**Criterion A: Planning**

**Defining the problem:**

Felis catus, a club in our school that mainly focus on taking care of cats. This required them to locate the cats needed help and shared this information to find someone help that cat. Currently, they get through the process by utilizing the WeChat group or simply ask for their friends. This is inconvenient since sometimes the information in the WeChat group mixes with other unrelated chatting, so it could not be effectively gained by others. Plus, asking friends every for checking if they have time to take care of a cat requires lots of time and energy. From this situation, I think the club members lack a platform for them to share information about the vagabond cats, which makes the cats cannot gain timely help. Therefore, I decided to design a website for them to share information in response to their demand.

After a consultation with the club leader, we agreed that the website should have a range of functions. To begin with, the website should have a module to show the pictures of vagabond cats and the descriptions. This module should allow users to know the contact information of the one who posts it and allow the users to do basic actions to their own posts and profile. Besides, the club leader wants the website shows only pictures containing cats in it, which is to avoid unnecessary and unrelated pictures. In addition, there should be a user-friendly interface for the authorized users to be easily and conveniently upload pictures. Detailed functions will be listed below in the success criteria. Ms. Wu Di, my computer science teacher, has approved my idea and will be my advisor.

**Rationale:**

This product fulfilling all requirements of my client should be a website, since in this form, all users using all kinds of devices can get access to the website without installing anything before except a browser. I decided to utilize PHP and MySQL for my website because they can fulfill my need of store, process or access a range of information and pictures.

I chose to use PHP since it is the most commonly used programming language to construct a website nowadays. Therefore, it is supported by all kinds of API, including the ones I need to complete the cat face recognitions. This will reduce my work’s complexity.

I chose to utilize an API from Baidu to recognize the breed of the cat in my website. That’s because training a new neural network to perform cat face recognition will be complicative and as the data I could find is limited, the training I could perform is insufficient and the accuracy of the recognition will be low compared with the API.

I chose to use MySQL as my database because it is open-sourced. As a result, it is more powerful than other alternatives, since the numerous resources can be found online. This is helpful for someone firstly learned database like me as there are lots of tutorials can be found online.

Besides, PHP with MySQL is compatible on most of the devices regardless of the type of operating system, reducing my burden of maintaining as there is no need to rewrite the source code.

**Success Criteria:**

After the consultation with my client, we agreed that the website should at least contain the following functions in the table:

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| **Functions：The different functions of the website that should be achieved to fulfill the requirements of my client.** | 1. The platform will provide basic actions, like post and search 2. The platform should automatically identify the breed of the cat and send a feedback if there is no cat in the picture |
| **User System: The management of the users that should be achieved to fulfill the requirements of my client.** | 1. Users can be freely registered providing their email address 2. Registered users can post pictures, adding titles and descriptions 3. Unauthorized users can only view the existing information and pictures 4. Registered users can view all their posts and edit or delete them 5. Registered users can change their contact information |
| **User Interface: The graphic interfaces that are required and should be designed in the website.** | 1. An index page which describes the aim of the website should be available 2. A menu bar showing different functions and pages on top of required pages should be available 3. There should be a certain page for users to visit all posts 4. A page for users to modify their posts and contact information |

Word Count: 277+253=530(Excluded the Success Criteria)