FreePass- A Random and Replicable Password Manager

Computer Science Project 20/21

System Requirements

To achieve our system goals we will need to have proficiency in:

- **Java** - Password generating algorithm and android app
- **Javascript** - Chromium web extension
- **HTML** - Chromium web extension

Requirements Elicitation

After discussing the main goals of our project as a group, we decided to create at least a **chromium browser extension** and an **android app**.

We looked at projects with similar technologies, like **LessPass**, that computes a unique password using a **site**, login **user** and a **master password**. But keeping in mind that our algorithm had to generate even "stronger" password than LessPass.

Context Description

The way our service works the user will have to enter a **master password**, their **username** and the website's **url** in order to get his password.

We also have a feature to **change** the received password by using a counter number, if the user changed the password "x" times they will have to change the counter to "x".

With the **web extension** and **android app** the user will be able to use our service anywhere even offline.
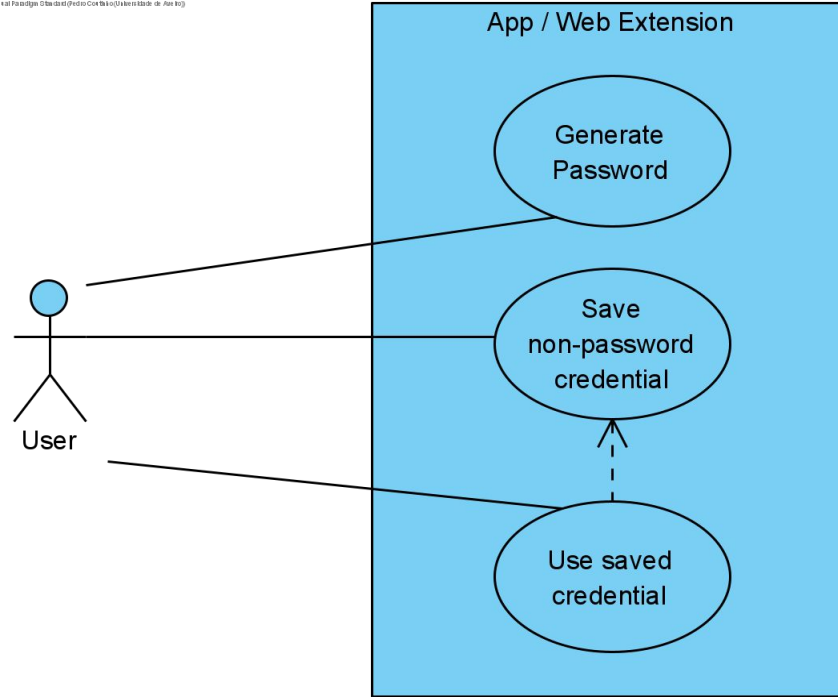
Actors

The only actor for the extension is the following:

- **User:** represents the user of the extension. Will have access to the main feature which is the ability to generate the **password** .

Use Cases

Non-functional Requirements

- **Security**: This is the whole purpose of the extension. **Priority**: Very High.
- **Reliability**: The need for the service to be always available is very straightforward. Not having the credentials available at any time can be a huge problem for the user. **Priority**: High.
- **Usability**: Since the user will not want to waste any time logging in to websites, it is required that the service will be as simple as possible for fast use. **Priority**: Medium.
- **Portability**: Since there are various different browsers, it would be desirable that the extension is available for multiple browsers
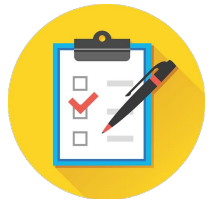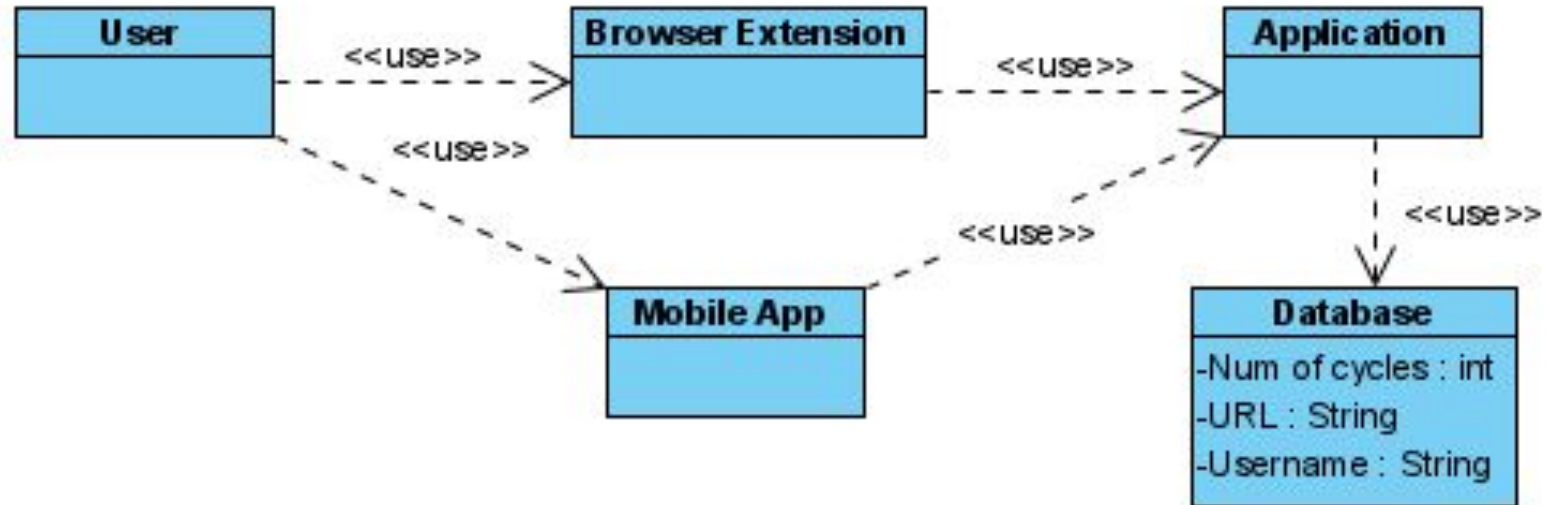
Assumptions and Dependencies
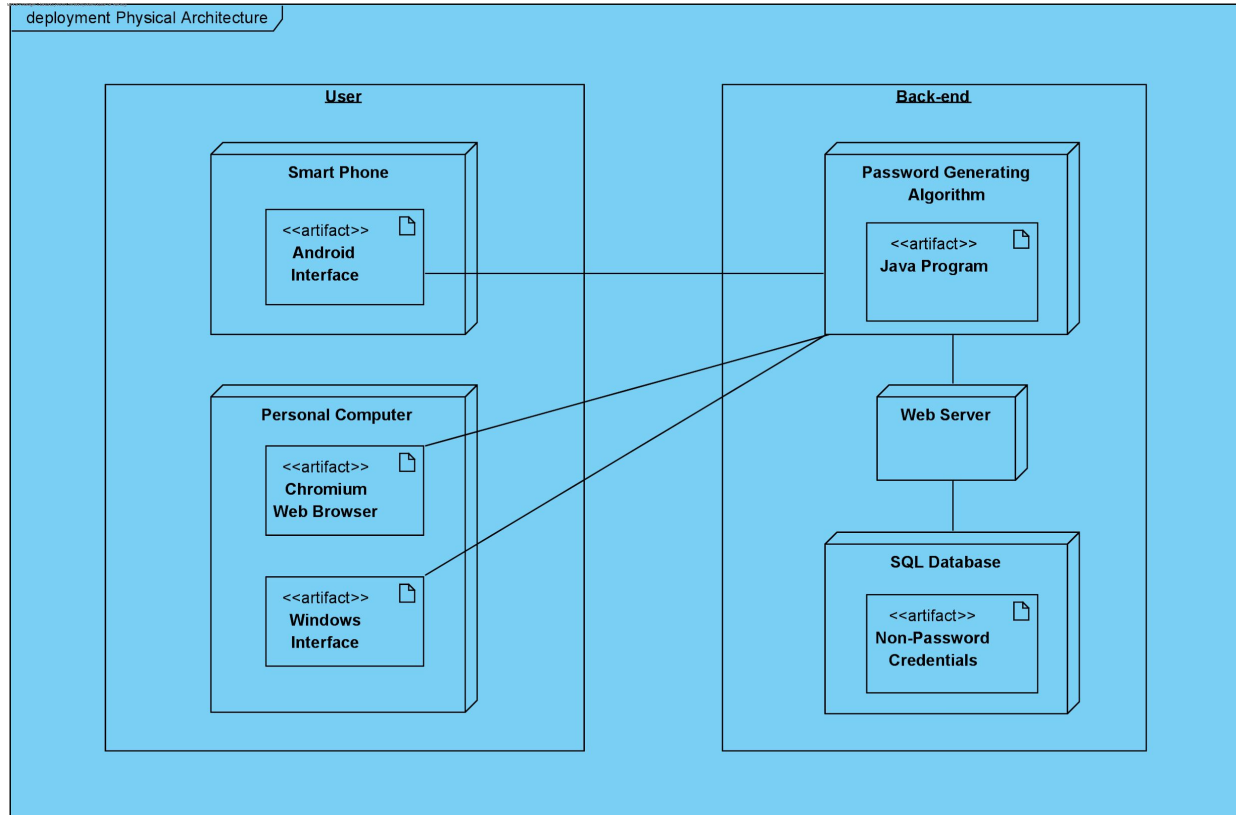
We assume that the user's:

- Mobile phone must have an **Android** operating system
- Web browser must be a **chromium browser** (i.e Chrome; Edge)
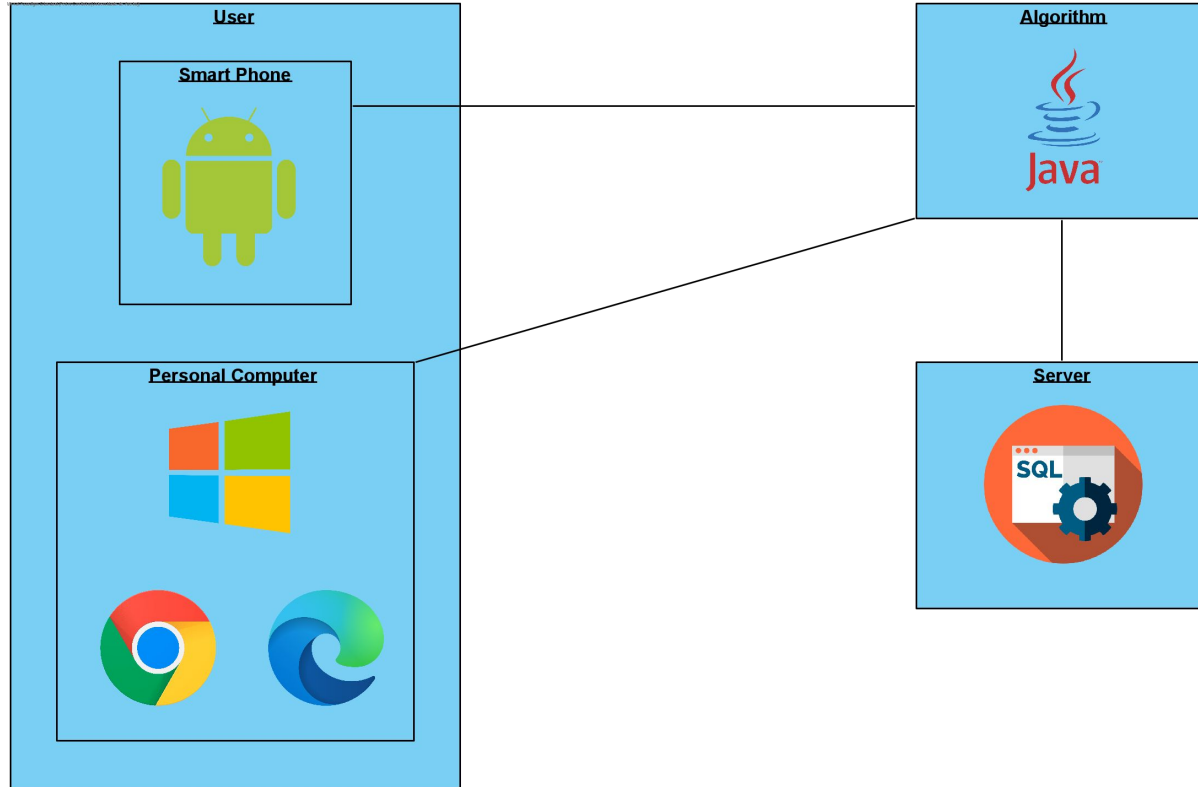- Personal computer operating system has to be **Windows** (If we end up building a windows app)

Domain Model

Physical Model

Technological Model

The team

Our team is composed by:

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- Miguel Ferreira - 93419
- Pedro Coutinho - 93278
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The End

Do you have any suggestions and/or questions?