**First iteration:**

**Code:**

**Evaluation:**

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. Overall, this iteration completes the basic functions and is accessible and user-friendly.

**Second iteration:**

**Evaluation:**

We use the same evaluation techniques heuristic evaluation and cognitive walkthrough, but additionally add user feedback in this cycle. According to the main target of enriching the diversity of functions, the evaluation will focus more on the usability and practicality in this iteration. Through cognitive walkthrough, it is found that all of the functions can be easily accessed and the feedback from the system provides enough information for user to judge and monitor the system state, reducing the cognitive load to the max extent. This iteration passes the heuristic evaluation well and performed especially excellent in visibility for its complete feedback when certain function is on running, for example the fast playback would show proper number of which speed the video is played at. As for the aesthetic and minimalist design, the new buttons and widgets are in the same clear and concise style. Except these, the second iteration shows great superiority in the match between system and the real world due to the addition of double-click full screen, click pause and using directional key to adjust progress and volume these four functions, which are well related to the normal logic of general processing. About the practicability, functions mentioned above do huge contributions to improving the user experience, and additionally a full screen playback is added to the player also provide users a better experience. User feedback counts relatively heavy in this evaluation, because we have received critical feedback from another group’s members. It is estimated that our diversity of function is quite high, and there are several functions including double-clicks to full the screen and click to pause the video are very useful and provide much convenience, but problems exist in the layout, which is not that fit with the normal logic, may leads to user misunderstanding. This issue should be fixed well in the next iteration.

**Third iteration:**

**Evaluation:**

The key point to be evaluated in this iteration lies in the rationality of the layout of the widgets and the feasibility of the new functions screenshot and search, because great changes have been made to the layout and the new features are relatively complex which may easily crash. Still, we will evaluate this iteration with the help of heuristic evaluation and cognitive walkthrough. It is estimated that the whole layout of the product seems more appropriate with a bock of functions icons/buttons, a separate video list and even a comment area below the play window. All of the widgets fit well in this window and match the normal logic. By using the cognitive walkthrough technique, we find that the whole product is very close to the application in the market and offers nearly the same user experience, which indicates that it is almost already a mature product with no cognitive load, no misleading and high efficiency. In evaluating the feasibility of screenshot and search functions, visibility and error prevention is well designed because enough information and feedback would be given to user to ensure accuracy of every steps. The screenshot photo will be saved in the file folder and the search function can correctly show the matched video. Realization of these two functions are not just the increase of the number of functions, but a great contribution to improving the user experience, providing much fun and much convenience. Overall, a relatively mature product is created in the third iteration, the only one points needed improvement may be the appearance of the window.