

# URLocker: Password Protection for websites

## Motivation:

In recent days, many websites are making the login process hassle-free. Almost all the websites provide with an option “keep me logged in”. This is very useful as there is no need to re-enter the password everytime you log in. If you are using your personal computer or laptop you almost always choose this option because this makes sense for the websites which you frequently visit and you don’t want to log in by entering username and password each time you visit. But with this easing out of the login process, there are chances that your privacy can be compromised. Many times you have to willingly or unwillingly share your laptop with some friend. And your friend will have all the access to your logged in websites. One solution could be to log out from all the websites, which can be a time taking process. Another possible solution can be to tell them to use a different browser, but it is said- “Precaution is better than cure”. “URLocker” can definitely be the precaution in this kind of scenario. This extension can be used to password protect individual websites so that whenever someone tries to open a URL which has been locked, he/she will be asked to enter the password. This tool can secure your social network sites when you forget to lock your computer.

Another important utilization of this tool can be as a child lock. During exam time when you want your kid to focus on studies, you can lock the websites which you think could be distracting your kid. Also, you can password protect the website which you do not want your kid to access at all.

## Prototype:

The prototype is an extension which can be added to chrome browser. Extension menu(Fig. 1) can be accessed by clicking the extension icon beside the URL bar.

## Functionalities:

1. Add a website to password protect it
2. Remove a website if there is no need to password protect it
3. Option to change the password
4. Prompt to enter the password[1] when a password protected website is accessed.
5. No need to enter the password for each password-protected website separately, once the password is entered to open a website, all other websites can be accessed without the need to re-enter the password
6. Once the password is entered, all the websites which were being accessed will reload when the tab is activated
7. One-click lock-all option to change the status of the already added website to locked, so that when any of the password-protected websites are accessed, the password prompt is open
8. A URL will be password-protected if its superURL was added to the password-protected list.

For e.g.: “<https://www.google.com/search?source=hp&ei=yQzqW>” will be automatically password protected if “<https://www.google.com/>” was added to the password-protected list

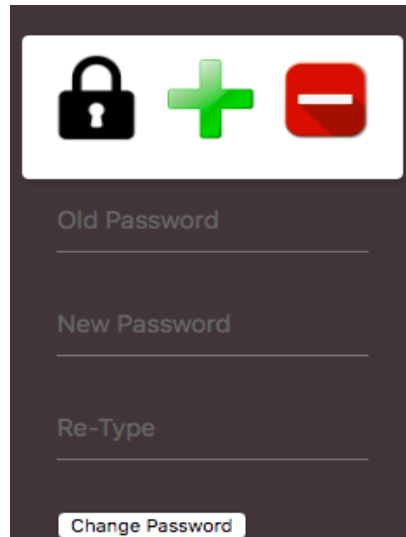


Fig.1: URLocker extension functionalities

## Work Flow:

### Add Button: Adding a website to password protected list

1. Open the website which you want to password protect
2. Once the website loading is complete, open the extension menu by clicking the extension icon on the browser
3. Click on the green “+” button in the menu
4. If you reload the website, you will be asked for the password if you have not entered the password for any other website or if you have used lock-all option(explained later)

### Remove Button: Removing a website from password protected list

1. Steps to remove a website are similar to adding except for the 3rd step, where instead of clicking the green “+” button, you need to click on the red “-” (minus) button
2. From now on, you will not be asked to enter the password for this website

### Lock Button: Locking the password-protected website after successful login

1. After you have entered the correct password and successfully accessed the website, you can access all the websites which you have added to the password-protected list earlier
2. Click on the lock button to reset the lock the websites again

**Change Password: To change the password**

1. Enter the old password. The default password is “asdf” (without quotes)
2. Enter new password
3. Re-enter new password
4. Click on “change password” button. You will be shown a message for successful change or if something went wrong

**Password Prompt: Enter the password to access the website**

When you try to access a website which you have added to the password-protected list, you will be shown a password prompt(Fig.2). You have to enter the password to access this website. Once you enter the password, the website will be open. And after this, you can access all the website you have added without the need to enter the password again until you restart your browser or use the lock-all button

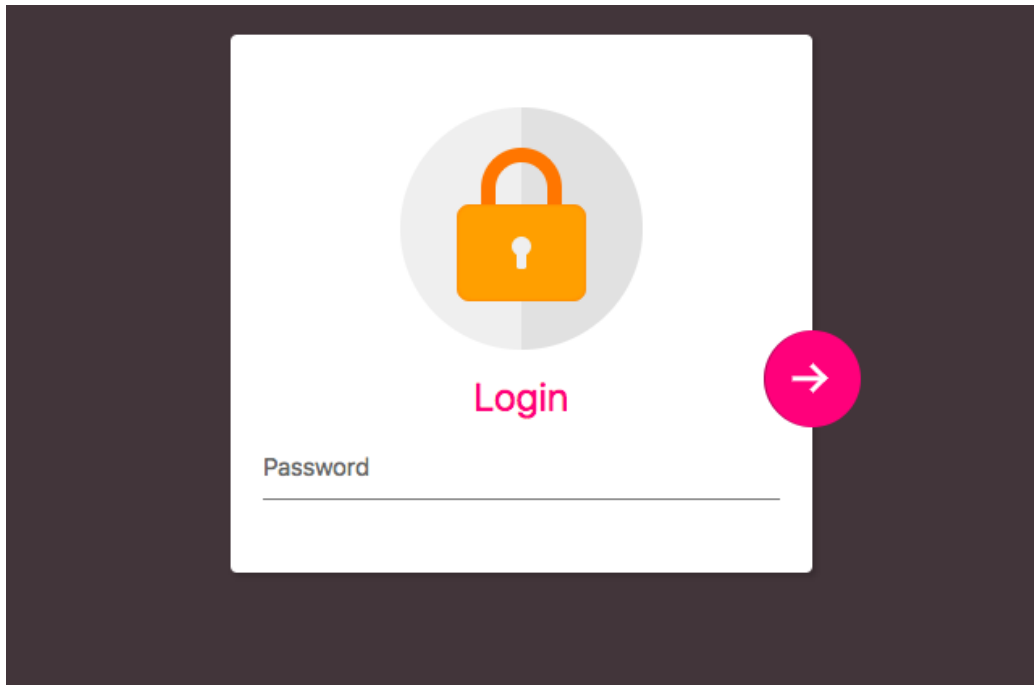


Fig.2: Password prompt for URLocker chrome extension

**Edge Cases and implemented solutions:**

1. What if someone disables or uninstall the extension?  
Solution: When you try to open the extension from chrome menu, you are navigated to “chrome://extensions”. When you install the extension, this URL is added to the

password-protected URL list by default. To remove/uninstall any extension you need to enter the password.

**Future work:**

1. Show the list of websites which have been added to the password-protected list
2. Give the option to remove a website from the password-protected list from the all website menu
3. Option to recover the password, if the user has forgotten the password

**References:**

[1]. Login template: <https://cssauthor.com/html5-and-css3-login-forms/>

[2]. Add, remove and lock icons: <https://www.flaticon.com/free-icons/>