

DVDelivery Development Reflective Report

Introduction

In this report I will provide critical analysis of the decision-making process and the overall production of the DVDelivery website for a DVD rental company. The report aims to highlight the challenges faced as well as the successes achieved. I will reflect on areas of improvement and future considerations, overall evaluating the entire development process for the project.

Decision-Making Process

The decision-making process for the DVDelivery website involved a combination of research, analysis, and critical thinking. Initially, the volume of work was overwhelming and so I created a work breakdown structure diagram to itemise the tasks needed for the project to be successful, making the workload far more manageable. To begin, I conducted extensive market research to understand the needs and preferences of potential users. This involved analysing similar websites, such as Amazon and Netflix, to identify best practices and areas for improvement. For example, when browsing through Netflix, content will be loaded as you scroll down to create an “infinite scroll” effect, which I wanted to emulate on my site.

Due to the limitations of the Sakila database, other design choices made on similar websites could not be done on my website. Notably, Amazon and Netflix show thumbnail images and videos to give users a better idea of the content of any film or show, but that would not be possible for DVDelivery as the database had no such content. To compensate for this, I instead chose to show other details of the films on the browsing pages, such as the description and film tags of which I added to the database to give more information to the user.

One of the most useful sources of information during the decision-making process was a combination of online resources, including articles, tutorials, and video demonstrations. These resources provided valuable insights into web development techniques, user experience design, and responsive design principles. Additionally, conversing with potential users of the site to gain feedback during development allowed me to change functionality and design decisions before the final artefact was completed, preventing the need for last minute changes.

Development Process

The development process of the DVDelivery website was heavily informed by the available literature. With minimal previous CSS experience, designing a website was a concern due to the initially unintuitive nature and high level of technicality involved with CSS (Rendle, 2020). I explored various online resources, such as web development forums, documentation, online video tutorials, and reputable blogs¹. These sources presented different approaches to solving common challenges allowing me to get a better grasp of CSS, as well as aiding with the production of the HTML, JavaScript code, and PHP code.

I encountered multiple ways to tackle certain aspects of the website, such as the login process or search functionality. To determine the most suitable approach, I evaluated each option based on factors such as user experience, scalability, and technical feasibility. Ultimately, the decision was made by prioritizing user-centred design principles and aligning with established best practices where possible.

Successes and Challenges

The DVDelivery website underwent a series of challenges throughout its production, offering valuable learning experiences. The functionality of the website can be deemed a success, with all core features implemented as intended and to a polished standard. Additionally, several value-added but not critical features were added, such as the inclusion of a scroll to top button on the films page, enhancing user quality of life and create an extra sense of professionalism to the website.

One major obstacle I encountered was the design and CSS components, as I found the learning curve to be steep and difficult to intuitively grasp. For example, I initially created the film cards using absolute and relative positioning, however this caused certain components of the card to overlay. Through thorough research and exploration, I ultimately redesigned them using grid for the layout. This allowed for much better control over the content and showed me that flexbox and grid are very powerful and versatile features for many different applications.

The design was a large amount of trial and error, but this was reduced by using the browser developer tools to help quickly make changes to the CSS and see the results. I used feedback from stakeholders to modify certain design aspects of the website, such as the header images used and the colour scheme. On the other hand, the functionality was largely rigid and could be implemented to my specification with far less issues.

¹ Sources in bibliography.

Comparing the DVDelivery website to industry giants like Amazon and BBC, I recognize that there is still room for improvement. While the DVDelivery website successfully implemented key features and functionalities, it may not have the same level of polish, extensive user testing, and resources as these established platforms. However, the website's user-centric design and adherence to best practices helped it perform well within its scope.

What I Would Do Differently

There are a few aspects I would approach differently given the chance. Firstly, I would design the website mobile-first as it is the industry standard due to the dominance of mobile web browsing worldwide with over 466 billion active mobile internet users in 2020 (Muzyka, 2022). I would also create a more robust sign in process with salted and peppered hashed passwords as currently the user accounts are unprotected which is a major security flaw. Additionally, I would invest more effort in cross-browser and cross-device compatibility to ensure a consistent experience for all users. Finally, I would focus on accessibility features and search engine optimisation as these are crucial aspects for any website (Digital Marketing Institute, 2021).

In conclusion, the production of the DVDelivery website was an enlightening experience that provided valuable insights into the decision-making process and web development techniques with HTML, CSS, JavaScript, and PHP. I learned the importance of thorough research, critical thinking, and seeking feedback from both peers and potential users. Through this experience, I gained a deeper understanding of web development principles, user experience design, and the importance of adhering to best practices. The DVDelivery website, although not on par with industry giants, stands as a testament to the knowledge and skills acquired throughout this process and serves as a steppingstone for future endeavours in the field of web development.

Bibliography

Das, S., 2022. *Create Your Own Movie Recommendation System*. [Online]
Available at: <https://www.analyticsvidhya.com/blog/2020/11/create-your-own-movie-movie-recommendation-system/>
[Accessed 17 May 2023].

Digital Marketing Institute, 2021. *What Is SEO & Why Is It Important?*. [Online]
Available at: <https://digitalmarketinginstitute.com/blog/what-is-seo-and-why-is-it-important>
[Accessed 17 May 2023].

Gisder-Dubé, L., 2019. *12 tips for writing clean and scalable JavaScript*. [Online]
Available at: <https://blog.logrocket.com/12-tips-for-writing-clean-and-scalable-javascript-3ffe30abfe20/>
[Accessed 17 May 2023].

Hovhannisyan, A., 2022. *Modern Techniques for Writing Better CSS*. [Online]
Available at: <https://www.aleksandrhovhannisyan.com/blog/writing-better-css/>
[Accessed 17 May 2023].

Meiert, J., 2022. *Principles of Web Development*. [Online]
Available at: <https://meiert.com/en/blog/principles-of-web-development/>
[Accessed 17 May 2023].

Muzyka, B., 2022. *Mobile-First Design: The Best Practices*. [Online]
Available at: <https://www.techmagic.co/blog/best-practices-for-mobile-first-design>
[Accessed 17 May 2023].

Parameswaran, V., 2022. *Debugging in PHP*. [Online]
Available at: <https://www.atatus.com/blog/debugging-in-php/>
[Accessed 17 May 2023].

Powell, K., 2022. *Learn CSS Grid the easy way*. [Online]
Available at: <https://www.youtube.com/watch?v=rg7Fvvl3taU>
[Accessed 17 May 2023].

Rendle, R., 2020. *Why is CSS Frustrating?*. [Online]
Available at: <https://css-tricks.com/why-is-css-frustrating/>
[Accessed 10 May 2023].

Vieira, S., 2019. *Build dumb shit - the value of useless things - a talk by Sara Vieira*. [Online]
Available at: <https://www.youtube.com/watch?v=KauRmlffjqc>
[Accessed 17 May 2023].

Web Dev Simplified, 2023. *Top 10 Advanced CSS Responsive Design Concepts You Should Know*. [Online]
Available at: <https://www.youtube.com/watch?v=TUD1AWZVgQ8>
[Accessed 17 May 2023].

Appendix

User Login Details Sample

Username	Password	User Type
roger	admin	Staff
ben	admin	Staff
blackbear44	pass-word7	Customer
redhawk52	pa33word-5	Customer

Wireframes

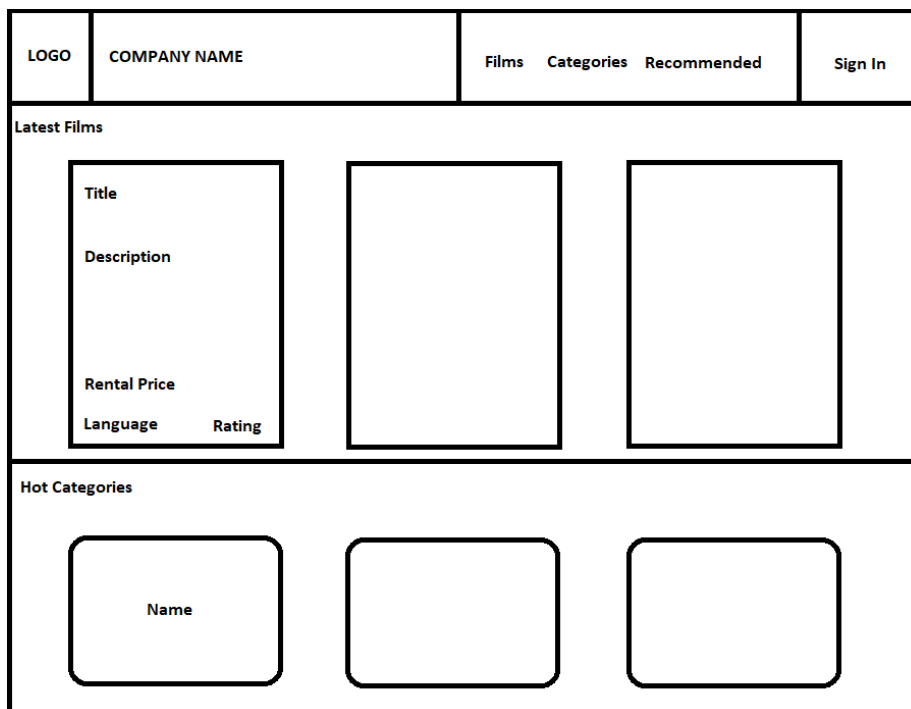


Figure 1 Wireframe of the home page.

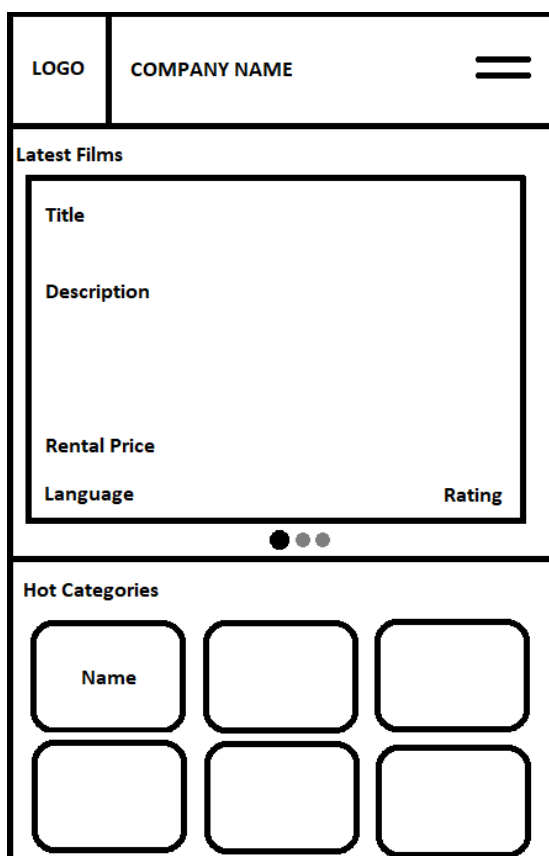


Figure 2 Wireframe of the homepage mobile layout.

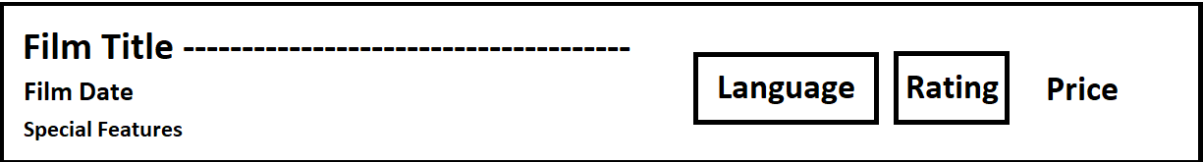


Figure 3 Film box wireframe.

Website Performance

Home Page

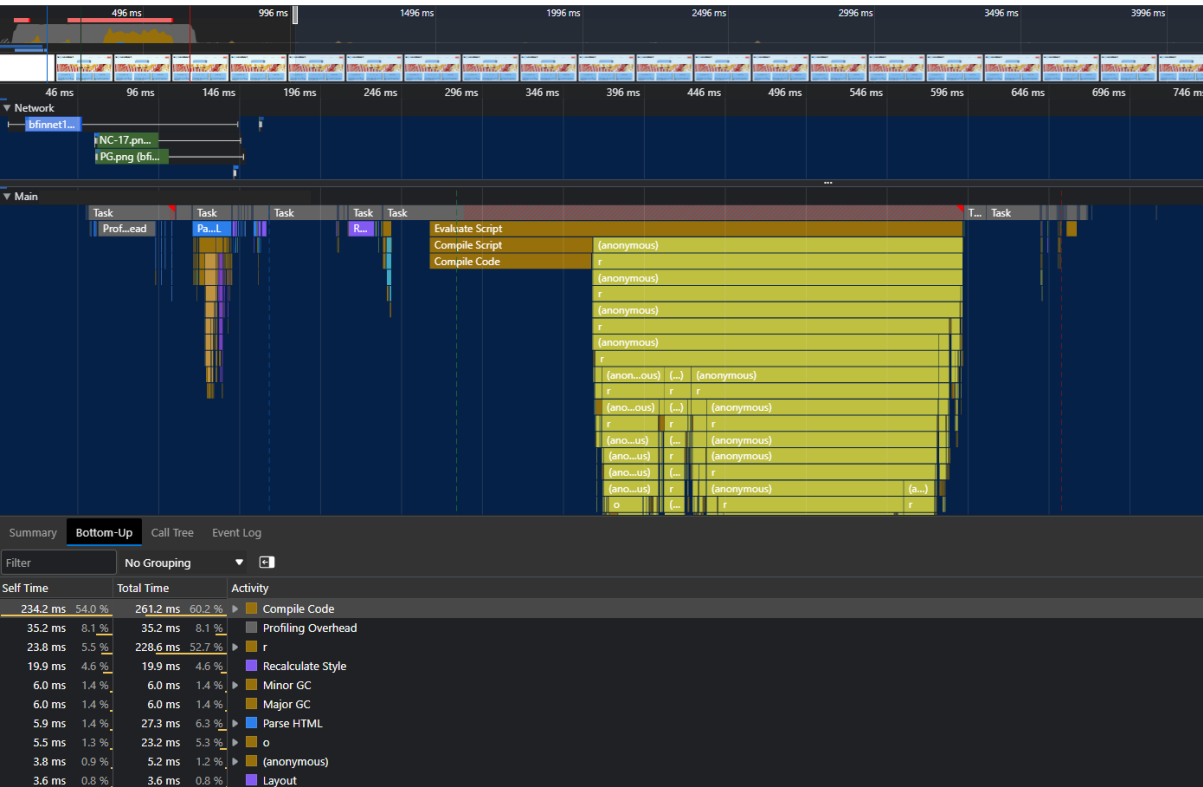


Figure 4 Performance analysis of home page.

The home page took only 46ms to show content, with the complete cold (not cached) load finished after 700ms.

Films Page

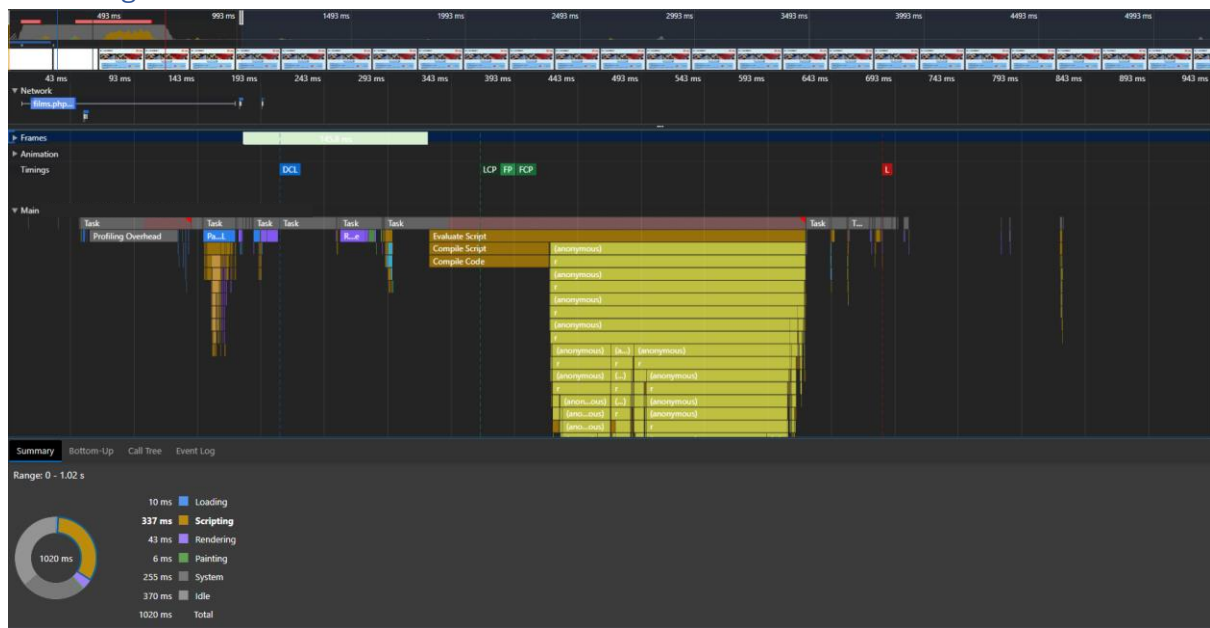


Figure 5 Performance analysis of films page.

The films page took a total of 1020ms for a cold load time, with content initially being shown after 78ms.

Notable Resources

The following resources frequently aided with the design of the website:

- <https://www.w3schools.com/>
- <https://developer.mozilla.org/>
- <https://www.javatpoint.com/>
- <https://css-tricks.com/>
- <https://codepen.io/>

Word Count: **1032** words excluding bibliography and appendix.