Chapter 6

System Deployment and Conclusion

6.1 On-site Deployment

This project is run with Visual Studio Code and frameworks and drivers must be installed before the deployment. The version of python used in Visual Studio Code is the latest version that is Python 3.9.7.

To run and test the prototype on other computers, there are a few procedures that are needed as the following:

- ◆ Visual Studio Code to execute the codes
- ■ Libraries required to install: selenium, bs4, requests, pandas, numpy, csv in python terminal with the following format "pip install [libraries]"

6.2 Installation and Configuration

Check the version of web browser in google chrome by clicking the hamburger button at the upper right, navigating to the help button then lastly'About Google Chrome'

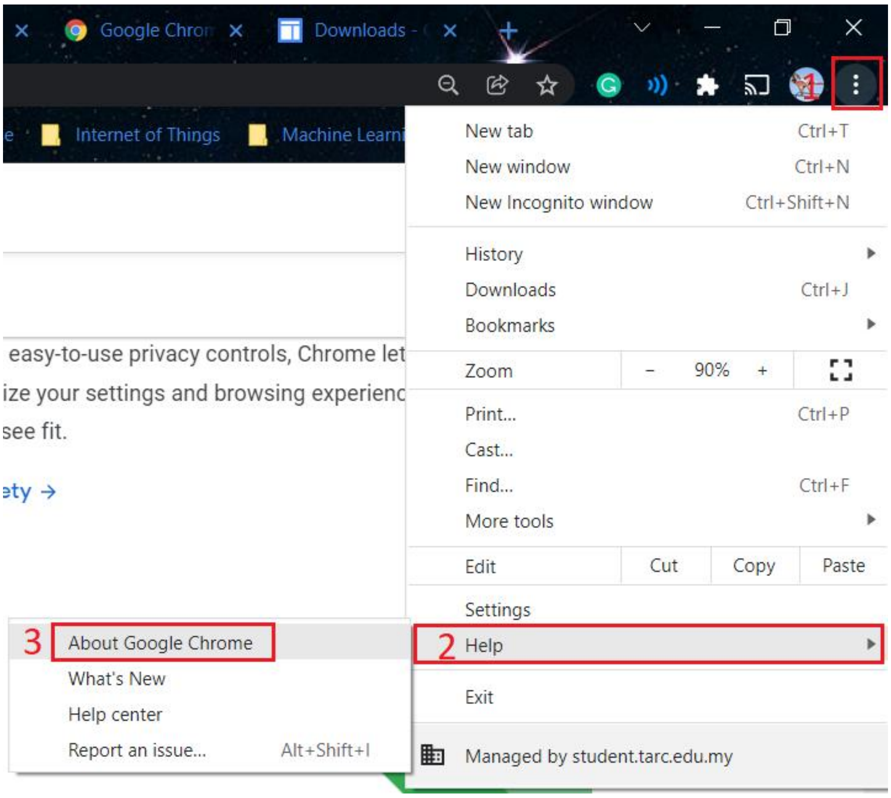
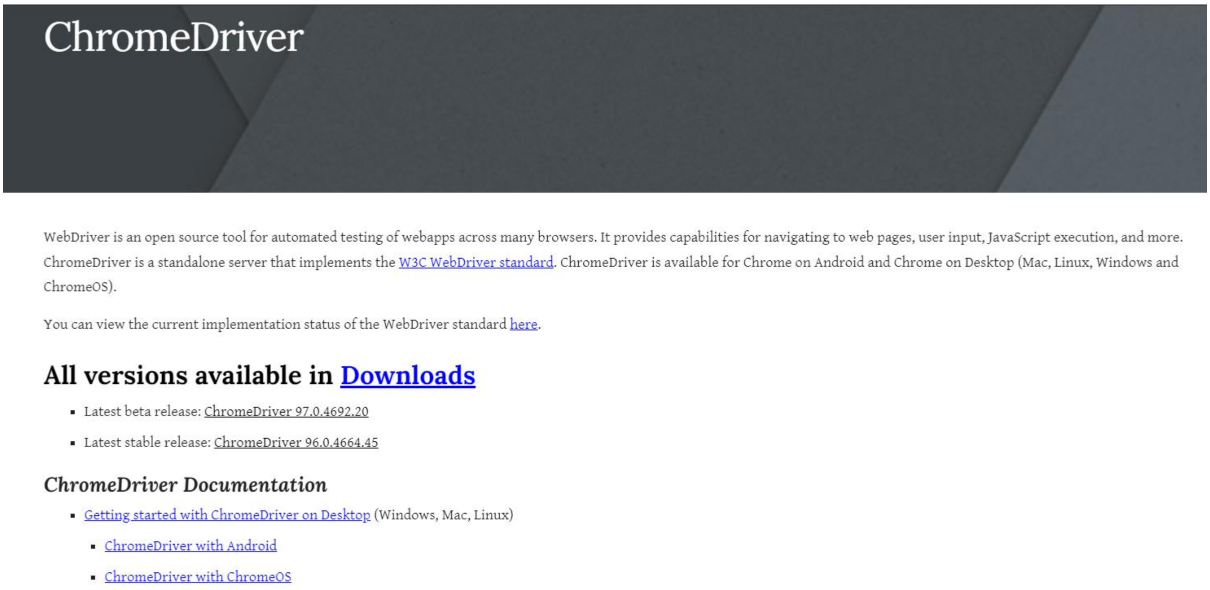


Figure 6.1: Google Chrome Version Check

i. Download the driver from this link: ChromeDriver - WebDriver . You are required to proceed the step 1 to install the correct version of webdriver.



ChromeDriver

WebDriver is an open source tool for automated testing of webapps across many browsers. It provides capabilities for navigating to web pages, user input, JavaScript execution, and more. ChromeDriver is a standalone server that implements the W3C WebDriver standard. ChromeDriver is available for Chrome on Android and Chrome on Desktop (Mac, Linux, Windows and ChromeOS).

You can view the current implementation status of the WebDriver standard here.

All versions available in Downloads

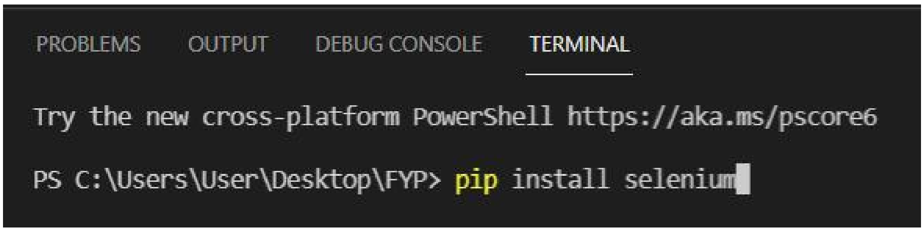
- Latest beta release: ChromeDriver 97.0.4692.20
- Latest stable release: ChromeDriver 96.0.4664.45

ChromeDriver Documentation

- Getting started with ChromeDriver on Desktop (Windows, Mac, Linux)
  - ChromeDriver with Android
  - ChromeDriver with ChromeOS

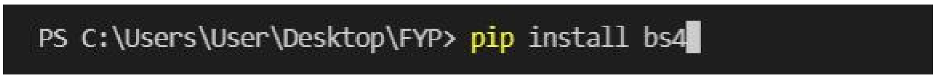
Diagram 6.2: Google Chrome WebDriver Installation

ii. Use pip install to install selenium, bs4, requests one by one



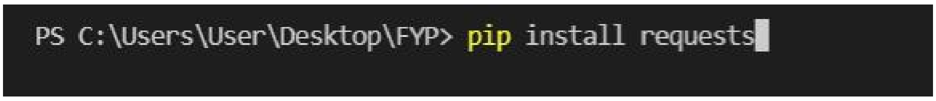
```
Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\User\Desktop\FYP> pip install selenium
```

Diagram 6.3: selenium installation



```
PS C:\Users\User\Desktop\FYP> pip install bs4
```

Diagram 6.4: beautifulsoup4 installation



```
PS C:\Users\User\Desktop\FYP> pip install requests
```

Diagram 6.5: requests installation

6.3 Conclusion

Overall, UIPFuture, the centralized database system is considered a successful system that had achieved the users' requirements. It has all the data information and also the features and functions required by the users. The UI design is also created in a simpler way, showing user-friendliness in the system itself.

We encountered some challenges throughout the development process. First: some reference coding we learnt from the websites could be the old version. When we execute the old version, it will prompt various error messages, which leads us to spend more time solving the problems. Hence, effort is needed to update the library coding into the latest one whenever there is a new version.

Secondly, due to the limited knowledge in web scraping, we only applied the basic knowledge of web scraping for the project. As a result, we did not implement the advanced skills. Therefore, this aspect can be improved with a deep study of web scraping.