**Research document**

***CLOTHINGSTORE INC.***

# Adding Google login to the web application

## Introduction

Sometimes, in the web application, the user does not have the patience to create an account, or maybe he does not want to provide too sensitive data. Maybe the owner of the application needs to know how many users their application has and will want to get feedback about who’s using the application and how. To get these statistics, they need users to sign up with their emails.

These two situations make Google login such a good solution to implement.

## Advantages

* Popularity and reliability of Google as an e-mail platform.
* Less friction between the user and the application by logging in with Google instead of creating an account.
* The fast process of logging in for the user

## Main research question

* What type of authentication would be the best for a web application?
  + What benefits will it bring for the web owner?
  + What benefits will it bring for the client?
  + What are the cons of using Google login?
  + What are the alternatives for Google login?
  + What features and functionality should be included in the user interface for being able to login with Google on the ClothingShop website?
  + Are there any existing APIs or libraries that can be used to display Google login on a website?
  + How can customers authenticate with the Google login API to access their data?

## Answers

* What type of authentication would be the best for a web application?
  + Based on my research, I consider that authentication with Google is the best method to authenticate in a web application, because of the many benefits and the easiness of implementing. (Innocent, 2022)
* What benefits will it bring for the web owner?
  + For the web owner, login with Google will reduce the need of developing and maintaining a login/sign in system. It can help increasing the registration rate of users, since the process is easy to follow. Also, the web owner has the ability to get feedback about who is using his application and how.
* What benefits will it bring for the client?
  + The client is free from the burden of having to create a new account or remembering his credentials. Also, the benefit of better UX design and the high security provided by Google will be very beneficial for the client. (Kenyon, 2021)
* What are the cons of using Google login?
  + One of the cons is that the web application it bounded to third-party services, thus increasing the risks of data breaches. It also reduces the pool of users, as only those with a Google account can utilize the feature. (Kenyon, 2021)
* What are the alternatives for Google login?
  + There are some alternatives to Google login, most notable being other companies, such as Facebook, Twitter, LinkedIn, and others. Also, authentication with Microsoft Authenticator and other forms of two-factor authentication such as SMS verification can be alternatives. (Merritt, 2022)
* What features and functionality should be included in the user interface for being able to login with Google on the ClothingShop website?
  + The interface should be concise, with few steps to login and the instructions should be as clear as possible. A way for users to recover their password or change their login details if necessary is recommended to exist.
* Are there any existing APIs or libraries that can be used to display Google login on a website?
  + Yes, there are some existing APIs and libraries out there, the most used are Sign-in APIs provided by Google, Firebase Authentication and OAuth2.0.
* How can customers authenticate with the Google login API to access their data?
  + The customers can authenticate with Google by following the instructions provided by the API/library. Most of the times, this involves redirecting to a Google authentication page, prompting the user to enter his Google account details. Then, the user is redirected back to the website with an access token. This token needs to be used by the website to retrieve the data for that specific user. (Google, 2022)

# Conclusion

The best authentication method for this application is Google login, which has many benefits, as well as disadvantages. It is important that both the user and the developer take into consideration the pros and cons so that they are aware of its usages. It is important to carefully consider the security, privacy, and usability implications of this feature and to implement it in a way that meets the needs of all stakeholders.

In the future, if I have more time at disposal, I will try implementing this feature to my project. But for now, I cannot guarantee that I will definitely implement it. Once implemented, the authentication by Google will facilitate the process by safely storing the user details into the database. The results will then be safely retrieved whenever needed.

# Recommendation

For further recommendation, the reader can access the works cites that I looked into. Google provides some really nice documentation about its features, along with the experiences of the developers and the users.

# Works Cited

Google. (2022, October). *Integrating Google Sign-In into your web app*. From google identity: https://developers.google.com/identity/sign-in/web/sign-in

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Merritt, T. (2022, June 29). *Top 5 alternatives to Google Authenticator*. From techrepublic: https://www.techrepublic.com/article/top-alternatives-google-authenticator/