**Netflix Bookmarks**

**An application to help users find scenes on Netflix episodes.**

**Creator:**

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**Last Updated: 03/14/2025**

# Technical Field

My project encompasses the technical fields of computer science and web development.

# Background Information

I often want to re-watch a scene from a Netflix episode. However, I often have a difficult time finding scenes and remembering which episode they were in. So, I waste time scrubbing through each episode to find the scene. This seems inefficient to me. We already have bookmarks for websites, so why not have them for videos? So, I created a Chrome extension that allows users to bookmark specific timestamps on videos. I believe this idea will help improve Netflix viewers’ experience and save them time.

# Prior Art (legal term)

Other applications inspired me to create this tool. First, Google Chrome’s bookmarks feature inspired me to create my application. Google Chrome allows users to bookmark a website by simply pressing a button at the top of the screen. Then, the user can click on the bookmark, which displays on a bar at the top of their screen, to visit the page. I really love the simplicity of Google Chrome’s bookmarking tool, and this inspired my application’s design. Second, YouTube has a feature where creators can place timestamps on videos and name the timestamps. The video displays timestamps as small, vertical bars on its scrubber. When users hover over the timestamp, they can see its name. After seeing how this feature helped users find moments in videos so easily, it inspired me to create a similar tool for Netflix.

Currently, Netflix does not offer a bookmark feature. I have not found any other services that offer it, so it seems this problem has not yet been addressed. However, some applications address similar problems. For example, YouTube mobile on iOS has a “Clip” feature, which acts like a video bookmark for YouTube videos. Second, Microsoft PowerPoint allows users to bookmark times on presentations’ videos. Finally, the Chrome extension “Netflix Timestamp Link” allows users to create links to specific times on videos, but it does not allow users to create bookmarks. Although you could convert the link into a bookmark using Chrome’s bookmarking tool, most users would not know how to do that. In contrast, my Chrome extension would allow users to click a single button to add a video bookmark, so it is much easier to use.

**Update for 02/01/2025:**

I recently discovered another Chrome extension that offers similar functionality to mine, but for YouTube. *Youtube Timestamp Bookmarker* allows users to bookmark timestamps on YouTube videos (Forever Impulse Tech, 2022). Like my extension, it features a popup with a bookmarks list and a search feature (Forever Impulse Tech, 2022). However, unlike my extension, it features additional filters and shows the YouTube thumbnail associated with each bookmark, which helps users quickly identify each one (Forever Impulse Tech, 2022). It also features a wider popup window, which allows users to perform more actions on the same menu/page (Forever Impulse Tech, 2022). Overall, I like the extension, and it inspires me to add additional filters for bookmarks. I might also add visuals to help users identify bookmarks quickly.

# Project Description

My application will help users find Netflix episodes’ scenes more easily. Users will be able to install my Chrome extension on the Chrome Webstore. Once they install it, they will be able to click on the extension to open its popup. Then, users will be able to click a button to add a bookmark at the current time. Users will also be able to set the bookmark’s name so they can find it more easily. When users want to watch a specific scene, they will open the Chrome extension to view the list of bookmarks. Then, users will be able to use a search bar at the top to find the bookmark by name.

The extension will also have other features to help users find and manage bookmarks. When users want to view the list of bookmarks, the application will automatically group the bookmarks by series so users can find bookmarks more easily. Then, the user will be able to click on a series in the Chrome extension to view the series’ bookmarks. Each bookmark will show its name to help users identify what scene it represents. Then, the user will be able to click on the bookmark to automatically open the episode at the desired time. Finally, users will be able to manage bookmarks by clicking a button on each bookmark. The button will open a menu where users can delete the bookmark.

As you can see, my application improves users’ experience. Before, users had to either memorize or write down the episode and time they were watching. If they forgot, they would have to spend time searching through many episodes for the scene. With my extension, users can now quickly save a scene with the click of a button. This helps save users’ time and improves their watching experience.

# Innovation Claim

My application will help users find and rewatch scenes on Netflix episodes by allowing users to bookmark times on them. This application is one of the first of its kind and is different from similar products because it is easier to use and provides bookmark-management features.

# Usage Scenario

A user might watch a Netflix episode and want to save the time where they left off watching the episode. Although Netflix allows users to continue watching where they left off, it only saves the last episode each user watched for each series. If the user switched to a different season or rewatched a previous episode, they might lose where they left off watching. Fortunately, my extension can fix this problem. The user can open the extension’s popup and click a button to bookmark the scene. This will open a menu asking the user for the bookmark’s name. Once they enter the bookmark’s name and click the save button, the application will save the bookmark. Later, the user can open the extension to view the bookmarks grouped by series. Once they click on the series, they will see its bookmarks. Finally, they can click on the bookmark to navigate to Netflix and view the scene.

# Evaluation Criteria

The following questions will help evaluate whether the project was successfully completed:

* Can users install the extension on Google Chrome?
  + Yes
* Does the extension show the list of bookmarks?
  + Yes
* Can the user click on a bookmark to visit its episode at the correct time?
  + Yes
* Does the extension show you the series related to each bookmark?
  + Yes
* Does the extension allow users to search through the bookmarks by name?
  + Yes
* Does the extension allow users to delete a bookmark?
  + Yes

**Update for 02/03/2025:**

* Does the extension allow users to edit a bookmark?
  + Yes

# Objectives and Tasks Associated with the Project

1. Create the Figma design / mockup. This was completed on 03/21/2023.
   1. Design the menu for creating a bookmark.
   2. Design the menu for deleting a bookmark.
   3. Design the list of bookmarks.
   4. Design the list of bookmarks that appears when the user uses a search bar.
2. Create the Chrome extension. This was completed on 05/30/2023.
   1. Create the menu for creating a bookmark.
   2. Create the list of bookmarks.
   3. Add the feature that allows the user to visit Netflix when they click on a bookmark.
   4. Create the menu for deleting a bookmark.
   5. Create the search feature.
   6. Test each of the features.
   7. Test the Chrome extension on different device sizes.
3. Publish the Chrome extension. This task was completed on July 24, 2023.
   1. Create a privacy policy on my website. This is necessary because Google requires each extension to have one.
   2. Create a detailed extension for the Chrome extension. It should probably mention that the extension is not made by Netflix to prevent users from becoming confused.
   3. Verify that my extension meets all of Google Chrome’s criteria for creating an extension.
   4. Make any necessary modifications according to those criteria.
   5. Submit the extension for review.
4. Make final adjustments to my Student Innovation Project’s website. This was completed on 03/07/2025.
   1. Add a link to the Chrome extension’s page on the Chrome Webstore.
   2. Add screenshots or thumbnails for the Chrome extension.

**Update for 01/25/2025:**

* Add the ability to view additional bookmark details. This task was completed on 01/31/2025.
  + Create a popup that shows the episode’s additional details. This will be called the “Bookmark Details Popup.”
  + Add a button that opens the popup.
  + Move the deletion button into the popup.

**Update for 01/31/2025:**

* Add the ability to edit bookmarks. This task was completed on 02/14/2025.
  + Create a popup with a form. This popup will be called the “Bookmark Edit Popup.” The form must allow users to edit a bookmark’s name. Furthermore, it must have a submission button.
  + Add a button to the Bookmark Details Popup that allows users to open the edit form.

**Update for 02/23/2025:**

**All highlighted items were modified on 03/06/2025.**

* Fix the extension failing to open a bookmark while an advertisement is playing. This was completed on 02/28/2025.
  + Identify the cause of the issue.
  + Update the extension to open a new tab for the bookmark if it detects an advertisement is playing.
* Debug a connection issue. My application has an issue where it displays an error message if the user installs the application while they are already on a Netflix episode. I will determine how to best fix this issue. This was completed on 02/28/2025.
  + Identify the cause of the issue.
  + Identify the best solution.
  + Implement the solution.
* I will improve the user interface of my extension. This was completed on 03/03/2025.
  + I might add visuals to help users differentiate between bookmarks and series.
  + I might improve the discoverability of the edit button.
  + I might add a few minor animations/transitions/notifications.

**Update for 03/01/2025:**

* Review and test the code. This was completed 02/28/2025.
  + I must review and test the code to ensure there are no bugs.
* Re-publish the extension. This was completed on 02/28/2025.
  + I must re-submit my extension to the Chrome webstore so users can utilize my changes.

# Description of Design Prototype

Users will be able to run the extension by installing it on the Chrome Webstore from a Chrome browser. The extension will consist of the following components: the series list, the bookmark creation menu, and the menu that shows a series’s bookmarks. First, the series list will show each Netflix series that the user saved bookmarks for. Users will be able to click on each series to see its bookmarks. Furthermore, the main menu will have a search bar at the top. Users will be able to search for bookmarks by name by typing a query into the search bar. Then, the extension will automatically show the user the list of bookmarks that match the search query. Finally, the menu has a button to create a bookmark. When the user is watching a Netflix episode, they will be able to click on this button to navigate to the bookmark creation menu.

My application will also feature a bookmark creation menu and a menu to show a series’s bookmarks. The bookmark creation menu will allow users to set a bookmark’s name and save the bookmark. Behind the scenes, the extension will automatically get the name of the episode’s TV series to group the bookmark by TV series. Once the bookmark is saved, the extension will navigate the user back to the main menu. When the user clicks on a series, the extension will navigate them to that series’s bookmarks. In that menu, each bookmark will have a name and a deletion button. The user will be able to remove a bookmark from their list by clicking on that button. Finally, the user will be able to click on a “Back” button to navigate back to the main menu.

I created a Figma prototype of the application to demonstrate these components. To run this prototype, visit [this link](https://www.figma.com/proto/Z0MoioyEpCznOA62sbf9cP/Design?node-id=85-1027&scaling=min-zoom&page-id=0%3A1&starting-point-node-id=85%3A1027&show-proto-sidebar=1). You should see a Chrome browser with a blue icon with a “B” at the top right. First, click on the icon to open the extension’s main menu, which should display a list of Netflix series. Second, click on the “Add Bookmark” button to open the bookmark creation menu. Then, click on the “Name” input/box to simulate filling in the bookmark’s name. Finally, you can click the “Save” button to save the bookmark and navigate back to the main menu. This demonstrates the main menu and the bookmark creation menu.

The prototype also demonstrates the menu that displays each series’s bookmarks and the search bar. To see a series’s bookmarks, click on the first Netflix series in the main menu. This will show the series’s bookmarks, and each one will have a name and a deletion button. Then, click on the “Back” button to navigate back to the main menu. Finally, you can click on the search bar at the top to simulate searching for an episode by name. The extension will automatically show the list of episodes that match the search query. This prototype helps demonstrate the extension’s design and the components’ functionality.

The following are the design prototype’s images:

A screen shot of a computer

Description automatically generated

A screen shot of a phone

Description automatically generatedA screenshot of a bookmark

Description automatically generated

**01/25/2025:**

At this time, I successfully completed all of the required functionality and published the extension. I am now working on a few improvements. I fixed a user interface issue, which was a minor setback, where the scrollbar appeared in some pages, but not in others. Furthermores, I updated the application so that bookmarks on the series’ pages now show the episode’s name, if it is available.

**01/31/2025**:

I added the Bookmark Details Popup. Users can open the popup by clicking an info icon next to each bookmark. The popup will show the bookmark’s name, series, and episode if they are available. The popup also features a “Delete” button and an “Open” button, which allows users to open the bookmark in a new tab. I also updated the Figma prototype to show the info icon instead of the “Delete” button.

**02/03/2025:**

I added the Bookmark Edit Popup. Users can now navigate to the Bookmark Details Popup and click on a pencil icon at the top right to edit the bookmark. The application will open a new popup with a form field for the bookmark’s name. Users can then enter a new name into that field and press the save button to submit their changes. The application will then refresh the bookmarks list to show the bookmark with its updated name.

**03/01/2025:**

Previously, users might have had trouble understanding that the homepage showed the series list. To fix this, I updated the homepage’s design by adding a folder icon to each series in the series list. This addition will help users understand that bookmarks are organized by series and help distinguish the homepage from the series page. Furthermore, I added a few icons throughout the application to improve its overall appearance.

**03/06/2025:**

The application now provides additional feedback after users create or edit bookmarks. Specifically, users will see a green notification indicating that the user successfully saved their changes. Furthermore, when a user creates a bookmark, the notification will feature a button that allows the user to open the bookmark. This feature allows users to open new bookmarks quickly.

# Evaluation Plan

First, the tester must verify that the extension can be installed. To do so, the tester should open a Chrome browser. Then, they should navigate to the extension’s page on the Chrome Webstore by clicking on the link in the “Download” section of [my project’s website](https://netflixbookmarks.wordpress.com/). The Chrome Webstore’s page should feature a button to install the extension. The tester should click on the button, download the extension, and verify that there are no obvious errors with installing the extension. Finally, the tester should verify that the extension, which is named “Save that Clip,” displays in the browser’s navigation/menu bar or the extensions’ menu. By completing these steps, the tester can confirm that the extension is installable.

Second, the tester should test creating bookmarks. To accomplish this, the tester should navigate to Netflix’s website and play an episode. Then, they should click on the extension’s icon, which they will be able to find in the browser’s navigation menu or the extensions’ menu, to open my extension’s popup. Next, they should click on the “Add Bookmark” button, fill in a name for the bookmark, and click “Save.” The tester should verify that the list of series has the name of the episode’s series. In the rare event that the extension could not obtain the series’s name, the episode’s series will be “Other.” Finally, the tester should click on the series to open its bookmarks and verify that the list contains the bookmark’s name.

Third, the tester must confirm that the extension remembers the user’s bookmarks and can save multiple bookmarks. To verify that bookmarks do not disappear after closing the extension, the tester should close the extension’s popup, open it, and verify that it displays the correct list of series. To test that the extension can save multiple bookmarks for the same series, the tester should switch to a Netflix series that has multiple episodes. Then, they should bookmark at least two distinct episodes. Using the steps from the previous paragraph, they can verify that the extension displays each bookmark correctly.Finally, the tester should verify that the extension can save bookmarks for multiple series by bookmarking an episode from a different Netflix series. Finally, they should open the Chrome extension and verify that it displays each series.

Fourth, the tester must test that the bookmark navigates the user to the correct episode and time. To do so, they should click on a bookmark and verify that the extension opens the correct Netflix episode. The episode’s time should be set to the saved time. Furthermore, the tester should confirm that the extension can navigate them to an episode’s scene when they are already watching the episode. To accomplish this, they should switch to a different time on the episode and click on the episode’s bookmark again. The tester should verify that the extension automatically sets the video to the saved time.

Fifth, the tester must test the deletion and search features. To test the deletion feature, the tester should click on a series to see its bookmarks. Then, they should click on the bookmark’s deletion button and confirm that the bookmark does not display in the list. To test the search feature, the tester must open the extension’s main menu and verify that it shows a search bar at the top. Then, they should click on the search bar, type in a bookmark’s name, and confirm that the extension displays the matching bookmarks. Finally, they should verify that the list does not display any bookmarks that do not match the search query. By following these five steps, the tester will be able to confirm that the project meets the evaluation criteria.

**01/25/2025:**

On the series page, the bookmarks should now display a button that opens a popup with additional bookmark details. The deletion button will be moved into this popup. To test this feature, the tester should navigate to the series page, find a bookmark to open, and click on the button that opens the bookmark’s details. The tester must verify that the app opens a popup that shows at least the bookmark’s name and the deletion button. The steps for testing the deletion feature remain the same. Finally, the tester must be able to close the popup by clicking on the close button.

**01/31/2025:**

I decided to add a popup that allows users to edit bookmarks. The following describes how to test the Bookmark Edit Popup:

* Navigate to the Bookmark Details Popup and click on the edit button. This button will have a pencil icon, the word “Edit,” or something similar. It should open a new popup with a form allowing users to edit the bookmark’s name.
* Type in a new bookmark name.
* Click on the save button. If necessary, close the Bookmark Edit Popup.
* Verify that the bookmark’s new name is displayed in the following:
  + In the bookmarks list.
  + In the Bookmark Details Popup.
  + In the Bookmark Edit Popup.

**Update for 02/23/2025:**

The following describes a few additional testing criteria:

* Verify that the extension can open bookmarks even if an advertisement is playing.
  + Create bookmarks for a few Netflix episodes.
  + Open Netflix with an ad-supported plan. Watch episodes until an advertisement starts playing.
  + When an advertisement begins playing, open a bookmark for that episode. Verify that the extension opens a new Google Chrome tab at the correct timestamp for the episode.
* Verify that the extension works even if you install it when you are already on a Google Chrome tab with a Netflix episode.
  + Uninstall the extension if you have it installed.
  + Start watching a Netflix episode.
  + Install the extension.
  + Open the extension’s popup. Verify that it either does not display an error message or shows a message asking you to reload the page.

**Update for 03/06/2025:**

The recent changes require the following steps for testing:

* Verify that the extension shows a notification after creating or editing a bookmark.
  + Create a bookmark.
  + Edit a bookmark.
  + Verify that each notification’s message indicates that the operation was completed successfully.
* Verify that the creation notification allows users to open a bookmark.
  + Create a bookmark.
  + Verify that the bookmark shows a button. Its text should imply that it will allow users to open the bookmark.
  + Click on the button.
  + Verify that the application opened the Bookmark Details Dialog for the new bookmark.

# Project Completion Assessment

***Note: This section must be completed before SIP403/409.***

**Update for 01/25/2025:**

The application’s original requirements have been fulfilled. The product works exactly as described. However, I will continue to work on a few improvements and features. Specifically, I want to add the ability to view additional bookmark details, such as the episode’s name. I also want to add the ability to edit bookmarks, if time allows.

**Update for 01/31/2025:**

I am on schedule to complete the application. I finished the Bookmark Details Popup and fixed a few minor bugs, including one where the extension could not connect to the Chrome tab. I am now working on a few minor improvements. I will begin working on the Bookmark Edit Popup soon.

**Update for 02/03/2025:**

I am still on schedule to complete the project, and I successfully implemented the ability to edit bookmarks. It works exactly as required, and the evaluation criteria were successfully fulfilled. Furthermore, the process for editing bookmarks is quick and intuitive, and the design is professional. Overall, this went well.

However, I must still improve some aspects of the editing feature. Specifically, there is a bug where the Bookmark Details Popup and the Bookmark Edit Popup close after the user updates a bookmark’s name. I will work on fixing this bug in the coming days, and I will be more cautious in preventing bugs like these in the future. I will also consider adding the ability to edit other bookmark fields, such as the bookmark episode’s name.

**Update for 02/23/2025:**

I recently added new tasks aimed at improving the users’ experience. These tasks will add more work for me during the upcoming weeks. Nonetheless, the project is on schedule for completion. I already published the changes I made during SIP408. I also asked some people to provide feedback on my extension, and I will use their feedback to improve it. Finally, I discovered a few minor issues and potential improvements. For example, I found a bug where the extension temporarily displays an error message on startup. However, these issues are relatively minor, and I expect to fix them soon.

**Update for 03/02/2025:**

The project is nearly complete. I completed all of the due tasks on time. Specifically, I made some user interface improvements and fixed an error when installing the extension. I also fixed a bug where the extension failed to open a bookmark when an advertisement played. Furthermore, I am on schedule to complete the remaining tasks. I only need to make a few minor improvements and complete the final review and testing process. Overall, everything is going well, and I expect to complete the project on time.

**Update for 03/06/2025:**

The project is complete. This week, I made the final improvements to my application. First, I updated it to show notifications when the user creates or edits a bookmark. This feature helps the application provide the user with some additional feedback. Second, I fixed another bug where the app failed to open a bookmark while an advertisement was playing. Third, I fixed a visual bug where the popup’s height changed when switching between pages. Most importantly, I published my extension on the Chrome web store again so users could benefit from my latest changes. Altogether, everything went well, and no further work remains.

**Update for 03/14/2025:**

***What I Did Well***

I completed my Student Innovation Project successfully. I completed all of my project’s objectives and tasks on time and fulfilled my project’s “Evaluation Criteria.” Specifically, I created a Chrome extension that lets users bookmark moments in Netflix episodes. My application is innovative because although bookmark applications exist, they do not necessarily let you bookmark a specific time in a Netflix episode. Second, the application correctly allows users to open bookmarks; users can click on a bookmark to instantly start watching a scene on Netflix. Finally, the application correctly organizes bookmarks by series, has search functionality, and allows users to edit and delete bookmarks. All other evaluation criteria were also fulfilled, and the application’s features have been thoroughly tested.

Save that Clip also integrates with Netflix, so my application has a few convenient features. For example, it shows the series and episode associated with each bookmark and organizes bookmarks by series. This feature is innovative because, to my knowledge, my extension is the only bookmark application that integrates with Netflix. More importantly, my application features a professional, clean, and intuitive design. Users who beta-tested my application (Supercoder et al., 2025) rated its design highly and did not have significant trouble using my application. Most importantly, I successfully published my extension to the Chrome webstore, and users can install it as “Save that Clip.” Overall, the evaluation criteria were fulfilled, and my application’s features work as expected.

***What I Did Poorly***

Unfortunately, I made some poor decisions that wasted time. Initially, my application did not work well when advertisements played on a Netflix episode. This oversight led to bugs where the application failed to save and open bookmarks when advertisements played. I only discovered this bug in my SIP408 class, and I had to spend time fixing this issue. Second, I failed to consider that users would need the ability to see additional bookmark details and the ability to edit bookmarks. So, I had to spend time updating the design and the application’s code to add these features. This wasted valuable time I could have used to improve the application in other areas. However, I used these mistakes as a learning experience.

***What I Learned***

I learned a few important lessons when creating my application. First, I learned that it is essential to document applications. I was confused when I started updating my extension in my SIP408 class because I did not remember how to test and debug the application. If I had documented that, I would have had an easier time updating it. Second, I learned that user testing is essential. During SIP408, I asked a few users to test my application, and they provided feedback that helped me decide how to improve my application’s design and what changes to prioritize. This taught me that user testing can reveal design flaws and bugs that a developer might not expect. Finally, I learned that it is crucial to organize my code correctly. When I started updating my application in SIP408, I was also confused about my own application’s structure. If I had organized the code intuitively, I would have had an easier time making changes.

***What I Would Do Differently***

If I had to redo this project, I would approach it differently. First, I would focus on gathering more information about my users/audience. Specifically, I would survey a few Netflix users to ask them what features they would expect from a bookmark application for Netflix. The survey results would help me decide what features to add to the application. If I had done this at my project’s beginning, I would have had a clearer picture of my project’s objectives, which would have helped me plan it more thoroughly. Second, I would hire a professional web designer. If I had done so, the user interface would have looked more professional and had fewer issues. This means I could have spent less time iterating on the design and more time on adding features. Finally, I would perform regular user testing. Specifically, I would hire people every few weeks to test my application and provide feedback. This would help me fix any flaws and improve the design. Overall, my Student Innovation Project has helped me gain experience in software development, and I will transfer what I learned into future projects.

# Appendices

Appendix A: References

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Appendix B: This is the extension’s main menu, which shows the list of bookmarks. – main-thumbnail.png

Appendix C: This is the menu that displays the series’s bookmarks. – Bookmarks list mockup.png

Appendix D: This is the bookmark creation menu. – Add bookmark mockup.png