



Problem Solving and Engineering Design part 3

ESAT2A2

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Crack the Wi-Fi

PRELIMINARY REPORT

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A C A D E M I C Y E A R 2 0 2 4 - 2 0 2 5

Declaration of originality

We hereby declare that this submitted draft is entirely our own, subject to feedback and support given us by the didactic team, and subject to lawful cooperation which was agreed with the same didactic team.

Regarding this draft, we also declare that:

1. Note has been taken of the text on academic integrity (<https://eng.kuleuven.be/studeren/masterproef-en-papers/documenten/20161221-academischeintegriteit-okt2016.pdf>).
2. No plagiarism has been committed as described on <https://eng.kuleuven.be/studeren/masterproef-en-papers/plagiaat>.
3. All experiments, tests, measurements, ..., have been performed as described in this draft, and no data or measurement results have been manipulated.
4. All sources employed in this draft – including internet sources – have been correctly referenced.

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1 Website

For the website, it was decided to make a clone of Netflix. The website aims to be a clone of Netflix. W The idea is to trap the victim by making them believe they are consulting the real Netflix website. The idea is to make the victim believe they are consulting the real Netflix website. Z This would allow the attacker to steal the victim's personal information through the Man In the Middle attack. The following section provides detailed information about the website structure, the programming languages used, the victim's experience, and the references employed. I4 The user would then enter their personal information either by logging in to their existing Netflix account or by creating a new one. In the first scenario, it would be possible to steal their password and e-mail/phone number. In the second, the financial information of the victim such as cardholder name, card number, expiry date and CVC code would be at risk.

1.1 Website structure

The website consists of six distinct pages:

- The "index" page, where the user begins their journey. This page of the website is shown in Figure 1, Figure 2 and Figure 3.
- The "login" page, where users can sign in to an existing account. This page of the website is shown in Figure 4.
- The "getstarted" page, allows users to create a new account. This page of the website is shown in Figure 5 and Figure 6.
- The "keuze" page, where users can select from different payment options. This page of the website is shown in Figure 7 and Figure 8.
- The "bank" page, where users finalize the purchase of their chosen Netflix plan. This page of the website is shown in Figure 9 and Figure 10.
- The "fout" page, where the user is directed after entering their information. This page notifies the user of an error and redirects them to the real Netflix website. This way, the user remains unaware that their data has been stolen. This page of the website is shown in Figure 11.

The complete code for these six pages is available in the GitHub repository [with additional comments to enhance its clarity](#). A link of the repository is provided in the appendices section.

1.2 Programming languages

The decision was made to code in HTML, CSS and JavaScript for the website. The website uses HTML, CSS, and JavaScript for its code. W

Each programming language has a clear and distinct purpose. The HTML code adds the structure and the content, the CSS code customizes the style and the JavaScript code changes the language and checks if all fields are correctly filled in.

1.3 Description of user experience

When a user visits the website, he first lands on the homepage where he can adjust the language as desired, log in and create an account. The user first lands on the index page. He can choose to adjust the language, log in to his existing account or create a new one. D2

When scrolling down, sections are shown that highlight the positives of Netflix. There is a FAQ at the very bottom of the page. If the user wishes to log in, he will be taken to another page where his phone number or email and his password will be requested. Once the user is logged in, he will be taken to an error page with a link to the real Netflix website. This ensures that the user will never know that his information has been stolen.

Sections below highlight the positives of Netflix and a FAQ provides additional information. If the user decides to log in, he will land on the login page where he will need to enter his phone number or email and his password. Once logged in, the user is redirected to an error page with a link to the real Netflix website. This ensures that the user never knows that his information has been stolen. W

If the user wishes to register, he will have to provide his full name, email, phone number, password and gender on the getstarted page.

He will then be taken to another page where three different subscriptions will be offered. When the subscription choice is made, the user will have to add his financial information. Finally, after clicking on "Proceed", he will arrive at an error page with once again a link to the real Netflix website.

The user then chooses one of the three subscriptions offered by Netflix on the keuze page. Once the user has decided, he lands on the bank page where he enters his financial information. After clicking on "Proceed", he arrives once again to an error page with a link to the real Netflix.

The full code of all the files that are responsible for this website is in the appendix. Necessary explanations of the different parts of the code were added.

1.4 References

In developing the website, inspiration and information were gathered from various sources, including YouTube videos. One video [Coding With Dawid, 2022] provided valuable insights for creating a clone of the Netflix main page. Another video [CodingNepal, 2023] helped replicate the Netflix login page. In order to have a better understanding of registration and validation forms in JavaScript, a third video [JavaScript Academy, 2021] was a useful resource.

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2 Appendices

2.1 Website

2.1.1 Main page

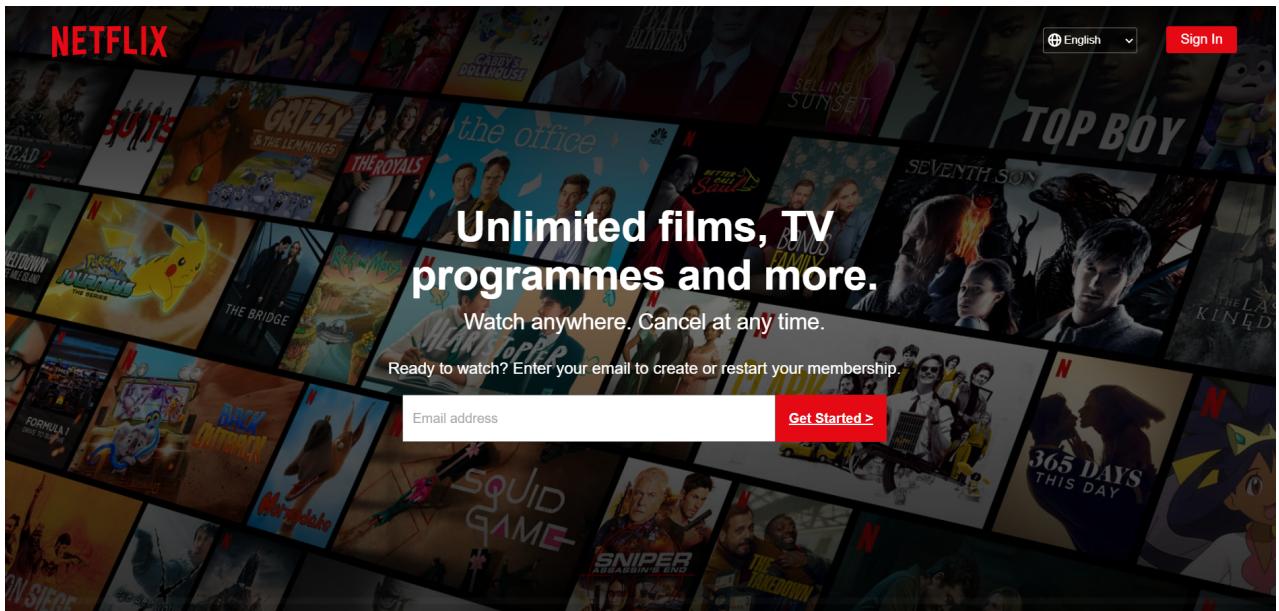


Figure 1: Website main page

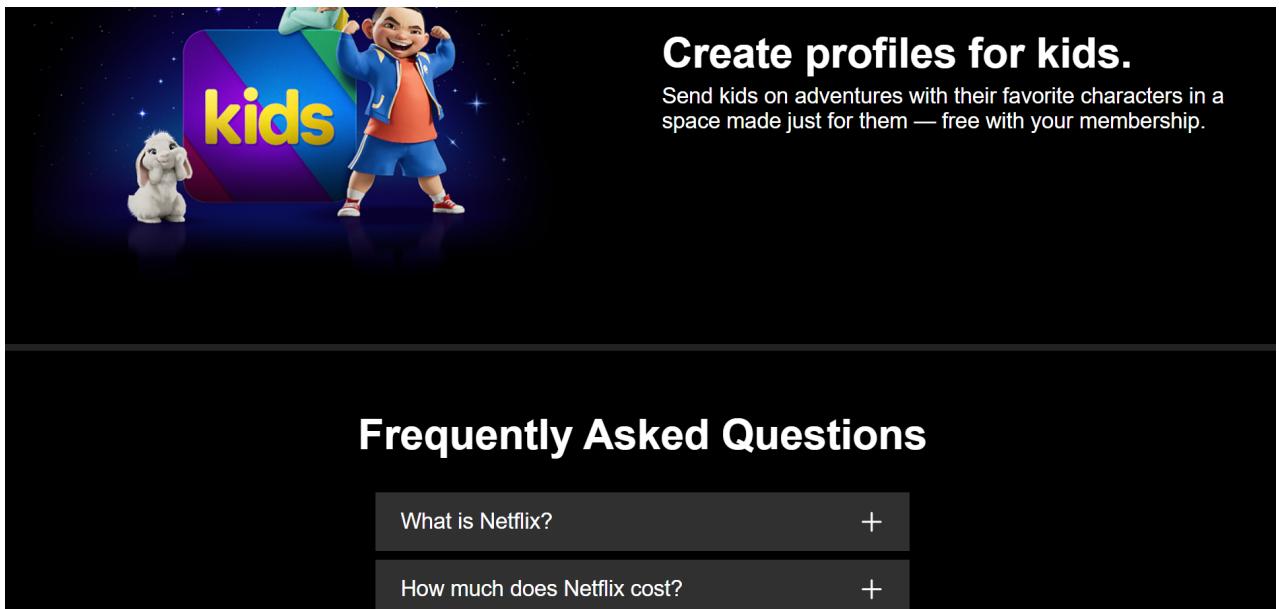


Figure 2: Website main page

Frequently Asked Questions

- What is Netflix? +
- How much does Netflix cost? +
- What can I watch on Netflix? +
- Where can I watch? +
- How do I cancel? +
- Is Netflix good for kids? +

Ready to watch? Enter your email to create or restart your membership.

 [Get Started >](#)

Figure 3: Website main page

2.1.2 Login page

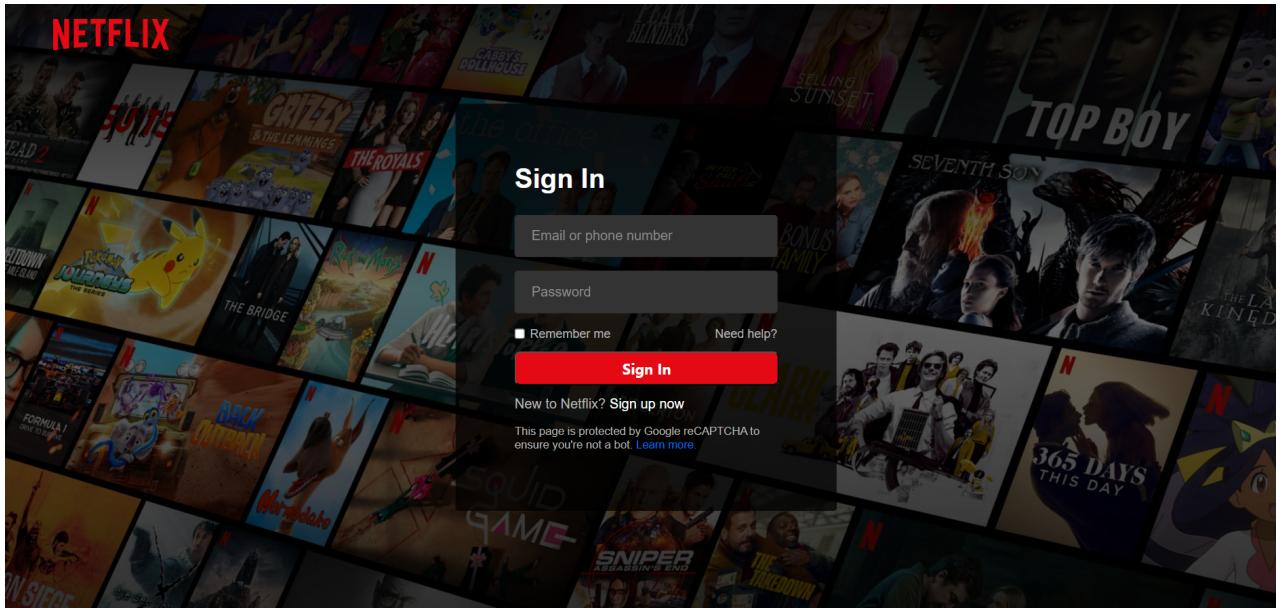


Figure 4: Website login page

2.1.3 Getstarted page

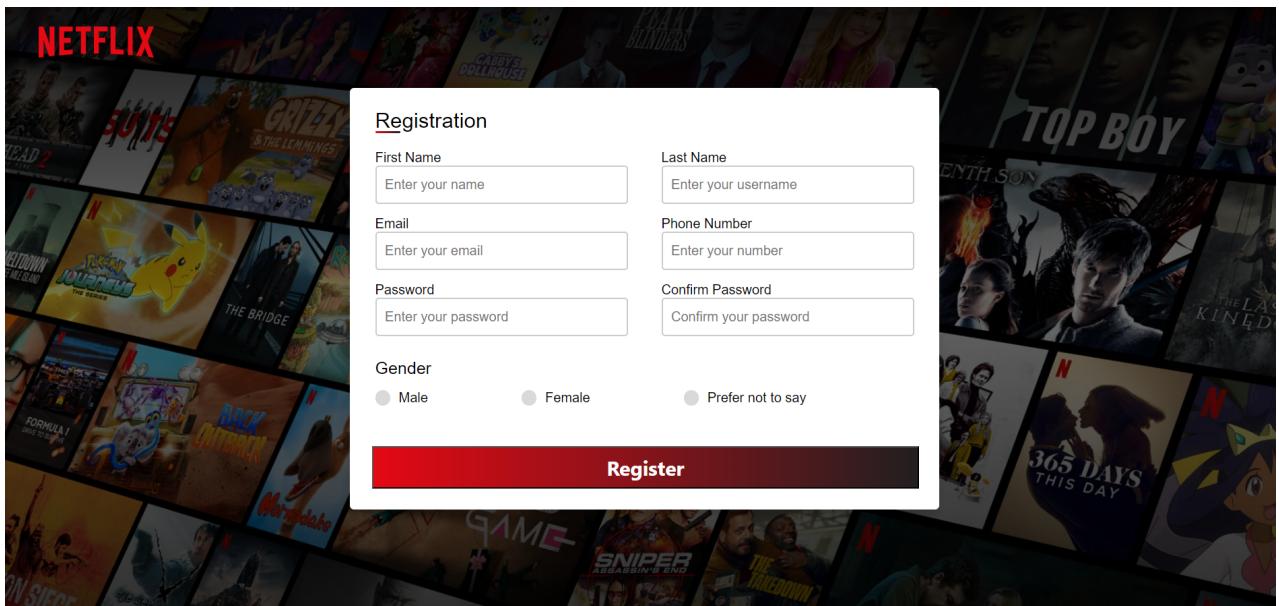


Figure 5: Website getstarted page

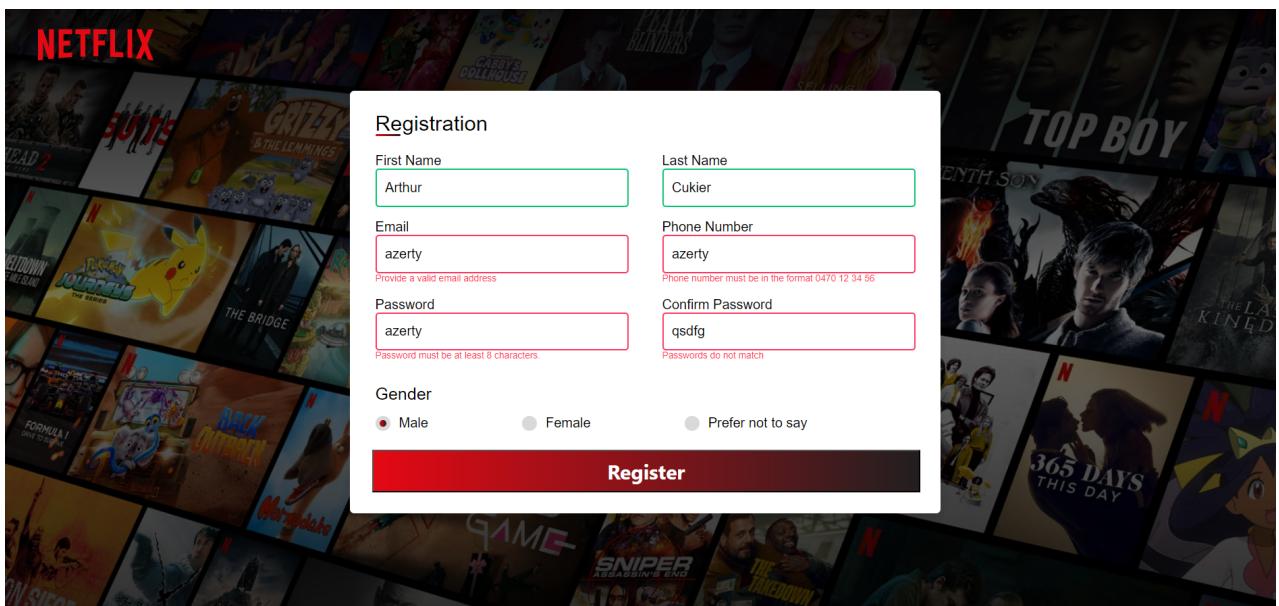


Figure 6: Website getstarted page

2.1.4 Keuze page

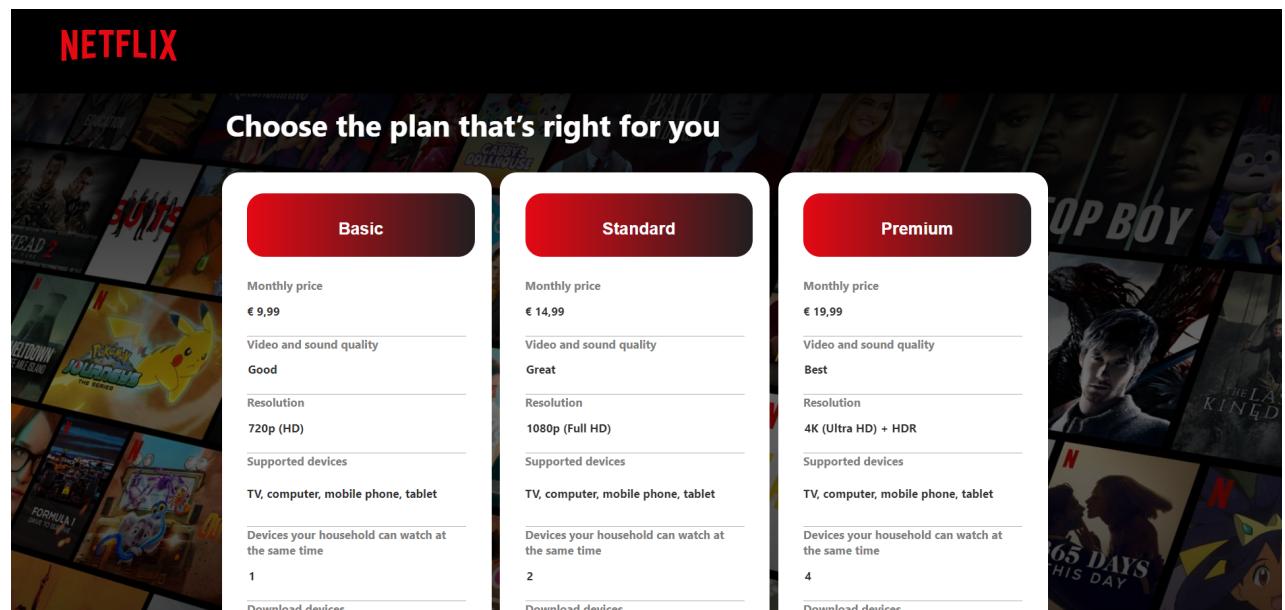


Figure 7: Website keuze page

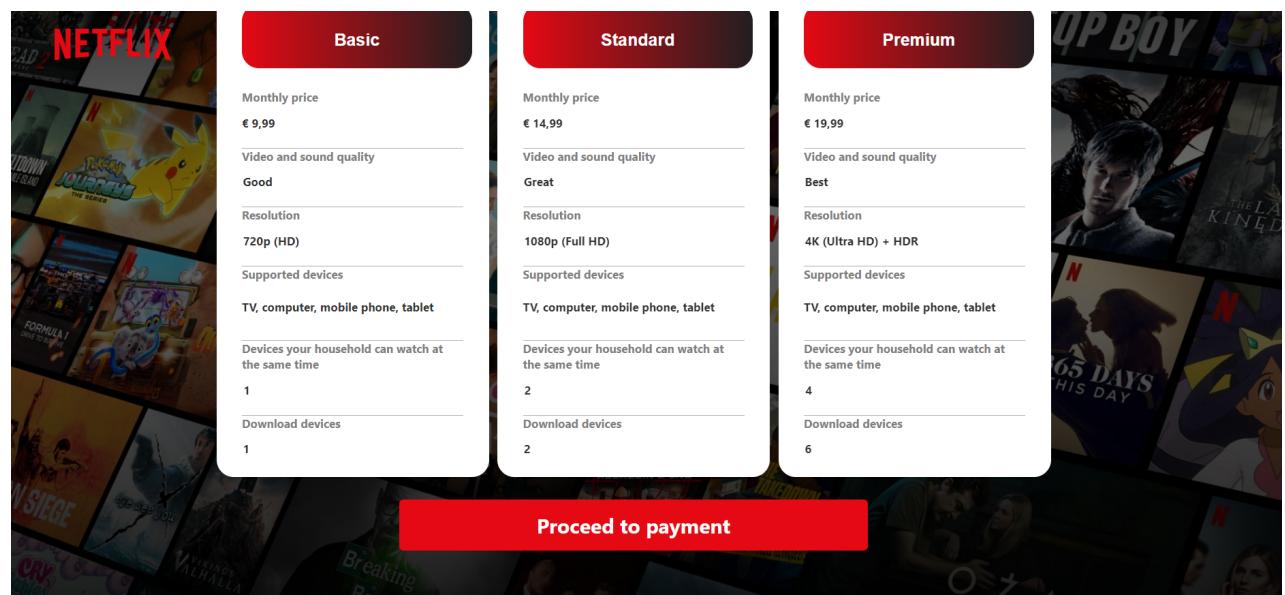


Figure 8: Website keuze page

2.1.5 Bank page

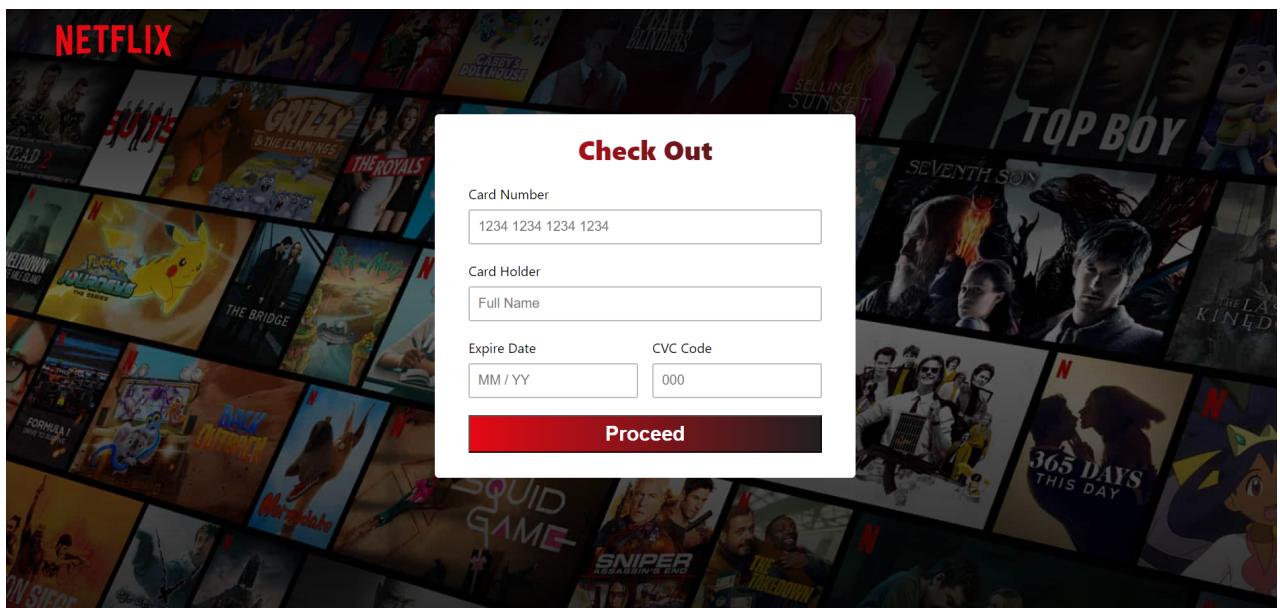


Figure 9: Website bank page

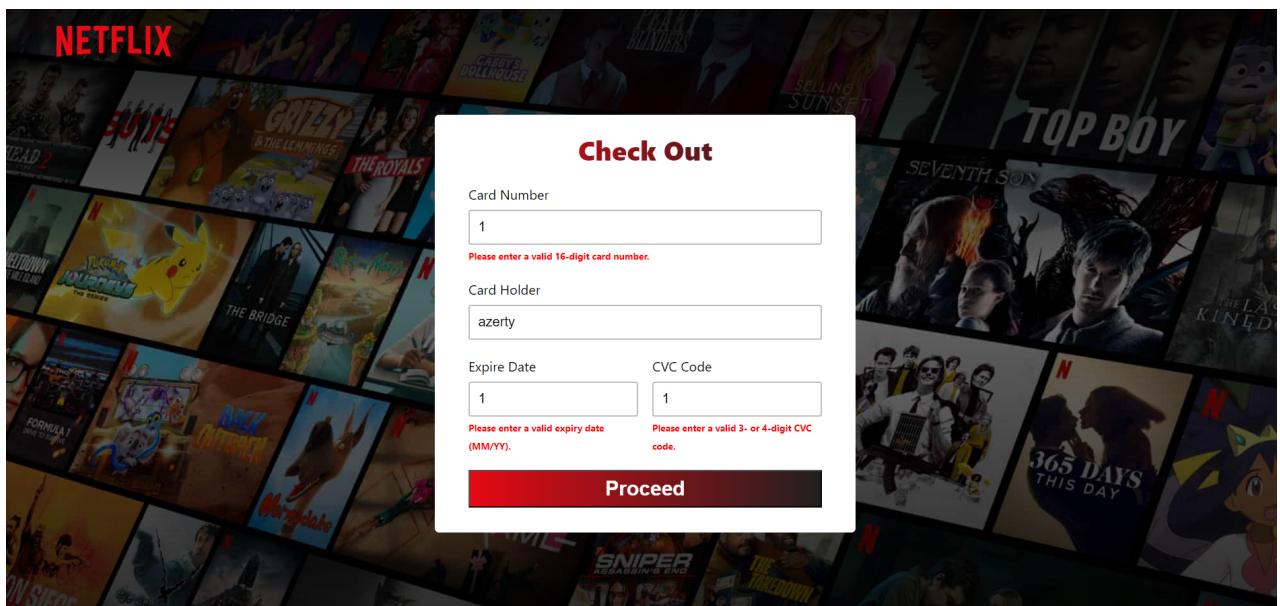


Figure 10: Website bank page

2.1.6 Fout page

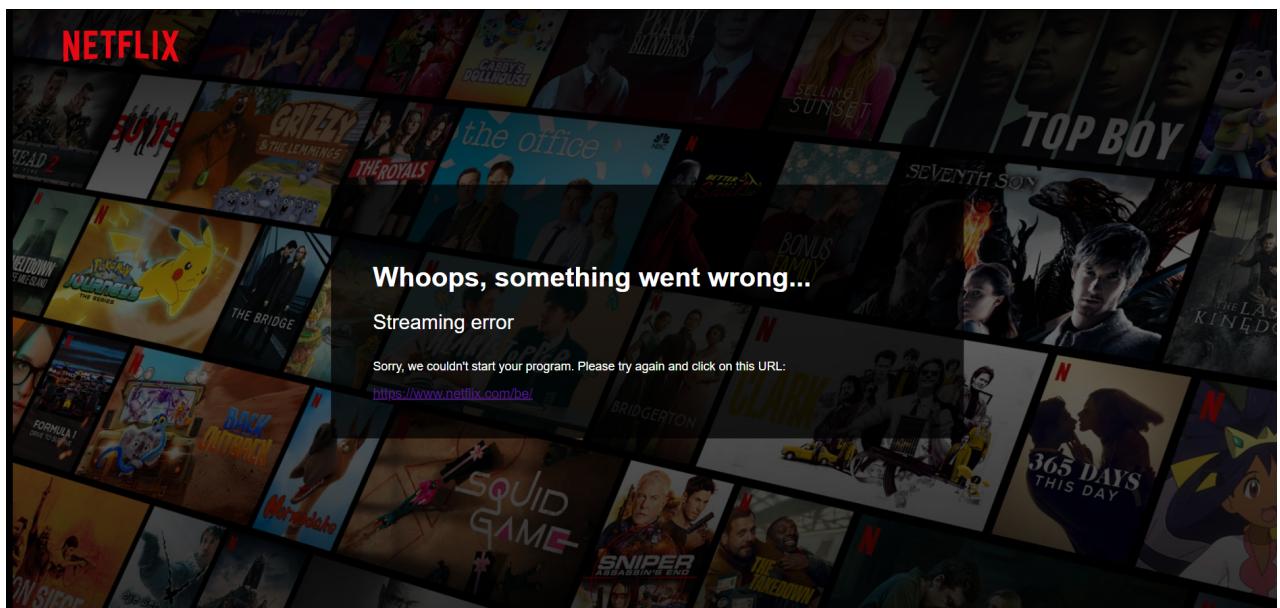


Figure 11: Website fout page