

School of Applied Sciences  
Bachelor of Science in Computing

**COMP490 Final Year Project  
Project Proposal**Academic Year 2021/22

|  |  |
| --- | --- |
| Activity Tracking with Self-organizing Albums | |
|  |  |
| Project number: | 24 |
| Student ID: | P-18-0212-8 |
| Student Name: | Thomas Leong |
|  |  |
| Supervisor: | Of:in |
| Assessor: | Evelyn Lo |
|  |  |
| Submission Date: | 2021/09/09 |

Table of Contents

[1 Project Description 2](#_Toc453937400)

[2 Summary of Related Work and Key References 4](#_Toc453937401)

[3 Project Workplan 4](#_Toc453937402)

[4 Risk Assessment 6](#_Toc453937403)

[References 9](#_Toc453937404)

# Project Description

In recent years, the quick development of smartphones and the social internet have changed people's lifestyles and the type of interpersonal communication. And now the smartphone cameras are more stable and support many points of view to take a photo. As a result, peoples pay more attention to record the present moment and emotion in their life via social media (e.g. Instagram, WeChat, and Twitter). However, sharing the photos have several limitations in social media.

Firstly, these activities often involve people who do not know in person. The people have to an add friend or make a group in social media for sharing the photos and videos to others. The big gathering may have people who are not familiar, so the sharing photo process wastes a long time and is not efficient. Secondly, after the activity finishes, most people share the photo on social media, this means the people need to find the social group and system album from beginning to end, to find the suitable photo to post. This finding process just relies on human eyes, and the photo is no identified. Lastly, manual intervention is required in storing these photos or videos for easy retrieval later. Some people choose to store it in cloud storage, name the photos or manage them by file[1]. This can solve the problem, but it is not intelligent and needs to be done by hand. In this project, new possible solutions to this problem will be discussed and proposed.

The aim of the project is to develop a mobile website for participants (or organizers) to record the common memory of activity with others with convenience for management of record. The project has the following major objectives:

* An organizer can create a (possibly multi-day) activity, which consists of several events to occur in specified period and location.
* The organizer can invite participants to the activity (through email, 2D barcode, etc.)
* The organizer can browse through the text description and photos of all activities.
* A participant can share photos (and videos), which will be categorized into suitable events, and the photo can match up the text description to share.
* Design a website to arrange and manage the uploaded photos, in an organized, clear interface for the users to browse the photos.
* (Optional) The system applies image processing techniques (e.g. face recognition and landscape recognition, for photo organization)

In this project, the developed system will provide a web website to share photos or videos. This system provides convenient means to manage all participants upload, categorize the photos in suitable events and get an album that contains all uploaded records in this event at the end. Solving the problem that the photos are usually disorganized in phones and hard to collect, the system will support efficient seeking and management of photos.

This project has several challenges. Firstly, it needs to sort the photos, possibly detect potentially relevant photos for an event and avoid duplicates when the user uploads the photos. Secondly, the system should monitor inappropriate photos and user behaviour. And the last, the system needs to identify the people and place in the photos for a more automated organization of photos in the shared album.

# Summary of Related Work and Key References

With the rise of the smartphone, more and more people use the social internet to sharing the record for their life. One type of photo sharing applications allows users to publish posts of photos to share with others. Some examples are Greetix [2] and Instagram [3]. It allows sharing the post with text, photo (and video), the like and vote function button. But these photos are shown in a timeline, and not organized around events. If users want to find the photos, they may need to scroll for a long time.

The other type of photo sharing applications provides the photo-sharing for many photos under in an event, such as Guest [4]. It provides to share the post with photo and show the upload username. However, these applications usually only a one-level organization (e.g. albums) and do not support the events within an activity, so they cannot classify the uploaded photos to the suitable events. And then, the filter of the photo is only near to far as the timeline shows.

So, this project design provides the photo and video sharing function, and text description with the photo function. Then, the arrangement of upload photos, just like smartphone album. Besides, the same user uploads a group of photo arrangements together in 30 seconds, selects one photo (cover photo) and hides the others by default. Therefore, the photo can choose under the subevent sharing, it is convenient for people to review and recall. Furthermore, changing the user download the photo store to the cloud album for convenience to manage, so it’s download should auto rename the photo name use the directly under subevent, and using the subevent name add the number (e.g. subevent1, subevent2… and so on). The way of the photo filter except for the timeline shows, it also filters to show one or more users of the photo.

# Project Work Plan

Table 1: Table of project Work Plan

# Risk Assessment

**Risk 1: The probably of development** **computer malfunction**

The development computer stores the important file, including program code and text files to help you do the project. But something is sometimes hard to avoid, such as computer freezes, which may generate computer data loss.

Solution: The progress code and text file backup to GitHub after making sure that the code has no bug.

**Risk 2: Users reject the website due to the dissatisfaction of users’ requirement**

The designer develops some function that has a strong usage, but the user does not understand this function how to use it, so they may reject to use.

Solution: Reference the design of similar website and experience it just like a user, to design the website which satisfies user requirements according to user habits.

**Risk 3: System do not support the different device**

The photo-sharing website is designed to be used in mobile devices, but some people may use it on a computer device or the iPad, but these devices’ screen size has a big difference.

Solution: The website’s design for user to records outside of the home, so most users uses the mobile device or iPad to upload photos. Then, design the responsive layout to adjust to the size of the iPad and smartphone. After finishing the event, it can share the link to the computer (or use local mobile) to download the all-upload photos.

**Risk 4: User data breach**

The user upload photo and user information just share for this event group, should not breach for other people know, to make sure the user private. But the hacker may use illegal ways to get these user data or delete the data.

Solution: Backup data prevent a data breach, and regular checking of the website detects the aberrant download action.

**Risk 5****: Code getting unmanageable because of changes in requirements**

The code development may set the fixed design which means that changing it will impact the other function, so may waste much time to finish this changing requirement.

Solution: In the design process, try best to design the function that can meet the requirement change, such as packet each event to function, the code just rewrite the part of the function code even if the requirement needs to change.

**Table of Priority Risk**

|  |  |
| --- | --- |
| Priority | Risk identifier and Description |
| 1 | **Risk 1: The probably of development computer malfunction** |
| 2 | **Risk 4: User data breach** |
| 3 | **Risk 5: Code getting unmanageable because of changes in requirements** |
| 4 | **Risk 2: Users reject the website due to the dissatisfaction of users’ requirement** |
| 5 | **Risk 3: System do not support the different device** |

Notes: Priority 1 is the highest risk

Table 2: Table of priority risk

Table 2 of priority risk shows these five risks. The development computer malfunction is the most priority because this risk may make the project work redo, this will impact very severity for the whole project process. User data breach arranges in a second priority place, because it make this website lose the user trust, and the designer will need to be held liable. Then, code getting unmanageable because of changes in requirements, it also impacts the project rate of the process, but not severity than developmentcomputer malfunction. Besides, users reject the website due to the dissatisfaction of users’ requirements is also important because it impacts the user impression of the website for the first time. The last risk is that system does not support the different devices, this website is mostly for the user's smartphone to use, so it will arrange to the last one risk.

**Probability Impact Matrix (****Initially)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Probability | High |  | Risk 5 |  |
| Medium |  | Risk 4, Risk 2 | Risk 1 |
| Low |  | Risk 3 |  |
|  | | Low | Medium | High |
| Impact | | |

Figure 1: Probability impact matrix initially

Figure 1 shows the initial risk probability impact, this project occurs in risk5 which has a high probability, risk 4 and risk 2 have medium probability, and risk 3 has a low probability. As see the impact way, risk2,3,4,5 also has medium impact, risk 1 is high impact.

**Probability Impact Matrix (After Applying Solution)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Probability | High |  |  |  |
| Medium |  |  |  |
| Low | Risk1, Risk 2, Risk 3 | Risk 4, Risk 5 |  |
|  | | Low | Medium | High |
| Impact | | |

Figure 2: Probability impact matrix after applying solution

Figure 2 shows that the risk probability risk after the applying solution, risk 1, risk 2, risk 3 just have a low probability risk and impact. Risk 4, risk 5 also have a medium impact, so it needs to focus on it to prevent this risk occurs.

References

[1] Organize your catastrophic digital photo library: <https://www.popsci.com/story/diy/sort-photo-library/>

[2] Greetix: <https://www.greetix.com/login?locale=en>

[3] Instagram: <https://www.instagram.com/instagram/>

[4] Guest: <https://www.theknot.com/photo-sharing-app/>