and movies. Plex also enhances the streaming platform with additional features: unwatched episode indicators, ability to download/sync a title to any connected device, and library access control. Plex focuses on an easy to navigate platform where the user can find specific content quickly. Movies and television shows are separated into libraries, as shown in the left panel in Figure 3. Content recently added and content still being watched are categorized in the main

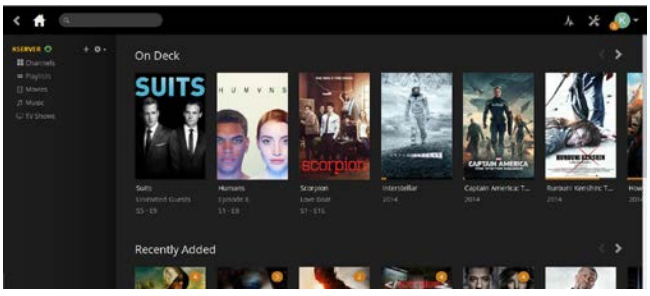


Figure 3. Plex's main page.

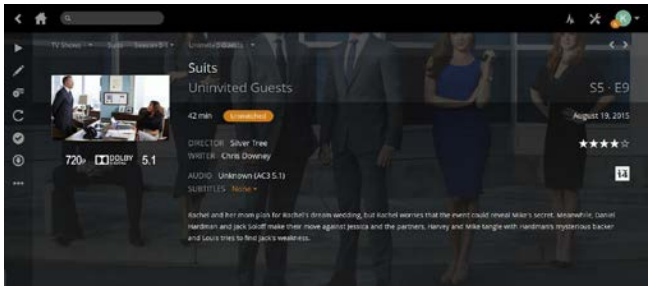


Figure 4. How Plex displays episode facts.

page. Navigating to a latest season is not possible from the main page, as shown in Figure 3. Viewing a television season requires the user to select the television show from the library, which then renders the layout in Figure 4. This is not useful. Each title in the "Recently added" and "On deck" categories have the name and season number if applicable, however, navigating via these descriptions is not possible. Navigating to a specific title will provide a brief description, as well as other media properties such as audio, subtitles and quality, as shown in Figure 4. The location of the title is at the top of the screen, where these links create a natural mapping to a file manager. The media file can be played via the toolbar on the left. Organization of content is a primary concern for television streaming services. Titles are sorted by series, season and episode that are displayed in either a grid layout or a list. All the content by default is sorted alphabetically, with an indicator for episodes that have not been watched. Episodes can be further ordered by first air date, rating, and date added. Adding specific filters on items, like genre, is hidden behind layers of options. A brief description for each season and episode is displayed upon traversing the library. Custom organization, like filtering by "currently following" or children shows, cannot be created in Plex. This is poor organization, as the user will have to locate the titles they want to watch every time they visit.

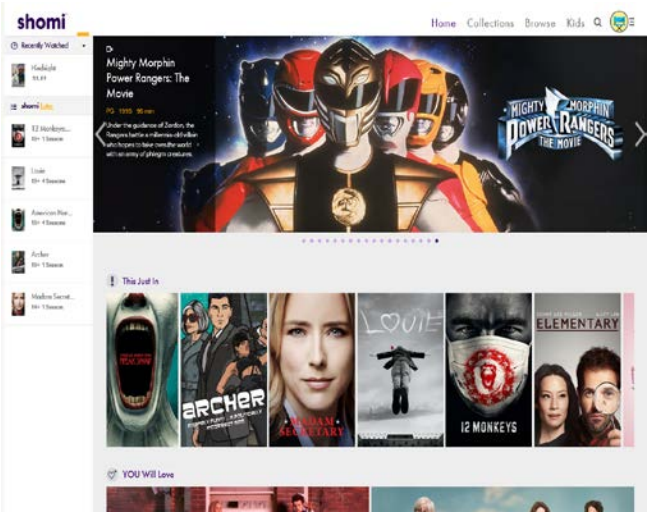


Figure 5. "Recently watched" contents and "bookmarked" contents on Shomi.

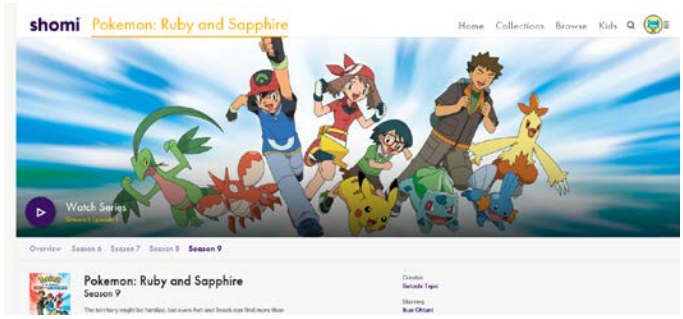


Figure 6. Search in Shomi.

Shomi

Shomi is a Canadian subscription on demand video service. Navigating through Shomi is extremely difficult and inefficient. The main page of Shomi suggests contents that may interest the user based on their view history and groups them into categories such as "You will like" and "This just in". It also displays contents that the user recently watched and bookmarked to watch later. "Bookmark" and "Recently watched" are helpful features because they remind the user what they planned to watch and where they last left off on previously watched titles (see Figure 5). These features, however, are only accessible from the main page and are disabled once the user navigates to another page. This hinders the user experience because they cannot see what they have "bookmarked" to play directly on their current page.

Another flaw with Shomi is the search feature (see Figure 6). Shomi's searching feature lacks functionality. It only filters by title, actor, director, and creator name. For example, if the user wants to watch *Fast and Furious*, they will not get any result when searching for "race" or "car". This limits the user to only the content of which they know the name. Furthermore, search filters cannot be cleared once they are set. For example, if the user searches for "Pokémon" and later wants to see all results, they would have to start over from the main page.

Contents in Shomi are not well organized. The user cannot pick multiple categories to filter results. If the user wishes to watch contents that fall in Comedy, Horror, and Action, they would have to select one of the three genres and manually browse until they see contents that fit the other two (see Figure 7). There is also no option to search by rating or popularity within the current genre. Furthermore, Shomi displays its content in a grid view with no text visible (see Figure 8). This keeps the page clean and simple but it also hides critical information from the user. This design slows

Figure 7. Genres in Shomi.

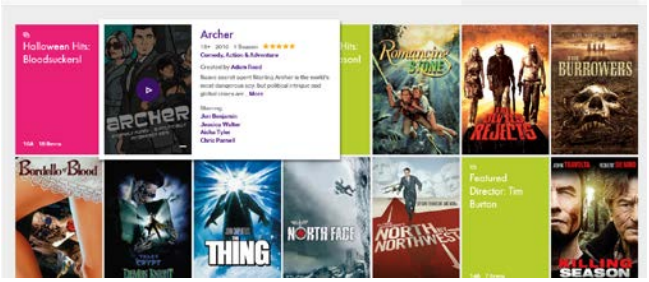


Figure 8. Shomi's grid view.

down the user because they have to hover their mouse over the content to see more details.

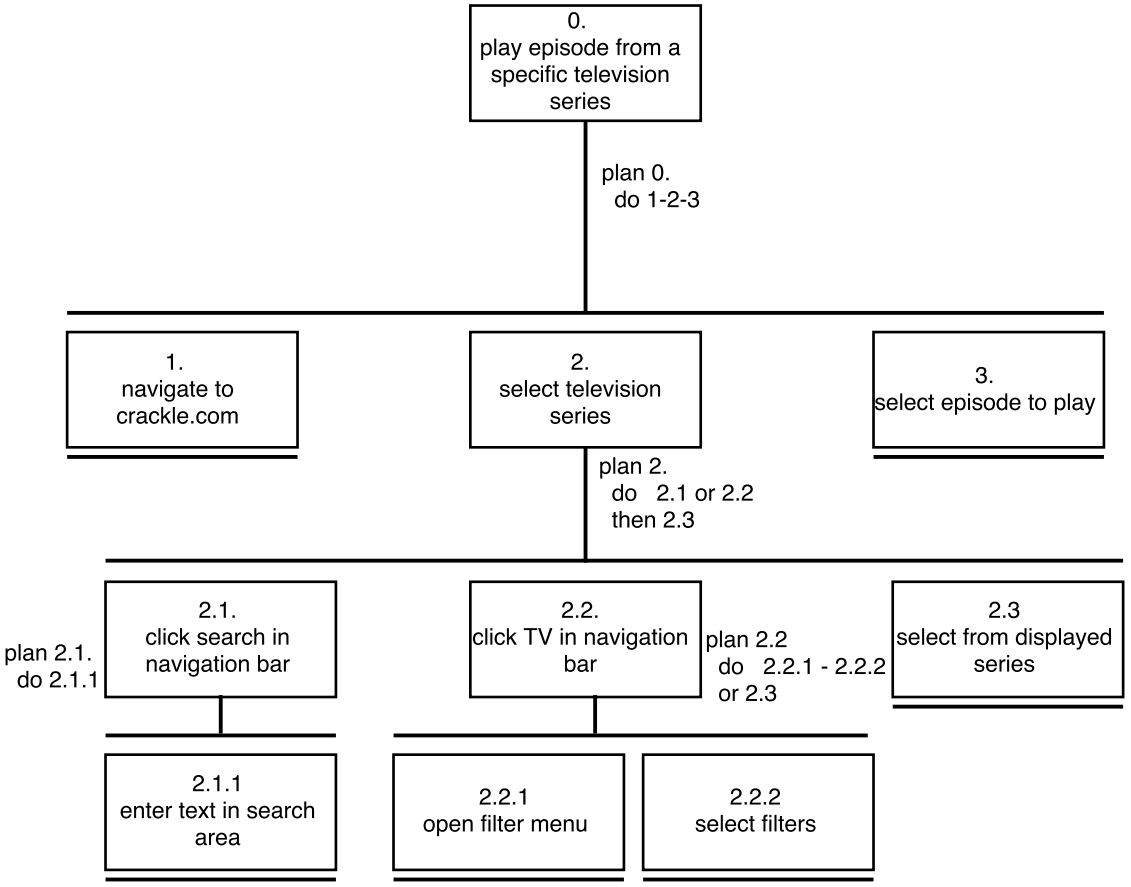
CONCLUSION

We have discussed our project proposal. We want to design an effective user interface for a video on demand web application.

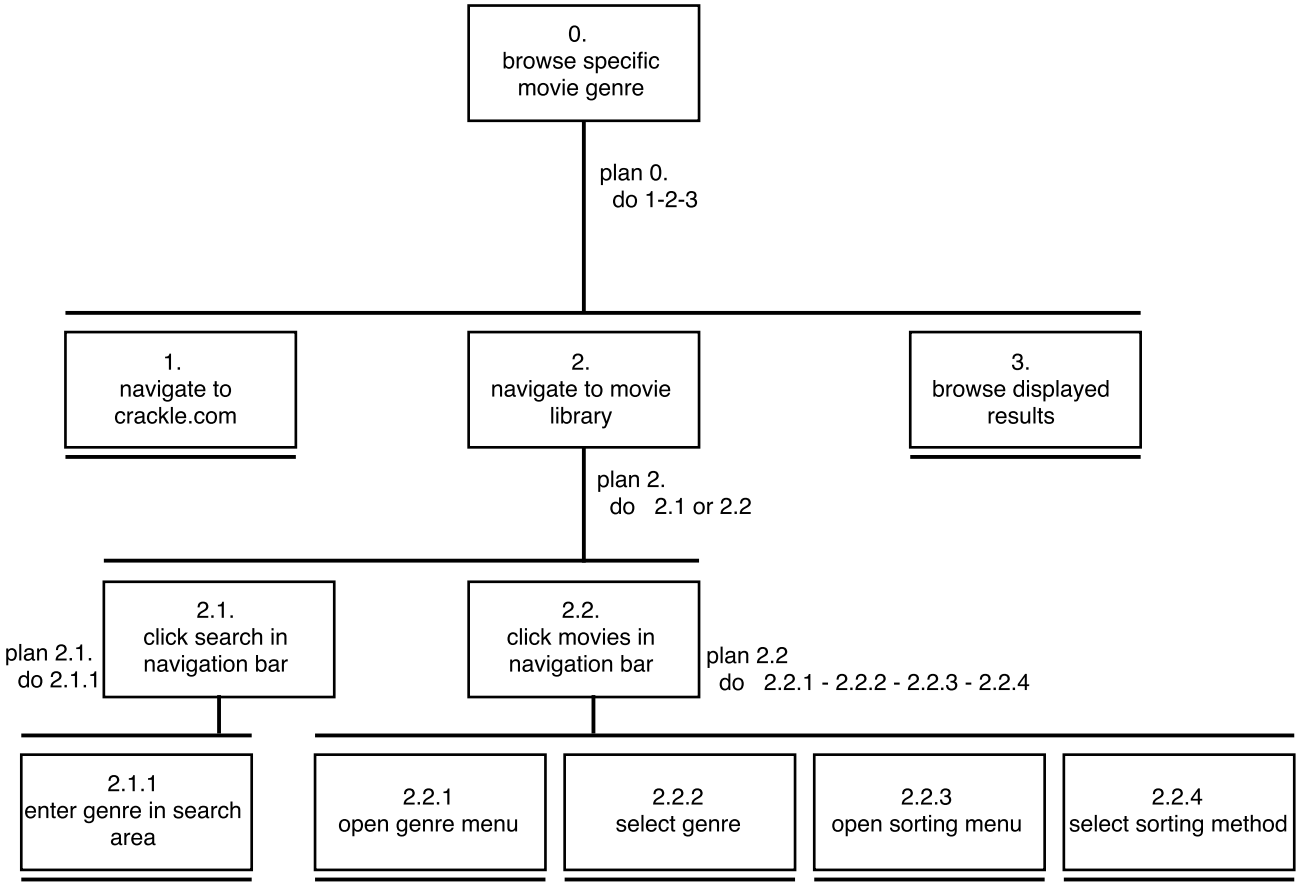
We also provided a software survey of four popular video on demand web applications used by the public. They were Crackle, Netflix, Plex, and Shomi. For each survey, we critiqued the user interface with regard to navigation and organization. We have attached eight HTAs to illustrate how a user on each application would achieve the following two high-level goals: playing an episode from a specific television series, and browsing for a specific movie genre.

Overall, we feel existing user interfaces of video on demand web applications are frustrating to navigate and poorly organized. They suffer from a lack of simplicity and intuitiveness, and are good examples of a putting "pretty" design ahead of usability. They are clunky and inefficient, and frustrate even a frequent user.

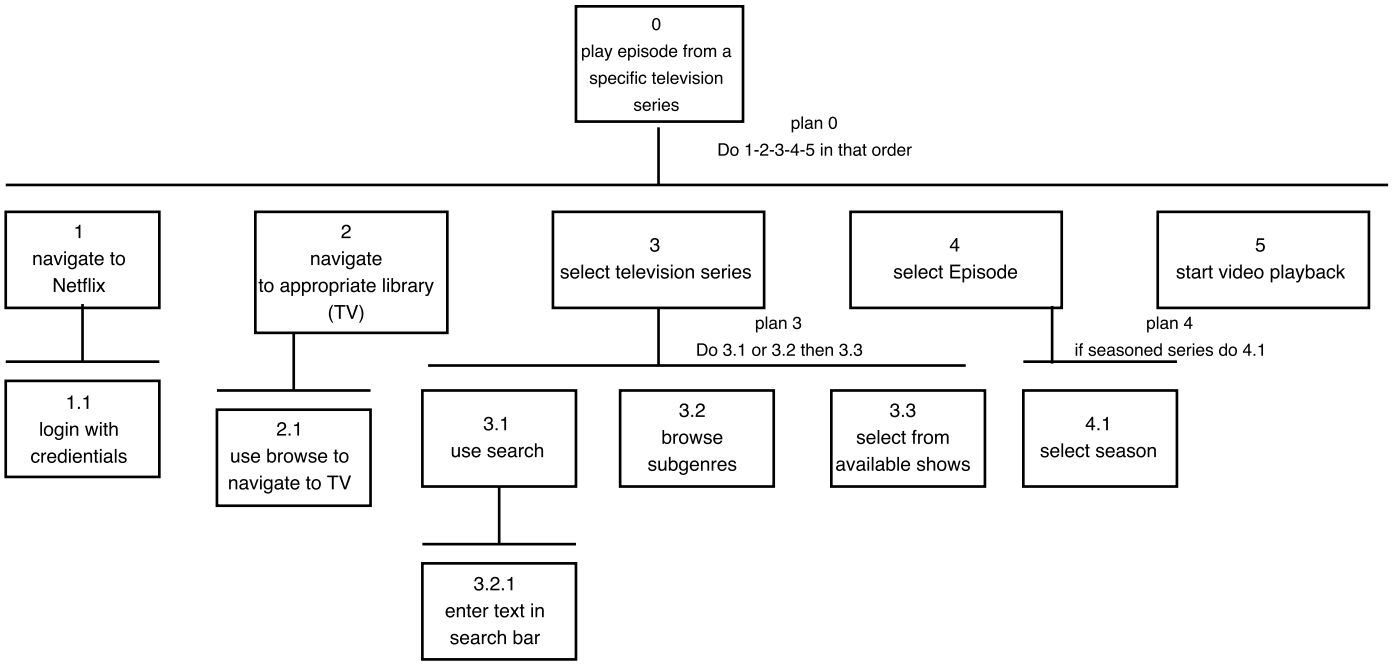
Crackle - Navigation



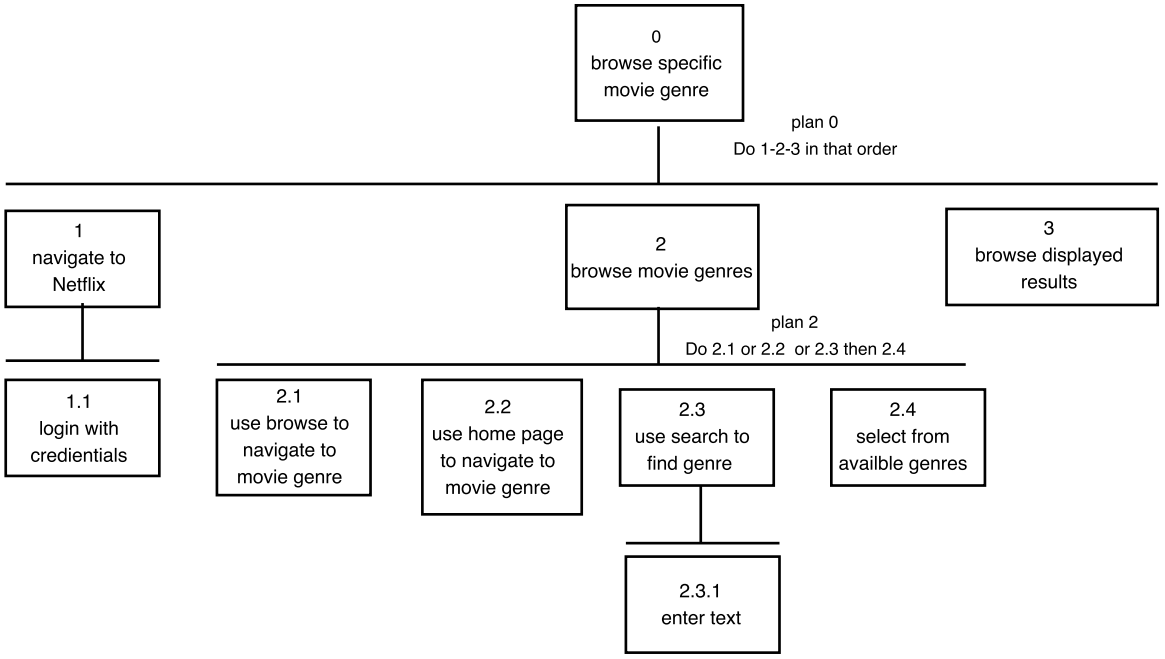
Crackle - Organization



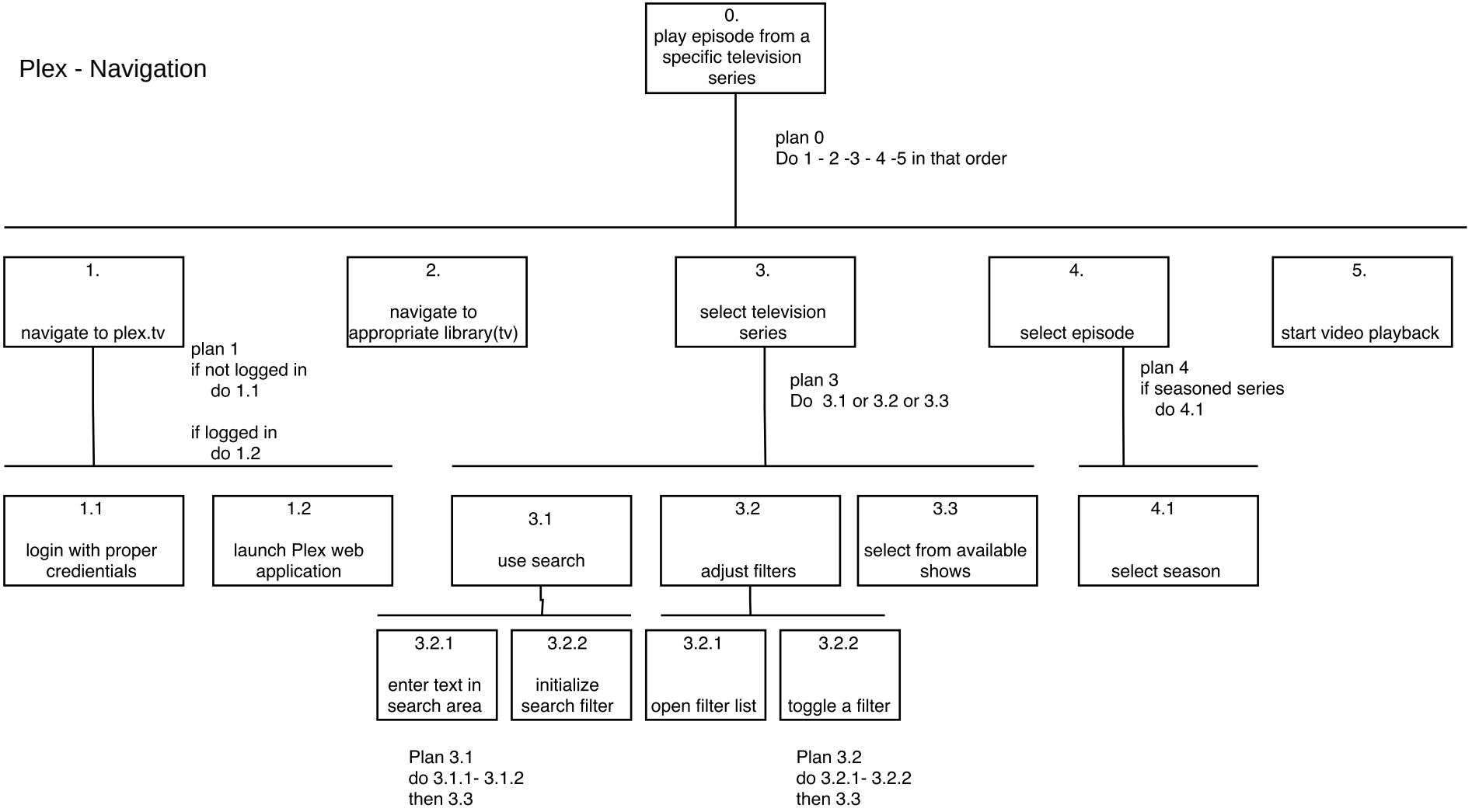
Netflix - Navigation



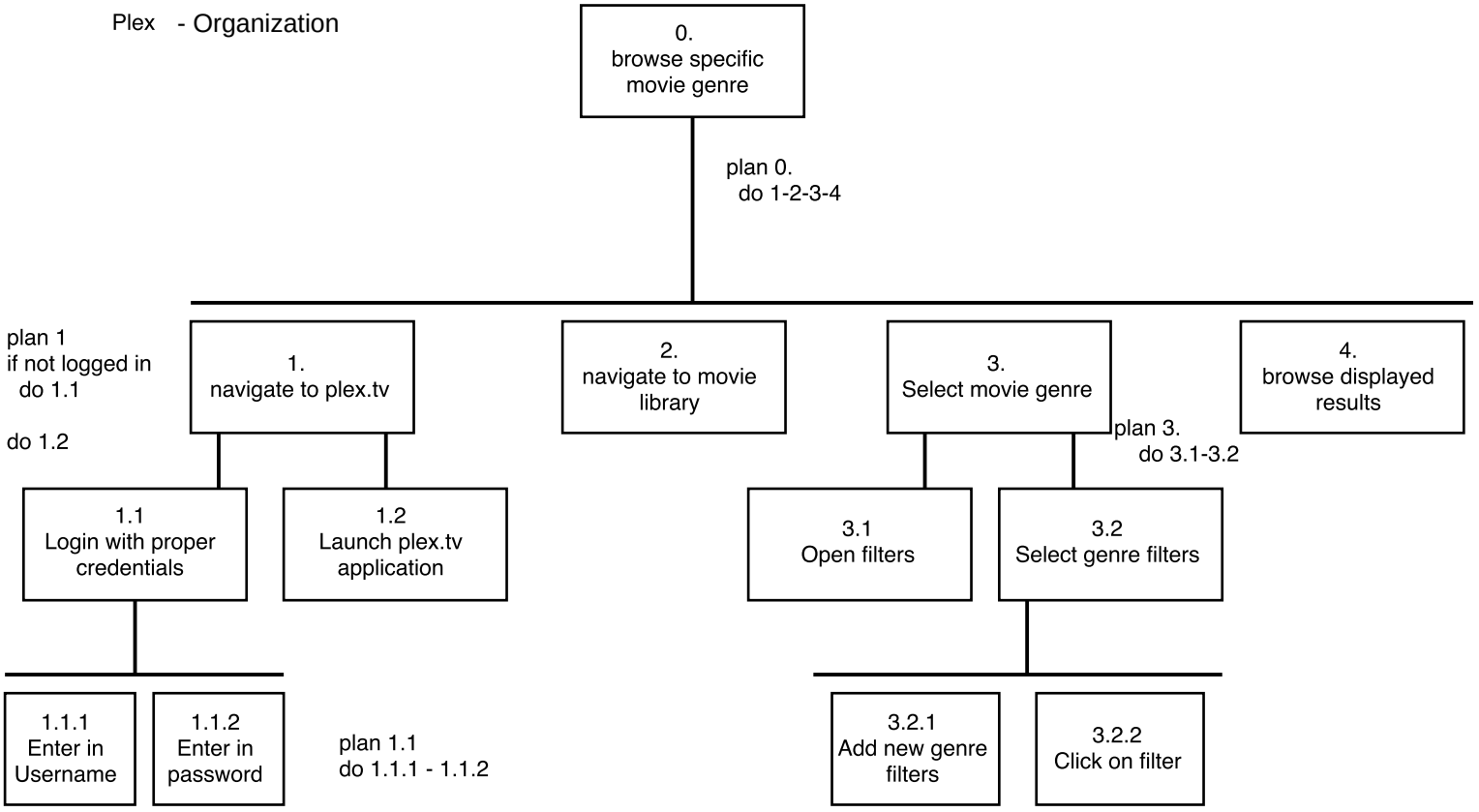
Netflix - Organization



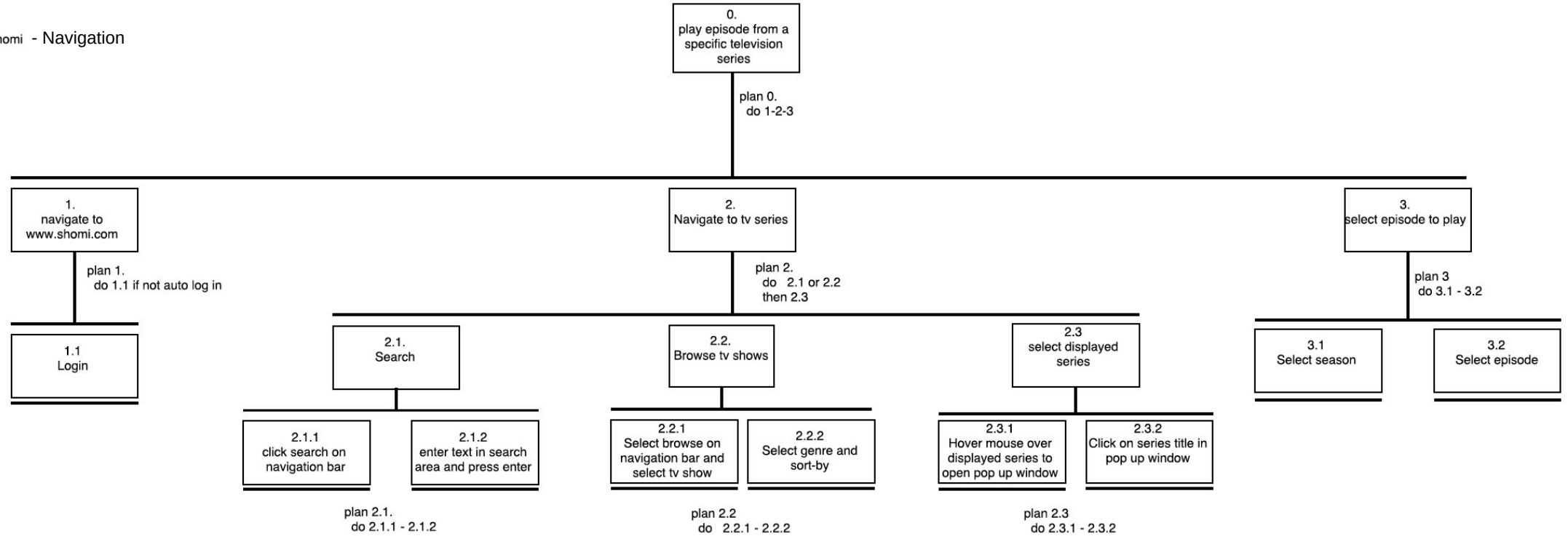
Plex - Navigation



Plex - Organization



Shomi - Navigation



Shomi - Organization