

## User Interfaces Coursework 3: The Process

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## **1: Group Members**

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## **2: Pact Analysis & Use Case Scenarios**

### **Pact Analysis**

In order to ensure Tomeo is appealing to potential users, it should be designed with the end user's experience in mind. In order to satisfy their requirements, we can use a PACT analysis to analyse the People, Activities, Context and Technologies that dictate the user's interaction with Tomeo. The main demographic which Tomeo markets itself at is the community of explorers who wish to document their travels and need an application to keep it organised. In order to make this content accessible to everyone let this be . The layout of the system must also be designed not only in such a way that the users are able to easily view other users' videos but also post their own but also that Tomeo is visually appealing. The content uploaded by users will be in a video format, however this can be in many types, whether that be common formats such as mp4, or 4K UHD which is commonly used to capture 4k resolution content and will document nature rich areas. Other video formats may still be preferred by the user though, and in order to cater to their needs, we will also need to consider compatibility with formats that are potentially less common. Additionally, whilst all users will be making use of an identical application, the video being processed by Tomeo will vary depending on each user's distinct hardware. Subsequently, video resolutions, among other details, will need to be adapted to ensure that their experience with Tomeo is not limited as a result of the hardware available to them.

## Use Case Scenarios

### Use Case Scenario 1

Jake (25 years old) is a semi professional skier who likes to record his ski runs to improve his times. He normally skis early in the day so that he has time to rewatch his previous recordings and improve on them. When he is recording his ski runs, he uses his GoPro which will capture content. During his break, Jake uploads the videos from his GoPro to Tomeo. He also adds labels to all of his videos so he knows which categories they belong to. He then starts rewatching his videos on his laptop in order to find improvements to lower his times on his runs. Since it is during the day Jake uses light mode so that the screen brightness is high and he can see the videos. Also since the background noise in his videos is loud, Jake uses the volume slider to decrease the volume of his videos. He also switches between all the different videos by clicking a video in the scroll area, where the selected video will appear in the video player. Now whenever Jake wants to view his previous ski runs, he can just open Tomeo where all the videos will be displayed for him

### Use Case Scenario 2

Fabian (55 years old) is a veteran hiker who has climbed Mount Everest, Mount Fuji and Pikes Peak. Due to the coronavirus pandemic he hasn't been able to hike in a while, so he decides to go to the Peak District to hike. Fabian books a hotel near the Peak District and hikes there each day during his stay. Whilst he is hiking, Fabian uses his FujiFilm X-T4 camera to record videos of himself hiking in and record the scenery. After a long day of hiking, he returns to his hotel and opens his computer to upload the videos he has recorded for each day. It is night time when Fabian opens Tomeo, so to reduce the glare on his computer he clicks the dark mode button. He then watches through each video he has uploaded, and he uses the pause/play button to stop the videos at certain points. Now Fabian has an application he can use to view recordings from his hikes in the future.

### Use Case Scenario 3

Bob (70 years old) is a retired teacher who has taught Computer Science at his local high school for the past 40 years. Since his retirement 10 years ago, Bob has travelled all around the world during his retirement and has recorded videos of the places he has visited on his drone. After downloading Tomeo on his PC in his home he starts to navigate to/from the home page and the video page since he is computer literate. Tomeo is designed so that users of any age & computer literacy can interact easily and comfortably with it to upload their personal videos and view it in the player. Bob then inserts the SD from his drone into his PC to transfer the videos he has taken on his trip to his PC. After uploading his videos, he then adds tags to the videos so he knows which categories the videos are in. Now whenever former students and friends visit Bob, he can open Tomeo to show them what he did on his trips.

### **3: Target Platform**

After careful consideration, we have decided to make Tomeo a desktop based application available on Windows operating systems. This is because a video player is better suited to larger screens. As mobile phones have smaller screens it wouldn't be suitable to develop an application for this system. Also we decided to make Tomeo exclusive to Windows as this is the most commonly used operating system. Having a larger resolution means that more videos can be fit on the screen. Therefore we can display previews of the other videos the user has uploaded next to the current video that is playing. All of the development for Tomeo will take place on Desktop with Qt, C++ and QtDesigner. Tomeo will be responsive so that it can adjust to different screen resolutions on each user's desktop.

## **4.1: Cycle One**

### **Prototype**

#### **Goal of Cycle**

The goal of the 1st prototype cycle is to create an understanding of what the users wanted. In this cycle, we will add a play button, pause button and create the home page. A play/pause button affords clicking to play/pause each video that the user uploads. The play/pause button also contains a text signifier which tells the user what the button does. These buttons also provide high level feedback which will result in the video that is currently in the player being resumed/paused. The home page will contain a link to the video player window. This was selected as the highest priority for this cycle as having a play/pause button is essential to a video player. These features will make Tomeo easy to learn and easy to remember for users once they become accustomed to using the application.

#### **Prototyping Technique**

Prototyping technique: Sketch

Software used: draw.io

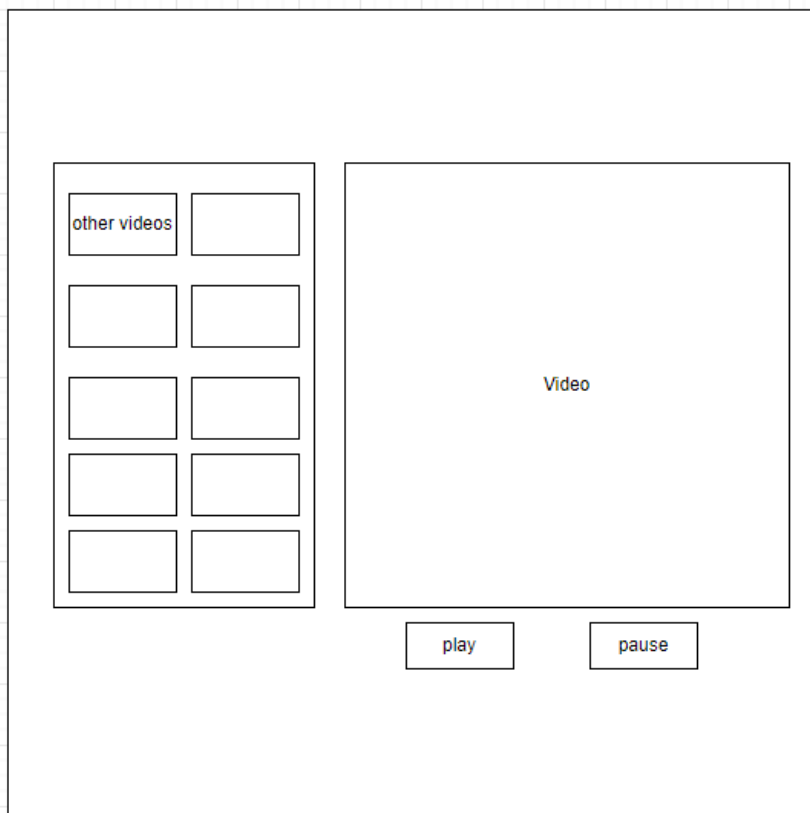
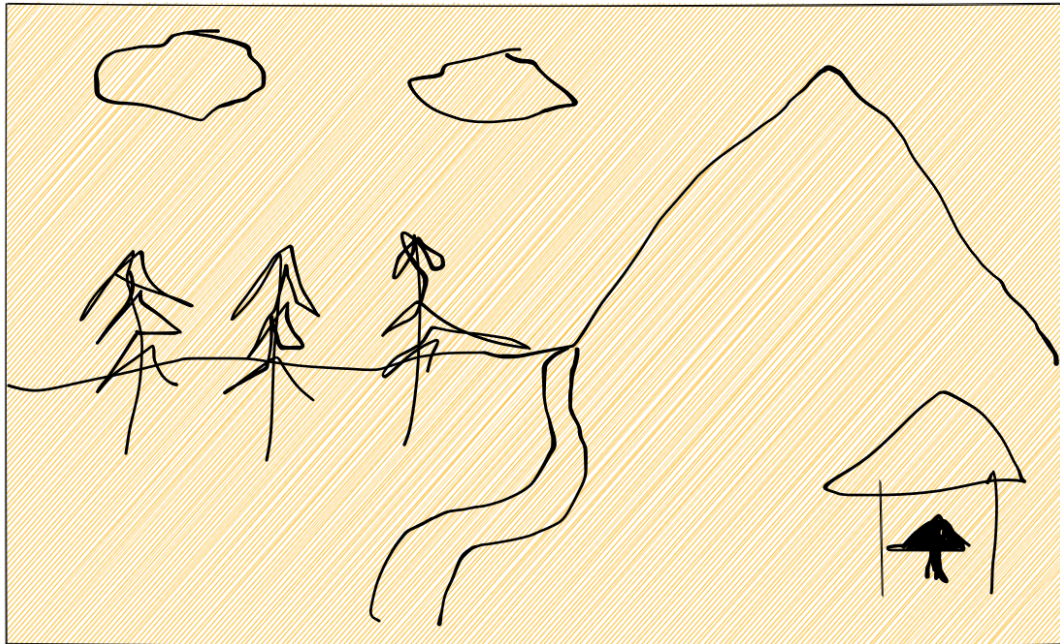
#### **Design Motivation**

In the prototype, we have created two separate pages; a home page and a video player page. We have also added an image that contains trees, clouds and mountains to the home page and a play/pause button to the video player page. This has been added so the Tomeo user can create a conceptual model that the home page isn't the video page and you navigate to get to the video player. Also, a play/pause has been positioned underneath the video player so the user can easily access the button. The buttons also have a signifier which is the "Play" and "Pause" text on each button so the user knows which button corresponds to which action. Finally, the other videos have been moved to the left so the video player can be positioned to the right.

#### **Technique Reasoning**

When designing the initial look of the application it must look as simplistic as possible to act as a guide for the appearance but also allow for additional features to be added during the next cycles. To meet these objectives drawing sketches using draw.io would be more effective because the low resolution designs created are more effective for acting as abstract placeholders. Therefore, low resolution allows for greater levels of creative interpretation and experimentation with the application in comparison to a higher resolution prototype created with Qt Designer.

Design Evidence



## Code

### Improvements Video

<https://youtu.be/hmynseSEDpo>

### Prototype vs Implementation

The layout of the implementation has changed in comparison to the prototype. This is evident as the buttons are situated on the left hand side and the set of thumbnails are now situated on the right hand side. This decision was made due to the fact that grouping the large number of thumbnails together would make them less legible compared to a singular thumbnail being displayed on each row on the right hand. This allows the user to identify which thumbnail correlates to which video and can more precisely decide which video to watch.

Furthermore the buttons were placed on the left hand-side rather than under the video in order to allow for more space for the current video being played. In addition, this creates a nice flow in the reading direction (left to right) going from manipulating the current video on the left hand-side ,playing the current video in the middle and a selection of videos to play on the right hand-side.

## Evaluation

### Evaluation Technique

Cognitive Walkthrough

### Technique Justification

By making use of a cognitive walkthrough in an early development cycle, we as developers can ensure that the foundations that we will build upon in future cycles are solid, such that the application can be navigated easily and function in the exact manner that we would expect it to across a logical series of steps. This means that we know before building the next layers in our forthcoming development cycles, we have a clear basis of what is and isn't appropriate. This not only provides us with this strong base to build upon, but also allows us as developers a valuable insight into what we can take into account during the development stage of the next cycle, to reduce the need for things to be tweaked in a repetitive and inefficient manner.



### Evaluation Outcomes & Evidence

Step	Action is Correct?	Notice how to Perform?	Can it be interpreted?
1 - Start-up the application	The opening options screen is familiar to the user.	The different scenic options appear.	Tomeo is shown.
2 - Choose a video type	Different video types can be selected	It may not be initially clear how to enter each of the video types, or videos of multiple categories.	Cursor indicates that the sections can be clicked into.
3 - Select a video	A video can be selected from the collection of videos on the application.	The video icons can be chosen from in the menu on the opposite side from the video playback segment.	The video is shown in the video playback segment.
4 - Play a video	The play button can be used to instigate video playback.	The button provides feedback when clicked to show that such action has occurred.	The video begins to run.
5 - Pause a video	The pause button can be used to stop video playback	The button provides feedback when clicked to show that such action has occurred.	The video pauses on the frame where the user has pressed the pause button.
6 - Select video of different natural characteristic	There is no option to return to the home screen to browse videos of a different category.	To do so, the user would need to close the application and restart, which is an inconvenient and painstaking experience.	The user has to scroll through an unclear, unsorted set of other videos.

The evaluation has allowed us to determine that the basic functionality of Tomeo works, on the whole, clearly and consistently. The path between different elements of functionality is easy to follow, and it is clear how to engage with these functions throughout the application. As such, we accepted the changes in the cycle. However, moving into the next cycle, we will look to redevelop the home screen to make picking between video categories a less unclear experience, and the ability to return to this page to ensure that the user can continue to browse videos of differing categories in one single experience.

## **4.2: Cycle Two**

### **Prototype**

#### **Goal of Cycle**

The goal of this cycle is to create a light mode for the video player, dark mode for the video player and a scroll area which will contain the other videos. A dark mode has been added to the application, as this reduces the brightness of the screen. As a result, glare will be reduced for the user when they are watching videos on Tomeo. However, we have also added light mode to give the user variety for what colour scheme to have the video player on. Furthermore a scroll area has been added so that if a user wants to have multiple videos, they can be placed in a scroll area for them to select from. This solves the problem in the event a user wants to add multiple videos that wouldn't have otherwise fit in the window. This was selected as the highest priority for this cycle, as these features are easy to implement.

#### **Prototyping Technique**

Prototyping technique: Sketch

Software used: draw.io

#### **Design Motivation**

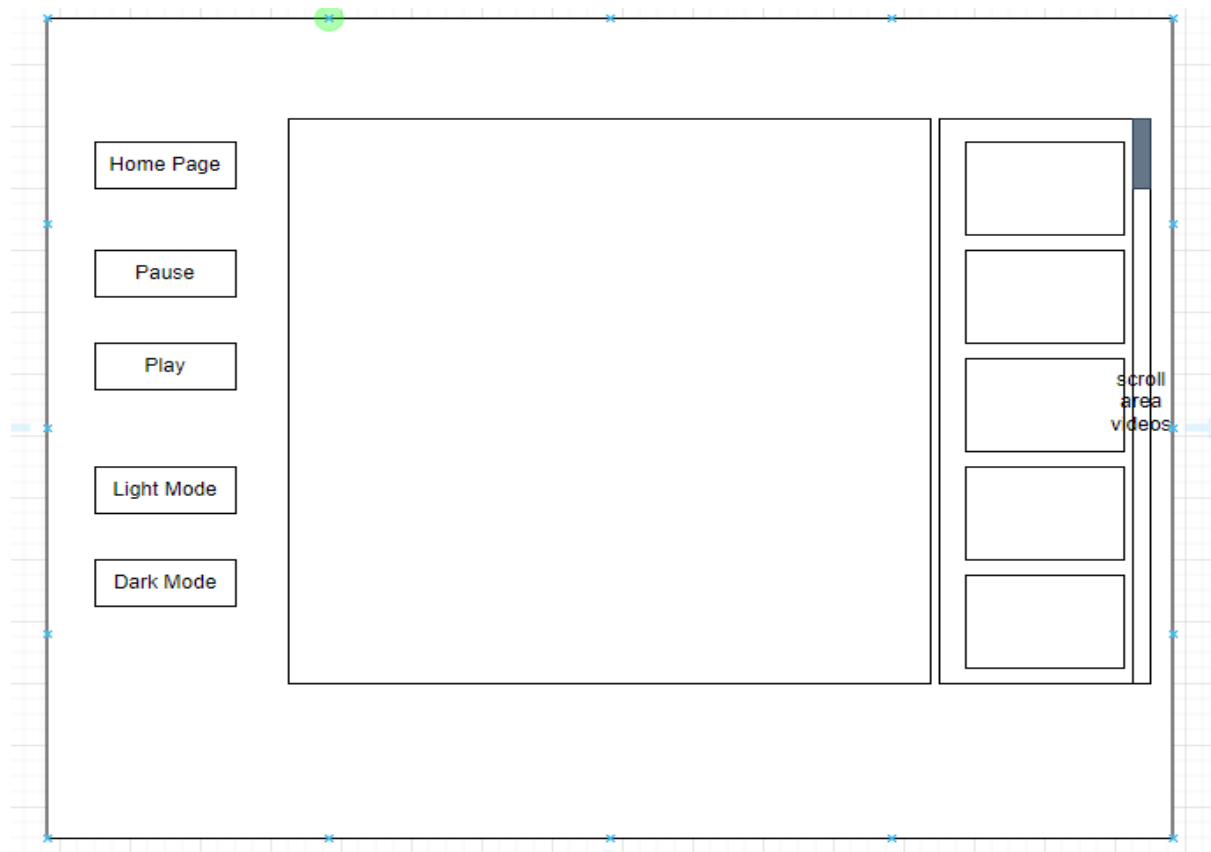
We have changed the home page to separate it into 4 images corresponding to different parts of nature. Each image will be clickable and have videos that correspond to that specific aspect of nature. Also a dark mode and light mode has been added to the video player. After careful consideration, the videos have been moved to the right as this looked better to group the other videos to the right of the main video player. We have decided to add a dark mode to allow users who prefer a darker theme to still enjoy the application. Also having a dark mode will allow users to use Tomeo in dark environments so that the brightness isn't blinding them. Furthermore, we have decided to split each of the videos into different categories of nature so that the user can view videos that correspond to a specific aspect of nature.

#### **Technique Reasoning**

We have decided to also use a low fidelity prototyping technique for this iteration as it can be easily changed. Sketches will be created which will be labelled to show all the different parts of the application. To create these sketches, draw.io will be used as it is simple to use and can be edited easily. Furthermore, sketches provide a simple way to discuss and challenge the current design of the system. Since the dark mode and light mode will be a major factor in the Tomeo application, we want to design a quick prototype to gather a rough idea. Also if we do have to make substantial changes, we haven't become emotionally invested so changing the prototype won't take long and won't cost a lot.

Design Evidence





## Code

### Improvements Video

[https://youtu.be/\\_AB6TWGXQc0](https://youtu.be/_AB6TWGXQc0)

### Prototype vs Implementation

- The scroll bar is set to horizontal instead of vertical as it was easier to search through many videos at a time with a horizontal scroll bar.

## Evaluation

### Evaluation Technique

Questionnaire

### Technique Justification

For the second cycle, we decided it would be most beneficial to use a questionnaire, firstly to ensure that any new features felt appropriate to the user, but more importantly perhaps, to ensure that developments made across the first cycle into the second were actually improving the usability of the application for any end users. This means that having thoroughly examined the building blocks of the program from the perspective of a viewer, we

can now ensure that we're beginning to polish the design and features to the highest possible degree, for maximised simplicity and user engagement. As such, we allowed users to explore the program for this cycle, then provided evidence of previous versions and functions to gain opinions on which elements of each cycle were beneficial, and if any 'improvements' we had made were actually doing the opposite.

### Evaluation Outcomes & Evidence

	Cycle 1	Cycle 2	Equal
Navigation from the home screen is clearer	11%	89%	0%
Navigating between videos in categories is simpler	22%	67%	11%
Increased viewability preferences	0%	100%	0%
Playing and pausing the video is simpler	0%	0%	100%
Button positioning feels more comfortable	78%	22%	0%
Returning to another category is simpler	0%	100%	0%

The evaluation allowed us to conclude that the majority of changes in our second cycle were positive in improving both the functionality and usability of Tomeo to the end users. The key exception to this rule is the button positioning, with users strongly preferring the buttons concerning the video playback to feature underneath the video. Furthermore, there were mixed opinions on the way to view videos, and as such we will look to provide a hybrid between these setups, in order to allow for quick video viewing, and precise video searching. On this basis, we accepted the developments from this cycle.

### **4.3: Cycle Three**

#### **Prototype**

##### Goal of Cycle

The goal of this cycle is to create a slider for the video length, adding volume to videos, buttons for each of the images on the home page and also adding a home button on the videoplayer. A slider has been added to create more signifiers in the video player as to the current time remaining for each video. We have added buttons to each image on the home page to link to the video player. These videos will correspond to a certain aspect of nature which it relates to. This was selected as the highest priority, as we want to split the videos into different categories. We eventually decided having different windows for different categories of videos was the most sensible approach to implement this. Also adding volume to videos was a priority as the user will want to hear the audio of the videos they have taken.

##### Prototyping Technique

Prototyping technique: Sketch

Software used: draw.io

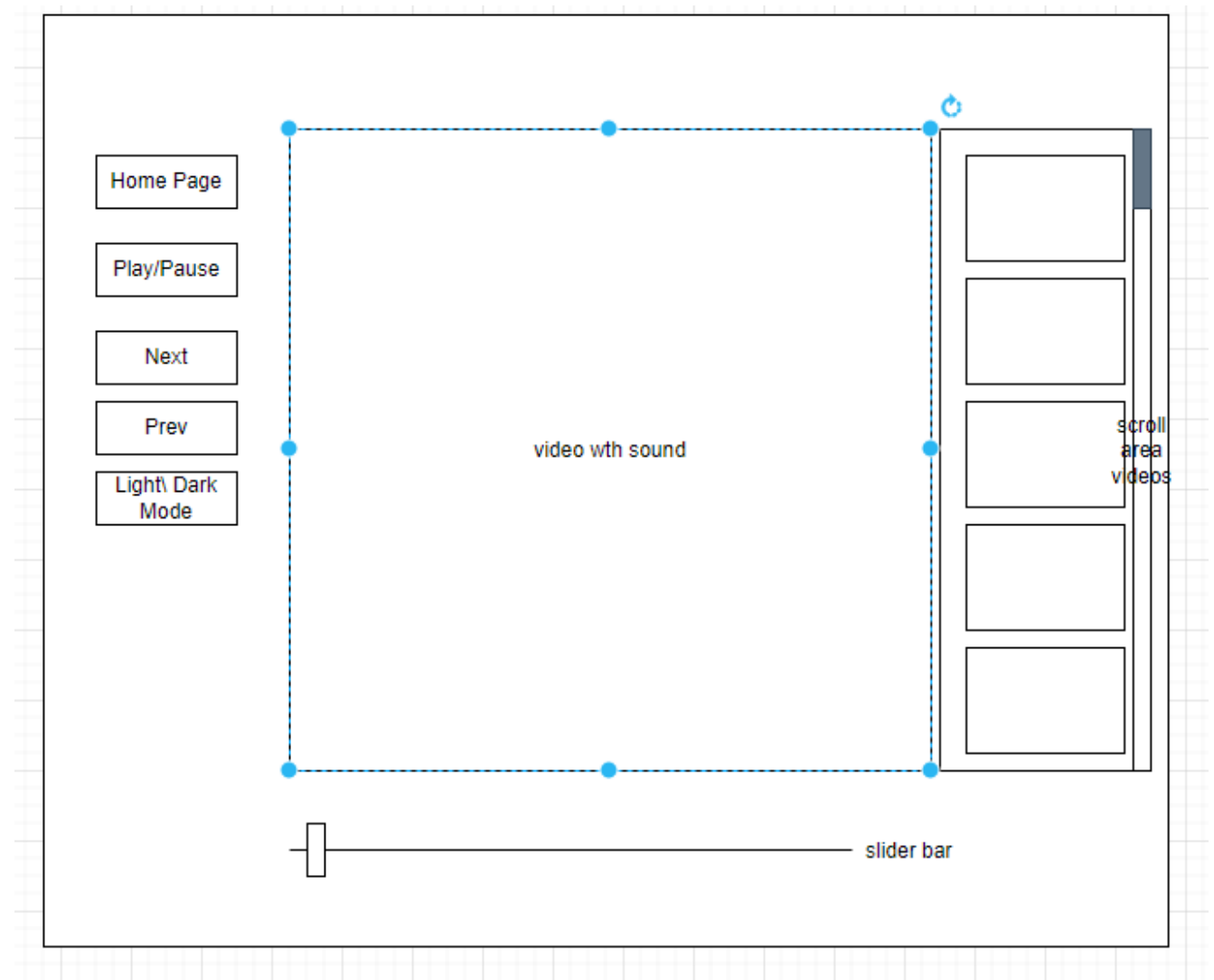
##### Design Motivation

The dark mode and light mode buttons have been merged into one button. This has been changed to support use case 2 and reduce the number of buttons on the application window. This will improve the usability of the system as we are combining relevant buttons to improve the UI. In cycle 2 we had too many buttons which failed at making the application efficient. In addition, the slide bar was added at the bottom of the window to give the user a mapping as to how long the current video had left. This was important as in cases where users upload long videos, it is essential that the user has an indication where the video length is displayed. They can then switch to other videos if they don't have time to view the whole video.

##### Technique Reasoning

Sketches have also been used for this cycle, as it is easy to share. We can also make as many sketches as we want with a relatively low cost. To create these sketches, draw.io will be used as it is simple to use and can be edited easily. Furthermore, sketches provide a simple way to discuss and challenge the current design of the system. Since we are creating a slider for the video length, we just want a quick prototype to gather a rough idea. Also we do not want to invest time to make something that would be used in the final product at this stage.

## Design Evidence



## **Code**

### Improvements Video

<https://youtu.be/1EGLTZy8818>

### Prototype vs Implementation

- The buttons have been moved to under the video to match with the slider
- The scroll area for the videos has been moved to the left hand side to increase the proportion of the screen size being given to the video being played.

## **Evaluation**

### Evaluation Technique

Heuristic Evaluation

### Technique Justification

For our third cycle, we opted for a heuristic approach (using Nielsen's original heuristics for UI), in order to break down the key component parts of what does and doesn't function in a clear and cohesive way. This allows us to focus on rectifying these issues going into our fourth cycle, before using the fifth cycle to polish any corners and make minor adjustments to the program's overall functionality.

### Evaluation Outcomes & Evidence

#	Heuristic Violated	Issue
1	8	The "next" button being above the "previous" button contradicts the order that the videos are displayed across the scrollable menu.
2	8	Use of video scrollbar means that next and previous video buttons are essentially redundant, and are just overpopulating.
3	10	The use of the scroll bar to display videos means that less videos can be seen at one time, and as such searching for videos may become more difficult and require endless scrolling.
4	7	The video is playing with volume, but the application provides no in-house volume control surfaces in order to cater to all potential levels of users.
5	8	The use of the words "play" and "pause" clutters up space for a button that could be denoted by a simple symbol.

Here, our evaluation made sure that features being included had an appropriate use, were clear and concise, and not combatant with one another. As the cycle was primarily centred around the development of the scroll bar, to allow for easier navigation throughout a specific video, and as this worked effectively, we accepted the cycle. However, we recognised the need to revert some design changes in order to clear up the usability, in ways such as making it easier for users to navigate the hub of videos, simplifying buttons with symbols, etc.



## **4.4: Cycle Four**

### **Prototype**

#### **Goal of Cycle**

The goal for this cycle is to add a volume slider, a mute/unmute button, merge the pause/play button and refresh the UI. This was selected as a priority for this cycle, as more signifiers needed to be added to the program. This will make the program more user friendly. A volume slider has been added so that the volume level can be adjusted. A mute and unmute allows the user to turn off the volume completely. The user now has a choice of using the volume slider or the mute/unmute button to change the volume. Also the UI has been refreshed so that the application looks more modern and flat. Finally the play and pause buttons have been merged into one button with an icon.

#### **Prototyping Technique**

Prototyping technique: Sketch  
Software used: draw.io

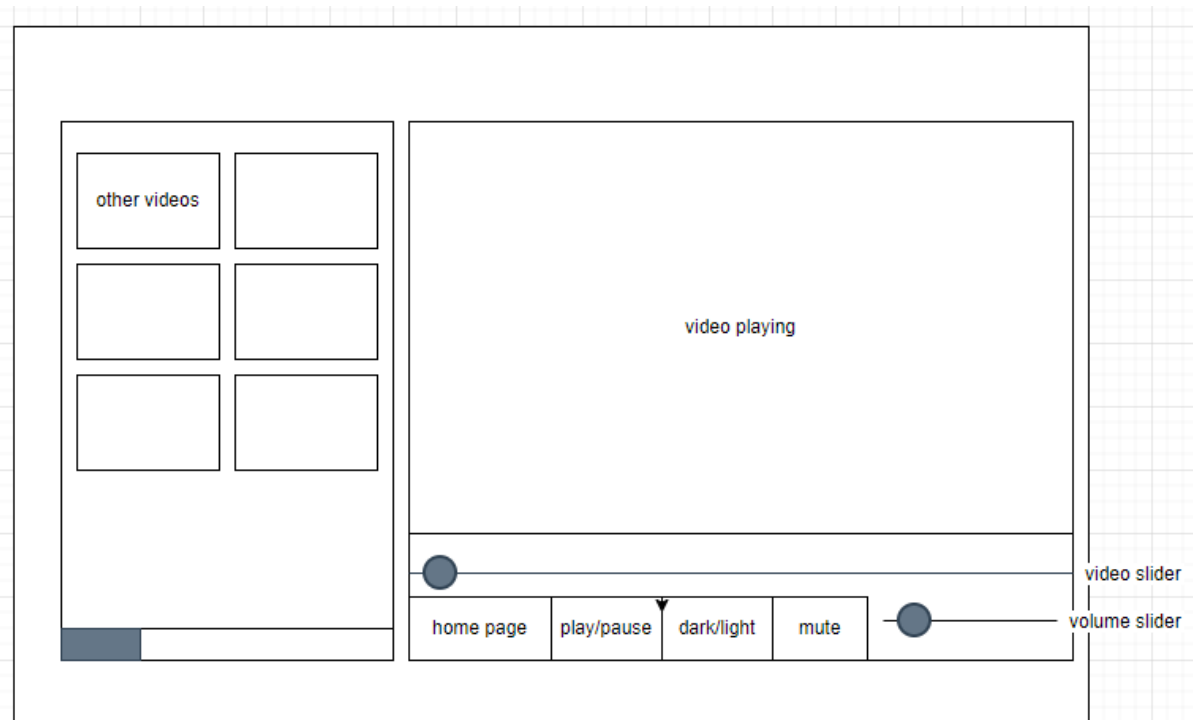
#### **Design Motivation**

The UI was changed a lot in this prototype to improve upon the previous ones. The scroll area which contains the videos was moved from the right to the left. This is because we preferred having it on the left on the screen as this design looked cleaner. As a result of this the video player was moved to the right so it can take up the rest of the screen past the scroll area. Also, the buttons have been moved underneath the video player so that they can be accessed more easily. Furthermore, they have been grouped closely together so that it can be assumed that they are connected to the video player. Finally, the volume slider has been moved underneath the video also. This was decided to ensure that the user would have easy access to all the components relating to the video player, by putting them underneath it.

#### **Technique Reasoning**

Sketches have also been used for this cycle, as we have redesigned the whole UI from the previous cycles. Since we are redesigning the UI, we need to make a quick iteration to ensure that it will be feasible. This is why we have opted with this low fidelity technique instead of using a high fidelity technique to reflect material that will be used in the final system. We can also make as many sketches as we want until we are happy with a UI. To create these sketches we will use draw.io as it can be edited easily. Since we are creating lots of buttons and merging buttons in this cycle, we want to create lots of prototypes to decide what the most effective and efficient layout should look like.

## Design Evidence



## **Code**

### Improvements Video

<https://youtu.be/qOnAiPsRhTU>

### Prototype vs Implementation

- Instead of the text representing what each button does it is replaced by an icon in order to look more appealing and understandable.

## **Evaluation**

### Evaluation Technique

Interviews

### Technique Justification

For our penultimate cycle, we decided to conduct interviews with users. This allows us a good blend of personal evaluation and user based evaluation, that we can use successfully in combination to provide solutions and provide an all round beneficial experience when using the application. These interviews would allow us to get specific bits of advice on certain areas of interest and development, and ensure any design changes were appropriate and received as intended.

### Evaluation Outcomes & Evidence

Question	Response Transcripts
“How easy is it to manipulate the audio contained in the video?”	“The audio is easy to adjust to my taste with the use of the slider, although it may still depend on some of my PCs' other settings.”
	“Muting a video with the click of a button is useful, as sometimes videos are filled with muffled sounds like wind blowing or talking that can't be understood.”
“How easy is it to search through all of the videos of a specific category?”	“Being able to see all of the thumbnails in one place is convenient for picking out a specific video in the collection”
	“Navigating inside each of the sections is well laid out, but it'd be nice to have a shortcut between sections instead of constantly having to return home?”
	“Compared to a previous version I tried, the wider video container combined with the scroll bar give the best of both worlds.”
“How clear is it which videos belong to which categories?”	“I clicked to choose a category so I know it's from there.”
	“Video categories tend to be easy to parallel by the thumbnails to ensure they're as expected.”
	“It feels like lots of videos are of multiple categories, maybe it would help to have a tab displaying information on each video, such as the different categories, so I don't have to sit through a whole video before knowing exactly which categories it covers in combination.
“Can video playback be controlled sufficiently?”	“In short, yes. It's simple and effective.”
	“Video playback seems pretty standard, which is probably a good thing. I instantly knew how to use it.”
“Are buttons logically labelled and placed?”	“Buttons for video playback are clearly related, and so are situated close to the video itself.”
	“The controls are clearly distinguished from one another.”
	“Whilst it is clear what each control does, repositioning non playback controls may help accidental navigation to pages and videos that aren't of interest.

The interviews clearly concluded that the changes made for this cycle were effective in improving video searching, making general navigation of the application simpler, and providing interfaces in a standard manner such that users can easily get to grips with them upon their initial use, off the basis of other application standards. These were some of the key targeted improvements, and subsequently we accepted the developments of this cycle.

## **4.5: Cycle Five**

### **Prototype**

#### **Goal of Cycle**

The goal of this cycle is to add a background colour for each area and label videos using descriptor tags. This was selected as the highest priority for this cycle as we haven't implemented how we will split the videos into different categories. By adding descriptor tags, we can split the videos into different categories. Also a co-ordinated background colour has been chosen so that the emotional response the user has will make them feel as if they are outdoors when they are watching their videos. Since the target audience is outdoor enthusiasts we feel this is an appropriate choice. Another goal of the cycle is to redesign the home page in order for it to be more user friendly, which helps the user in organising their videos. This is achieved through a helpful explanation of how to run the application.

#### **Prototyping Technique**

Prototyping technique: Native Prototyping

Software used: Qt Designer

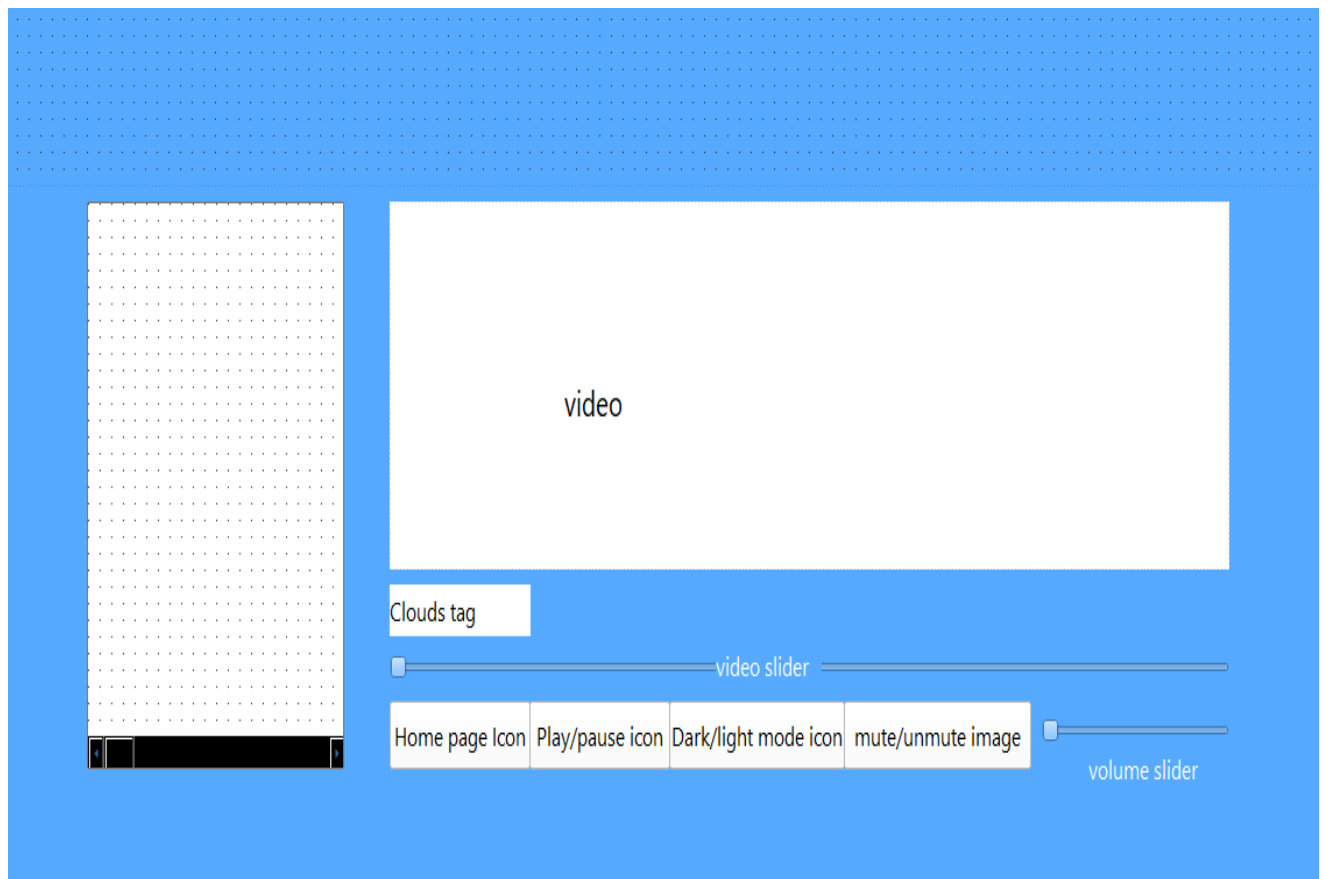
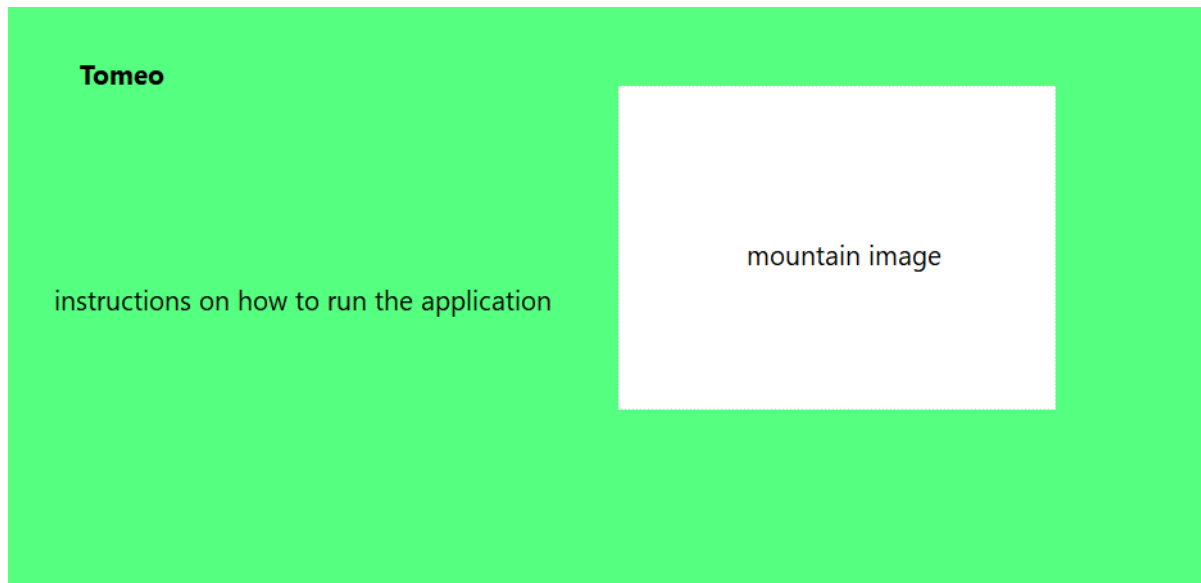
#### **Design Motivation**

A blue background has been chosen to mimic the sky. Also the tags of each video has been added beneath the video player. This ensures that it's clear to the user which categories the video is part of. The other components have been kept in the same place for this prototype as they have a good visual design. It is essential that we keep the video player easy for the user to view our content. Therefore, we have not decided to overload the window by adding different content and we have created an ordered way for the user to traverse the video player. The dark/light mode button has been kept as a toggle to minimise the number of buttons and maximise the UI/UX.

#### **Technique Reasoning**

Native prototyping has been used as you can easily create a system. This also gives a realistic impression of what Tomeo will look like. Since this is the final development cycle, an accurate model of what the final system should look like should be produced. Qt Designer has been chosen since it has a visual tool for creating a layout in Qt Creator where we are developing our code. Therefore this will confirm whether the features in the previous prototype cycles are feasible and can be implemented.

## Design Evidence



## Code

### Improvements Video

[https://youtu.be/-EtAT\\_RvjEo](https://youtu.be/-EtAT_RvjEo)

### Prototype vs Implementation

- A primitive version of tags for the videos have been implemented, however the user is unable to search for video in a specific tag as hoped for. This is due to a mix of technical difficulties and time constraints.

## Evaluation

### Evaluation Technique

Cognitive Walkthrough

### Technique Justification

We used cognitive walkthrough as our first evaluation technique, in order to make sure that the application navigated easily and functioned logically. Now we will be making use of cognitive walkthroughs again to make sure that the program has kept these core qualities after four additional development cycles, which have added more additional features. This will give us clear insights to whether or not our implementation is user friendly and can be interpreted easily.

### Evaluation Outcomes & Evidence

Step	Action is Correct?	Notice how to Perform?	Can it be interpreted?
1 - Start-up the application	Yes	Yes - Home screen is familiar to users	Yes - application starts up
2 - Choose a video type	Yes - Each video type is labelled with a picture	Yes - nice obvious buttons	Yes - page changes to relevant natural characteristic
3 - Select a video	Yes - Videos are in a scroll area of left hand side	Yes - nice obvious buttons	No - selected video pops up onto video player but which video is playing isn't highlighted

4 - Play a video	Yes - play button in center of control buttons when a video is playable	Yes - nice obvious button	Yes - play button turns into a pause button so user knows pausing is now an option
5 - Pause a video	Yes - pause button in center of control button when video is pausable	Yes - nice obvious button	Yes - pause button turns into a play button so user knows playing is now an option
6 - Select video of different natural characteristic	Yes - home button	Yes - nice obvious button	Yes - User is taken back to the home page where they can select a different natural characteristic

The evaluation shows that the main functionality of Tomeo is still working clearly and efficiently. With the addition of button icons and a home button, video navigation and control are a lot easier, and the flow of the implementation works a lot better, since before the application had to be reset in order to select different natural characteristics. However, one area that could be worked upon is the visual feedback to the user after they perform an action. For example, if the buttons changed colour when hover/clicked, or the video being played would be highlighted in the scroll-area, it would provide valuable information to the user that the actions they are performing are correct, as this currently only happens with the control buttons.

## **5: Video Demonstration**

<https://youtu.be/F1R9GYqC-zg>

## **6: Ethical Considerations**

In order to comply with the university regulations for ethical research, each participant was given an information sheet to explain why and how the study was being conducted to ensure that they have made an educated decision before deciding to take part in the study. They will also be handed a consent form if they decide to participate, this confirms their participation. In the information sheet and consent form the user is told that they can withdraw any time.

Furthermore, user data must be kept safely and securely in order to achieve this the data will be encrypted and anonymised by separating the research data from user data. The data will be stored on one of the researchers N:drive folders as this has gotten approval from the Faculty IT manager. In addition the data will be stored for 3 years as the university projects a 3 year storage period as sufficient for student projects.

The information sheet and consent form are attached on the following pages.



## Information Sheet

### **Tomeo application requirements**

*This research sheet will help gather requirements to develop an outdoor enthusiasts video organisation application named Tomeo.*

### **Invitation paragraph**

You are being invited to take part in a research project. Before ensuring that you would like to partake in the following research project please read the following information carefully, as it will help you understand why it is being conducted and what the research will entail. If you are unsure about certain facets of information, please do not hesitate to ask for assistance. Please take time when making your decision.

### **What is the purpose of this Project?**

Tomeo is a video organisation platform which is directed at outdoor enthusiasts. Therefore, data will be needed to learn how outdoor enthusiasts like to organise their data but also help identify how the current system may be improved through the Tomeo application.

### **Why have I been chosen?**

You have been chosen alongside 10 other participants as you have shown a keen interest in exploring a wide range of areas in nature whether that be forests, the mountains, the skies or the ecosystems around rivers, lakes and oceans.

### **Do I have to take part?**

It is entirely up to you whether you decide to participate in this research project. If you decide to participate then you will have to sign a consent form. However, you are entitled to withdraw at any time without having to give a reason. In this case any data collected from you will be disregarded.

### **What do I have to do?/ What will happen to me if I take part?**

This research will take place over 4 weeks and each week can be completed online or at the university student union. When beginning the research project, you will be asked what your ideal requirements would be when developing a video organisation application. Some requirements will have been created before you have taken part in the project, and you would have to rank how desirable each requirement is when designing the application. At the end of this form, you will be able to add any requirements that you feel would be useful but have not already been noted. Then designs will be developed based on these requirements and you will give your feedback on these prototypes, answer what you feel could be improved upon.

### **What are the possible benefits of taking part?**

Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will help in developing an application that would improve on the current storage and organisation methods for outdoor enthusiasts, like yourself. This would be able to offer a more centralised hub for your collection of exploration videos making it easier to revisit them later.

### **Use, dissemination and storage of research data**

Once the data has been compiled, analysed, and published it will be securely archived in case of further development for the project. As this would be classified as a student project and appropriate storage time would be 3 years.

### **What will happen to my personal information?**

Any personal information will be anonymised. This will include the name of any participants, meaning the research study will just collect the participants' responses, unless your responses highlight any need for further attention outside of the research project, this may include university staff or the relevant authorities.

### **What will happen to the results of the research project?**

All personal information will be kept separate from the research data and secure. The personal information will be kept secure and because of the nature of this research you will not be able to be identified once the application has been launched. However, if the data you entered is flagged for further viewing, this may be due to indications of self-harm or other destructive behaviour, outside authorities may be notified.

You will be able to see the results of this project once the application has been developed, meaning you will be able to identify which features were chosen to implement. In addition, this research data could be used later during the update process as ideas may be revisited and later implemented.

### **What type of information will be sought from me and why is the collection of this information relevant for achieving the research project's objectives?**

In this research project data sought from yourself would include: First name, Surname, what would you like to be included in this application and how would you like your files to be organised. This data is needed in order to develop an efficient and therefore effective application.

The Tomeo Project

### **Contact for further information**

Tom Bata-Madden

07392 039554

You will be handed a copy of the information sheet and a consent form to sign, if you have decided to participate in the research project.

Thank you for reading through the information above.

## Consent Form

### Consent to take part in Tomeo Application Requirements research

	Add your initials next to the statement if you agree
I confirm that I have read and understand the information sheet dated 19/11/2021 explaining the above research project and I have had the opportunity to ask questions about the project.	
<p>I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any question or questions, I am free to decline. Contact Tom Bata-Madden 07392039554</p> <p>When you withdraw from the study all data will be redacted and not included in the study.</p>	
<p>I understand that members of the research team may have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.</p> <p>I understand that my responses will be kept strictly confidential.</p>	
I understand that the data collected from me may be stored and used in relevant future research in an anonymised form.	
I understand that relevant sections of the data collected during the study, may be looked at by individuals from the University of Leeds or from	

regulatory authorities where it is relevant to my taking part in this research, If found to be of necessary attention.	
I agree to take part in the above research project and will inform the lead researcher should my contact details change.	

Name of participant	
Participant's signature	
Date	
Name of lead researcher [Tom Bata-Madden]	
Signature	
Date*	

\*To be signed and dated in the presence of the participant.

## **7: Instructions - How to Run Tomeo**

To run Tomeo, input the directory containing videos and their thumbnails with the same file name, as the command line argument.

To use the video application press the mountain button on the homepage to be taken to the video player screen. This will automatically play the first video in the scroll area on the left.

To change videos select another thumbnail on the left.

The sliders can be used to skip to specific parts in the video, and change the volume.

The speaker icon can be used to mute and unmute the audio.

The sun icon is used to change the theme for the current page.

The pause and play icon is used to start and stop the video.

The home icon takes you back to the home page.