

While doing the project, we first spent a large amount of working time on designing the structure and clarifying the detail functions of the whole program. This stage is important since it is used to analyse the requirements and change the requirements into the software design, which can provide a clear structure for the whole project and also gives us a global preview of the software so that we can arrange the time reasonably. If the basic functions have been designed, it will save a lot of time in the implementation process since each individual parts and their relationships as well as the interfaces have been confirmed. Spending time and effort developing a thorough design prior to implementation not only can help us understand the structure of the software, but also can reduce the risk of error happening.

In the process of implementing the project, we made some changes which make the current program differ from the project design, including the methods in the weather prediction part, the API as well as the gem which is responsible for getting data. However, the general structure and implementation of the program obey the original design.

As for the postcode range, we first choose to collect postcode from FIO website, then after searching the Internet resource, we found a better solution that collecting postcode from the website <http://www.postcodes-australia.com/state-postcodes/vic>, which is more convenient and suitable for our project three. For the weather API we found a better website “openweathermap.org “ which is perfectly matched to our program.

We compared several gems such as cronno, daemons and rufus-scheduler. Since cronno cannot run automatically and other gems also have defects, we finally chose the rufus-scheduler which is much more easier to use.

Some of the methods in the weather prediction have been changed since we did not decide how to achieve the function of the weather forecast before. After discussion, we made the decision that using linear regression and polynomial regression to predict and then comparing their variances to find the best fit equation for the purpose of predicting the future weather data.

In addition, since we need to know the accurate time of the weather update, we changed the type of the attribute of update time in weather from Date to DateTime. Some other attributes were also adjusted accordingly, but would not influence the main function.