**Dublin Bikes Project**

Personal Learning Journal

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**Experience & skills learnt:**

Firstly, Python code is my weakness. I have a basic idea, but I could not success to write the correct codes. There are many dugs in my codes, which have increased my team’s workload.

Secondly, I have never used flask. In other words, in the sprint two, I have learned lots of skills about flask. I learnt how to use flask build the web and how to connect flask with python to run on the terminal. During this period, my team member Wen-Ting, Chang gave a lot of help. At the beginning sprint two, I total lost direction and had no idea how to start. Wen-Ting taught me firstly how to write the simply code to understand what flask is.

Secondly, due to study web application module in semester one, I have learnt JavaScript and PHP. So, I knew how to write html using JavaScript. However, writhing JavaScript function is my weakness. Finally, master distributed the how to make the markers and how to display the station information when clicking the marker. Actually, when finished the sprint two, our master taught me many skills about JavaScript. For example, from button getting the variable, we can call the data from database. But the function still is my weakness. I will poor lots of work on it, which can prepare to my summer project.

Actually, I must mention that the teamwork is very important. Everyone has her ideas. When we have a problem, different person has different solution. How can we coordinate each other and then successfully solve the problem. One of skills is communication and scrum management. Using scrum management could reduce lots of time and do efficiency. Meanwhile, We lead a master to distribute the assignments. In the beginning, we did not pay attention to the management. Each person just did her own work. When everybody finished her task, she just sent the code to the next person. We did not communicate with teamwork what the code was and what the next step was. So, it caused that we restarted again.

Having this experience, in the sprint two, we had a meeting at least one week and discussed what we did and what the problems encountered and what the idea for the next step or next sprint. Therefore, we did an efficient job finally.

Generally, I was working with my classmates firstly; I deeply understood that I had many drawbacks. I am shy person, which lead to have a bad communication with the master. I could not express my thinking about the project and just did my own work. So, I made some stupid mistakes and created some problems to my team. I need to apologize to my team.

Finally, I must give many thanks to our demonstrator; she gave us lots of ideas when we did this project. She is our client in this project, so she gave clearly us what we must do and what we missed. Due to my English poor, I did not ask her any questions. But every meeting she met, I learnt lots. And I would thank my team and demonstrator to teach me skills and help me successfully finished this project. This experience will give me a lot of ideas to do the summer project.

**Contributions and Problems in each sprint:**

During Sprint one:

By a little revising from following the lecture slide, I knew how to create RDS instance. While creating instance if select “not publicly accessible” will encounter cannot link to database even open inbound rule to all traffic. After revised this problem, able to successfully use pymsql package to link to database. In order to check linking status, add print out error message to tracking.

Based on the sample Json file from the JCDecausx API, we decide to create two tables – one for static station data, one for real-time data. Since in real-time data there are duplicate information can get from static station, we decide to not to keep this data in real-time table. We use MySQL Workbench to generate empty table first then use python to insert data. Furthermore, since the data inserted could double insert (i.e., duplicate data) we use MySQL built in function to fool proof this possibility. That is, we use primary key on station number in table station and unique on “number (station number) + last\_update” which is no more one row of a certain station in certain last update time exists.

Sprint two:

Compared to previous sprint, in this sprint we worked on the same sub-task together, one do the coding and the other two did the structure research and require material collection. After the sprint we find out this pattern is more efficient than the previous one and less revision to the previous take in each sub-stage. This sprint we spent more time on discussion of the whole structure could work. That is, how real-time data should response to the query from the web page. We wondered whether it was better to return all information of all stations or better to response based on the station number that web page query by using POST/GET from the form. However, we found out it is hard to revised once we choose the certain structure. The way need to be stick to the end even could be less efficient, otherwise, need be started from the beginning. Therefore, in sprint two, I set the markers and showed the information on marker.

Sprint three:

Chen:

Due to the AWS credit limitation, we store two weeks real time data in database (from March 20th to April 4th). Therefore, the chart is summarized based on the data from these two weeks. However, there are an unexpected situation happened in this sprint. That is, the account is closed due to reach the limit grant. So we need to import data to database again. However, the import process required more than one day so we decided to leave data for only one week. It was much faster to import to local machine so we import whole data to local machine as backup plane. When we finished the python code, we tried to put our flask app run on EC2 instance but cannot link through browser; even we changed flask start function. Finally, we ask the professor to help us fixed it.

At the sprint three, according to the previous skills learnt, I knew that how to scrap the weather information and showed the detail weather information on the web application using the JavaScript and JQuery and how to run flask app on EC2.

**Reflection:**

In sprint one; we actually processed successfully, except unsuccessfully link to database. And then master asked demonstrator how to fix this. We got that we did not open to public access. So, demonstrator is very helpful when we had problems and we totally lost the direction.

In sprint two, we found scrum management is very useful for our communication and distributions. Keeping one meeting every week could reduce our waste time. Meanwhile, I also reflected that my weakness gained many workloads to my team. But I have learnt lots of skills. So, I found that I do not give up when I have no ability to resolve the problems. I can ask master and demonstrator to help. Actually I did it. Therefore, I am grateful that I have this team and demonstrator.

In sprint three: it was easier than sprint two, because my team already knew using what skills we could build the charts and show the weather information. But we have some small problems that have not resolved now. First one, our default Google chart is not clear, just like the bugs. Second one, our weather information is current weather, but the available bikes charts are the last two weeks data. They did not match together. We wanted to fix those problems, but the project deadline is closed and the time that we found those problems are on we have finished this project. So, it reflected that we still had some problems that did not noticed during the sprint. Maybe we did not clearly understand the requirement at the beginning.

Finally, during this project, I have a clear idea what the software engineering is and how to efficiently finish a project together.