A. Background

We all have experienced some memorable group activities, such as volunteer works, academic field trips, supporting education in remote area, summer schools, etc. During the activities, which usually last several days, participants always like to take photos and videos to record the special moments with others by using their smartphones or cameras. When the activities are finished, people prefer to make a souvenir album including text, photos and even videos to keep as a souvenir.

How do people gather all the resources from various devices of different participants? From the interviews, we found out that the most common way for gathering is to establish a group in social software such as Facebook, WhatsApp, Wechat among participants, through which they upload the photos and videos.

However, there are a few problems with the methods:

• Time-consuming

The gathering process can be time-consuming to wait for all the resources being uploaded from all the participants.

· Resources need to be re-ordered based on time-line

After everyone uploaded, one person is assigned to re-order the resources based on the time-line.

Some resources are omitted

It can be always hard to all of the photos being taken afterwards. Thus, some resources are easily omitted.

• Emotions are hard to record afterwards

We all know the fact that the emotions at a certain moment, such as exciting, upsetting and feeling of happiness are hard to repeat and record afterwards.

While trying to solve the problem, the web is chosen due to its richness in content, simplicity for development and deploy on different devices.

B. Brief Introduction

OurMemory is a web-based activity souvenir album generator, which make the process of resource sharing, gathering and sorting more easily. Our goal is to help participants to share the feelings and resources along with the activity, in order to generate a more vivid album.

OurMemory is a multi-user real-time collaborative platform implemented by Node.js and express. For the front-end design, the bootstrap framework is used to adjust various screen size. The main functions include multi-user real-time online chatting, photos uploading, album generating and album downloading.

C. Functionalities

1. Multi-user Real-time Online Chatting:

The system allows multi-users to enter the server at the same time and chat online. 2. Photos Uploading:

Users can upload photos from local device selecting from folder or dragging directly into pages. After being uploaded, the photo can be seen from the interface. The photos uploaded are saved in a pre-defined folder. The file name is generated automatically including the exact uploading time.

3. Albums Generating:

Albums are generated base on the time-line. The photos are ordered by their name generated after uploaded.

4. Albums Downloading:

Users can download albums by pressing the download button. The a file with all the uploaded resources can be downloaded.

D. Interfaces

+ + C D localhost:3000		\$
<u>.</u>		
Who is Online	Chatting	Album Upload
test5 test5	send message as test5 test5	
	eonnected: you	
		Choose Fie No file chosen Upload Image
		Album Generate
		Download

We choose the color blue as main color of our interface. The whole pages are implemented based on bootstrap framework to make it responsive in different screen size. a. Online user list

Showing the list of real-time online users.

b. Chatting column

After typing the text in to the text-bar. The content will show automatically with user name in front.

c. Album column

After user clicking the file choosing button, they can choose a file from local computer. Then they click on Upload Image button, the image can be uploaded onto the webpage. Users can create the album by clicking Album Generate button. They can also Download it by clicking download button.

E. Problems

During the whole implementation process, we have run into many difficulties. The biggest one is realising the upload function in the same page. The form POST methods and socket methods have been tried. The upload function can be realised when the file is uploaded onto a different page.

Moreover, in order to avoid the override problem, we generate the file name by adding the exact uploading time.