

CSCI 3130 Group Project 1

Iteration 2

Group Members

Minwoo Yang B00857279

Sahl Zahoor B00798602

Benjamin Murray B00636179

Yinhao Cui B00819784

Rachit Hans B00816685

Megan Deering B00795798

GitLab Link: <https://git.cs.dal.ca/minwoo/courses-2021-summer-csci-3130-group-8>

Product

As a free video download plugin, Grab will make user's internet experience unforgettable. The plug-in, which was developed by students from Dalhousie University students, the needs and expectations of the users are regarded as a top priority. Grab 1.2 is the result of all the research and projects done to supply convenient and useful services for web users.

Grab offers downloading videos from web sites to collect your favorite videos or images. Our team has successfully launched Version 1.1 on a Google Chrome plugin. The product is easily adoptable and comforts users to save time instead of finding a way to download video files. Grab version 1.1 supported basic functions which are 'download' and 'history' service. However, the history function was not fully implemented since we focused on the download function as a top priority. Grab version 1.1 was not officially released because it was enough to be used as a demo. The current version 1.2 has a drawback which is not supporting audio in the video. The purpose of version 1.2 is to improve the functionality of the plug-in and build a stable frame. The audio issue will be handled in the next version. Our team is proudly releasing Grab version 1.2 and major updates are completed such as download history, video save, new interface design and we are planning to release version 1.3 in the future.

What Grab version 1.1 offers:

- Download a simple video individually.
- An easy instruction.

What Grab Version 1.2 offers:

- Download and save available videos from websites to user's local machine or storage.
- Track downloaded videos from your side.
- Download all available videos from webpages with a click.
- Provide simple instruction.

What Grab Version 1.3 will offer:

- Download images from websites and save to user's local machine.
- Upgrade UI&UX design.
- Develop an app that would work better on most websites.
- Make the plug-in available for most of the webpages. (Version 1.2 does not work on certain webpages)
- Audio supporting.

Important:

Grab is not supposed to download videos from YouTube, Instagram, Dailymotion, Vk and Tiktok materials since Chrome Store restrictions do not allow to do it. Grab also does not collect or share any personal data.

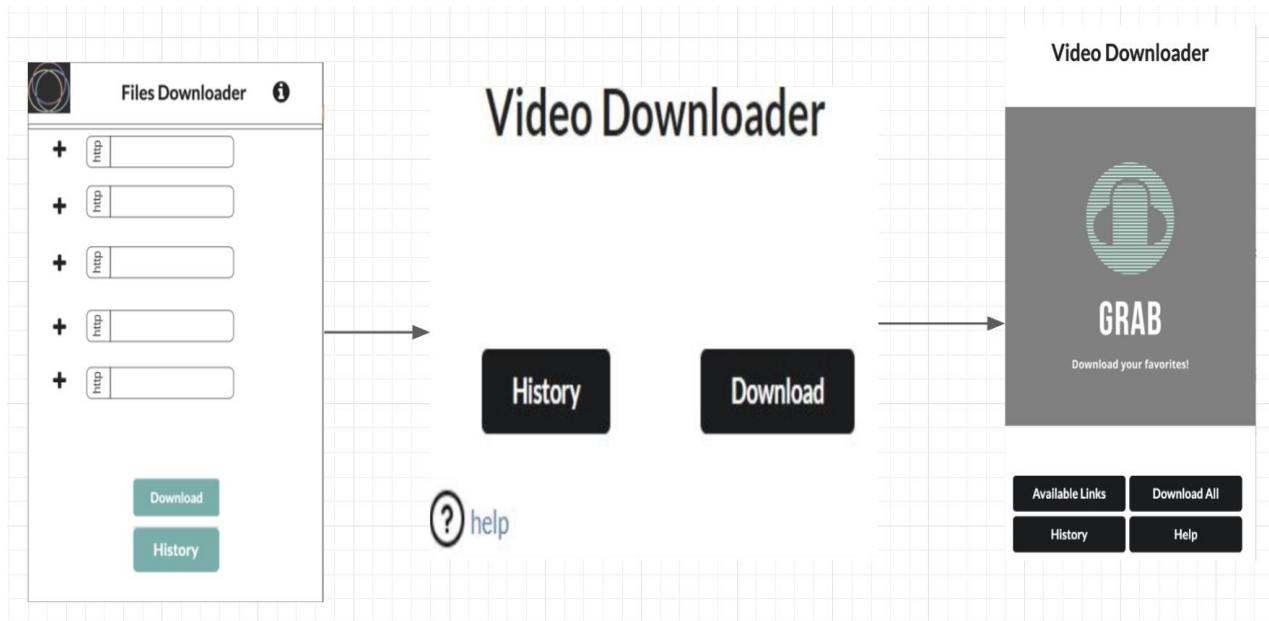


Figure 1.1 GRAB ver.1.0

Figure 1.2 GRAB ver.1.1

Figure 1.3 GRAB ver.1.2

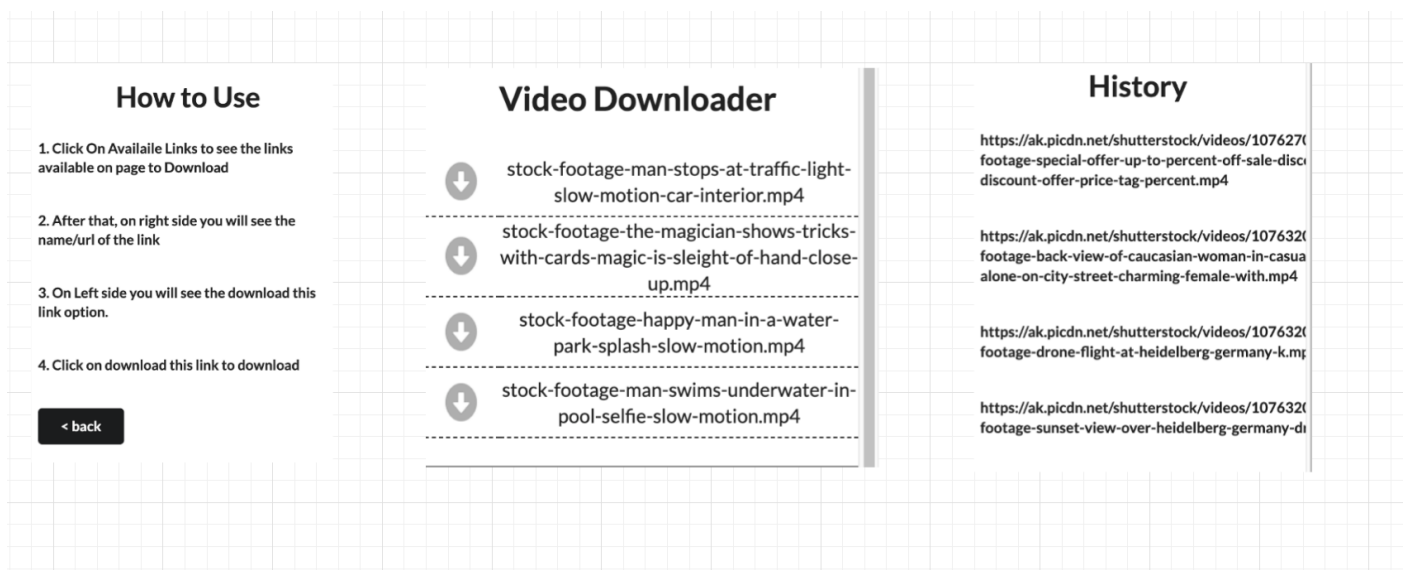


Figure 1.4 GRAB-Instruction

Figure 1.5 GRAB -Download

Figure 1.6 GRAB -History

Risks

Requirements changes: It may happen that as we think more about what our user base needs, that the requirements for our product may change and require us to make major changes to the software.

Failure of external libraries: We are using external libraries to help with our project, such as semantic UI. There could be updates to these libraries that would make them incompatible with our software.

Time management: Although we were more on track with managing time in this iteration, we still could have done a better job to ensure that there was less risk that we would not complete it on time. Therefore, in a potential future iteration, time management would be a risk and it would be essential that tasks and schedules were planned out from the beginning of the iteration.

Legal issues: We are developing an application that downloads media, which can allow us to run into legal issues. There are many websites that have restrictions on what can be downloaded from them because of copywrite, and/or to protect their users. Most companies have their own terms of service and limitations regarding their media, so this should be investigated further to not violate any laws of terms of service.

Lack of experience: None of our group members have extensive experience in developing software and so it is highly likely that there may be issues that we overlook or tasks that we are unable to complete.

Lessons

Through this project we all got the platform where we learnt about recent technologies and software development processes. In addition, we learned how important communication is in the completion of a project.

Git/Git-Lab: During iteration 2 we learned about burndown charts through which we were able to keep track of the amount of work we completed and were able to predict likelihood of completing the tasks each time. In addition, we learned about merge conflicts that we faced during this iteration.

Communication: One of the most important things we learned through this project was the importance of effective communication. During the project we encountered many difficulties with technology we used as none of us had experience with this before. However, whenever we faced the difficulty, we communicated with other team member as soon as possible to resolve the issues. Through this we learned that in a project, communicating with other members can solve the problems easily. In addition, we learned that communicating with other members also provides the latest ideas to solve a particular problem.

IndexedDB: To complete the project we needed a database where we can store the download history of the user. While working on this project we get to know about the different database system that browser provides us. Out of those we chose IndexedDB which meets all the requirements we were looking for. And working on this we also got to learn about NoSQL.

Issues

Having learned several lessons from iteration 1, we were able to avoid most of the issues that we faced initially. For our second iteration, we tried to plan out feasible goals that improved upon our first product, meaning that we were less rushed on the final product.

However, some issues still presented themselves. Our second iteration improved upon the features of our first, adding features like a history button and a download all button. Since both features were being developed simultaneously, it required us to refactor our code afterwards to ensure that both features interacted with each other well.

Another issue worth noting was due to the simple nature of the application, it was hard to produce useful features to add to it. Therefore, the features we added are useful additions to the base functionality of the application.

Satisfaction

We are satisfied with our performance in Iteration 2 since there have been major updates from the earlier version. Our team updated the "history" function that was not completed in iteration. Team members worked on the assigned tasks as has been planned using project management tools and the implementation was organized and easy to follow. Our team achieved completing the newer version through constant effort and collaboration during the semester.

As a result, the product has been better by each iteration in respect of interface design, programming feature, and user experience. However, we still have left ideas that have not been updated. The term of service is one of the issues that do not allow our product to download videos from certain websites. Since it is a legal issue, we are looking for advice from a professional legal consultant to resolve this issue.

The development of GRAB is inseparable from everyone's efforts. Everyone in our group is committed to making the product more perfect. Our team reflects the user's view to supply easy usable plug-in as well as the functionality of the product. Overall, GRAB 1.2 becomes a better product through iteration 2 compared to version 1.1 and we are ready to work on our newer updates for version 1.3.

Personal Statements

Benjamin Murray: I was pleased by how our group members came together for iteration 2 to improve on our plugin. All our group members came together to make a successful project, even in the face of an online learning environment, where collaboration can be difficult. It was clear to me that we learned from the mistakes we faced in our first iteration and ended up delegating work in a more successful way. Time management and communication were the most important skills that were improved upon by this project. Overall, I feel like we were successful in both learning from the experience and supplying a functional plugin.

Megan Deering: I thought our team organization was important for this iteration of this project. I feel like this was one of the major things that we were able to improve upon from the last iteration. In the first iteration we were mostly figuring out stuff as we went, but this iteration we were able to learn from that and come together in a much more organized way. We were able to get more use out of GitLab as well as coordinate tasks much better and create a timeline for when things got done.

Minwoo Yang: The group project was one of the practical software development processes. I was lucky to have an opportunity to lead a project as well as experiencing a full stack working environment. My duty was not only limited to programming, but also building useful software with my leadership skills. I actively took part in designing, peer-programming, project management, and back-end development. I was lucky to work with such a talented team and we applied academic knowledge into practical skills. I learned how to work as a team and improved communication skills to make sure whether the project is on the right track. Grab version 1.2 has achieved major updates and our team is proud of what we have done. The project has supplied me to practice agile project management and I would like to develop project management skills in my future career. To sum up, the project delivered us hands-on software development experience as well as how to work as a team.

Sahl Zahoor: This project really helped us grow and understand the world of software development and working in teams. Since we have never met each other for this project, and we managed to complete it all online is a great achievement and experience the remote working environment. I am happy with the way the team came together and completed this project from iteration one all the way to our final deliverable.

Rachit Hans: The most important thing the project taught me is the importance of communication in successfully completing a group project. Initially, none of the members had any idea about how to approach the task since we have not come across any such assignment. It was through effective communication that we all arrived at a consensus about how we will approach the project. While completing the project, we came across various obstacles which we overcame using effective communication. In addition, this project taught me some modern technologies such as, git, IndexedDB, chrome API, and provided me with a platform to use those.

Yinhao Cui: Compared to iteration 1, our group gave a lot of upgrade points in the iteration 2 plan. I think the most important thing in the project is to learn how to implement more program functions. So, our team is working hard to develop and constantly upgrade and update the program and add many new functions for everyone to use. In communication with my team members, I also learned some functions that users will need and how to add them. At the same time, try to look at the problem from the user's point of view in the update. This made me realize the importance of user stories, which are useful for us to realize the functions of the program.

Team Management

We divided our team into 4 parts which are project management, back-end, front-end and quality assurance. The dedicated members have their own accountability and maximize the agility of the team. We move back and forward to keep the best quality of the product and improve product functionality when it is needed.

We used GitLab to keep everything in control. This approach helped us divide the work and assign it to the write people. This way we knew what needed to be done when and who handled what. We have also used teams to communicate and hold team meetings to discuss our progress and just talk about genral discussion items. Both these tools really helped us manage and keep control of our project and move in the right direction and stay on time.

Our team has been actively using milestones and Figure 2.1 Burndown Chart with 3 different labels. The labels consist of three parts which are “To Do” “Doing” and “Done.” Using these labels, our team was able to keep on track and make sure to complete the project on time. As figure 2.1 shows, our team progress is below the average line. With that having said, we are able to manage assigned tasks efficiently.

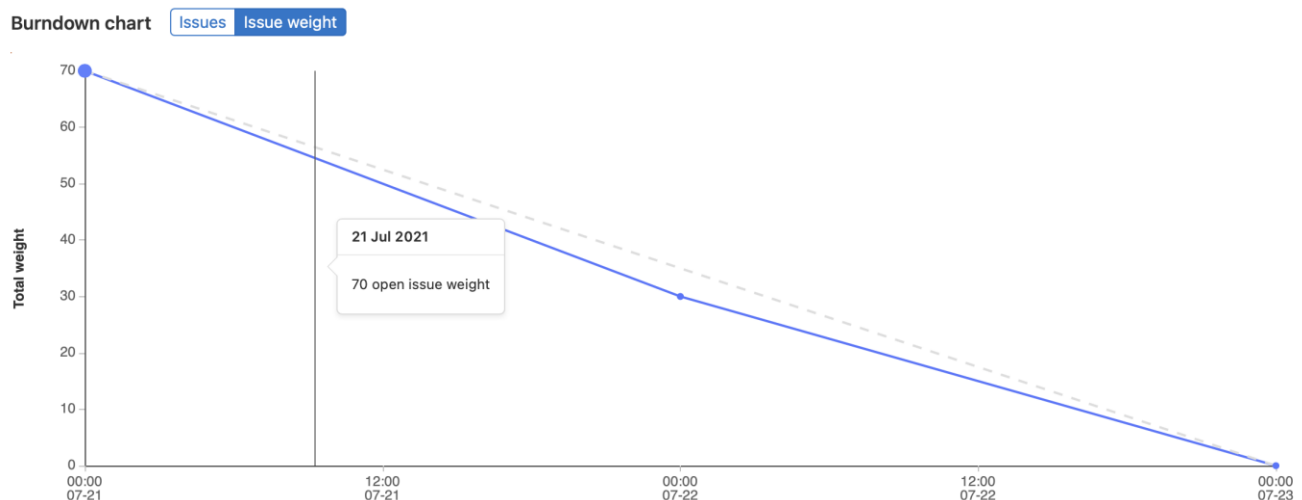


Figure 2.1 Burndown chart

Conclusion

In conclusion, this project was challenging for us, but as a team we planned the project in advance and completed it by given priority. In the initial stages, we reflected on what we have learned during the software engineering course that includes agile development, risk management, quality assurance and continuous updates with using a project management tool. By adopting agile method, our team keeps high-performance and deals with unexpected events such as implementation of audio of the video and terms of service issues. Overall, as our team communicates with TAs, our team ensures the value of the product throughout the delivery process, thereby meeting the expectations of the client.