A Report of Final Coursework

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1. BACKGROUND AND FIRST GROUP MEETING

In this final coursework, based on the app called BeReal, we are required to create a prototype app (MVP) which offers a similar range of functionality for video.

After receiving this task, our group member immediately held a meeting. Based on the theory of INTERACTION DESIGN LIFECYCLE (Preece et al. 2019), the first step of our project is decided to be establishing requirements.

After all our group members looking at final process.pdf and marking scheme provided, we started our discussion for the task and finally determined an initial design. Our app should offer functionality that is similar to BeReal so that we download this app to explore it. We took several screenshots of its interface to help us better understand the task. However, our app is for video, for which we decided to do marker research. Specifically, we got ideas from several video players or websites that has this functionality, including Bilibili, YouTube and Netflix. These websites are very popular nowadays, meaning that they must have complete functionality for video player, from which we can learn a lot for designing our app. After these actions, we had a direction of our app.

In this meeting, we put forward that our app should be able to read the video in a specific documentary, then play it, also including the button of stop, adjusting volume and speed of playing the video. This range of functionality is decided to be the necessary part of our app. At the same time, there is a series of functionality that we are expected to try (at least designing icon or button), in the final interface, user may also change the video for play directly rather than restarting the app. There may be some social properties, for instance, users check their recent video and share them with friends on the app, in

which we got ideas from BeReal.

We set up a shared code repository by Git. In the last semester, all our group members had experiences of using Git to program for XJCO1921 so that this technique is chose to be one of our group working techniques. Enterprise WeChat is also a technique for this aspect. It has functionality for videoconferencing, which is convenient for our group meeting especially when someone is busy with work and has no time to hold meeting offline. On the other hand, it also can record key points of every group meeting.

To start with programming task, we use Qt creator, which is the requirement for this task. For first iteration, our goal is to achieve the basic functionality for video player, concluding stop, play, adjusting volume, checking the list of videos to play. All of these are necessary functionality so that we want to complete them as early as possible.

We choose 3 main techniques for the evaluation of our project: heuristic evaluation, cognitive walkthrough, and user feedback. There are several reasons why they are chosen. In the first place, we attach importance to the visibility and consistency which directly relates to the user experience, and it is also considered important in the Nielsen’s ten heuristics. Second of all, in cognitive walkthrough we simulate the process of users performing specific tasks to assess cognitive load so that we can have a full view of the user’s experience and easily find the shortage of our design. Last but not least, the user feedback reflects user’s real feeling of using our product and their expectation of our further improvement, which are directional to the aspects that have to be improved. These techniques are chosen for faster and better reflection to the users’ demands.

Except for task relevant to programming, our group members are also required to write the report and make show case videos. However, these tasks are impossible to finish without our existing prototypes. So, for group task attribution in this week, all our members were commanded to review theoretical knowledge of User Interface and get familiar with the prototype provided at first. Sheng Ning, one of our group members, who has the best programming skill in our group started to program and tried to complete codes for basic functionality.

1. FIRST ITERATION

We use heuristic evaluation and cognitive walkthrough for testing the first iteration of our product. There are two reasons for choosing them. In the first place, we attach importance to the visibility and consistency which directly relates to the user experience, and it is also considered important in the Nielsen’s ten heuristics, so we choose this technique. Second of all, the biggest difficulty and risk actually lie on the realization of the functions for a brand-new team working for a brand-new project, so that the cognitive walkthrough can well reflect whether our product has been equipped with basic functions such as play and volume adjustment.

In the evaluation of the first iteration of our product, we focus on 3 points in Nielsen's ten heuristics: visibility of system status, match between system and the real world and user control and freedom, because these 3 requirements are the most relevant to the functions in this cycle. Our first-generation product successfully passes the heuristic evaluation. The progress bar meets the requirement of visibility of system status, the button’s icon is easily understood so that it meets the standard of match between system and the real world, and the button gathers play and pause functions together shows great convenience for user to control the whole process. While the shortages lie in the diversity of play functions, the present player can only play or pause the video and is unable to adjust the play speed or the size of play window, which may be our main target in the next iteration. About the cognitive walkthrough, the whole product is easy to use and runs smoothly with very slight cognitive load, but there is also a shortcoming, the chosen video can not be shown on the play window before clicking on the play button, this reduces convenience for users to some extent and need to be improved.

1. SECOND MEETING AND ITERATION

After evaluating our prototype of first iteration, second group meeting is held offline. In this meeting, the first mission of us is to re-arrange our group task attribution. Except for Sheng Ning, other three students should start the task of writing report and making UI improvements. For design of UI, Qt designer is chosen to be used. Because Qt is the technique that we must use, and Qt designer is related to it, having good interaction. In consideration of marking scheme for the report and relevant work, we decided that two students should be responsible for this mission, Junyu Zhou and Ziyang Zheng respectively. Then Jingwei Zhang, who has experience of using Qt designer, was commanded to complete UI improvements.

The goal of this week is to complete the second iteration and writing content about first meeting and iteration in the report. The mission of second iteration is to finish the full screen issue and speed multiplier of video play. The reason why we chose this range of functionality as the task of this week is that we regard it as developed functionality for video player. Not every video player has this kind of functionality, but for YouTube and most popular websites, all of their video players are able for this.

In this meeting, we also reviewed the result of first iteration. We had achieved the expected functionality for that week, thanks to great contribution of Sheng Ning and everyone involved in discussion of code writing. With other module final coursework released, time left for us was not as much as in the first week. Our group member concluded that it was important for us to improve our efficiency of team corporation and communication.