

## ✗ Incomplete Tasks

While we have completed most planned tasks in this sprint, there was one feature we decided not to implement at the end, which is the additional function of font size adjustment for users.

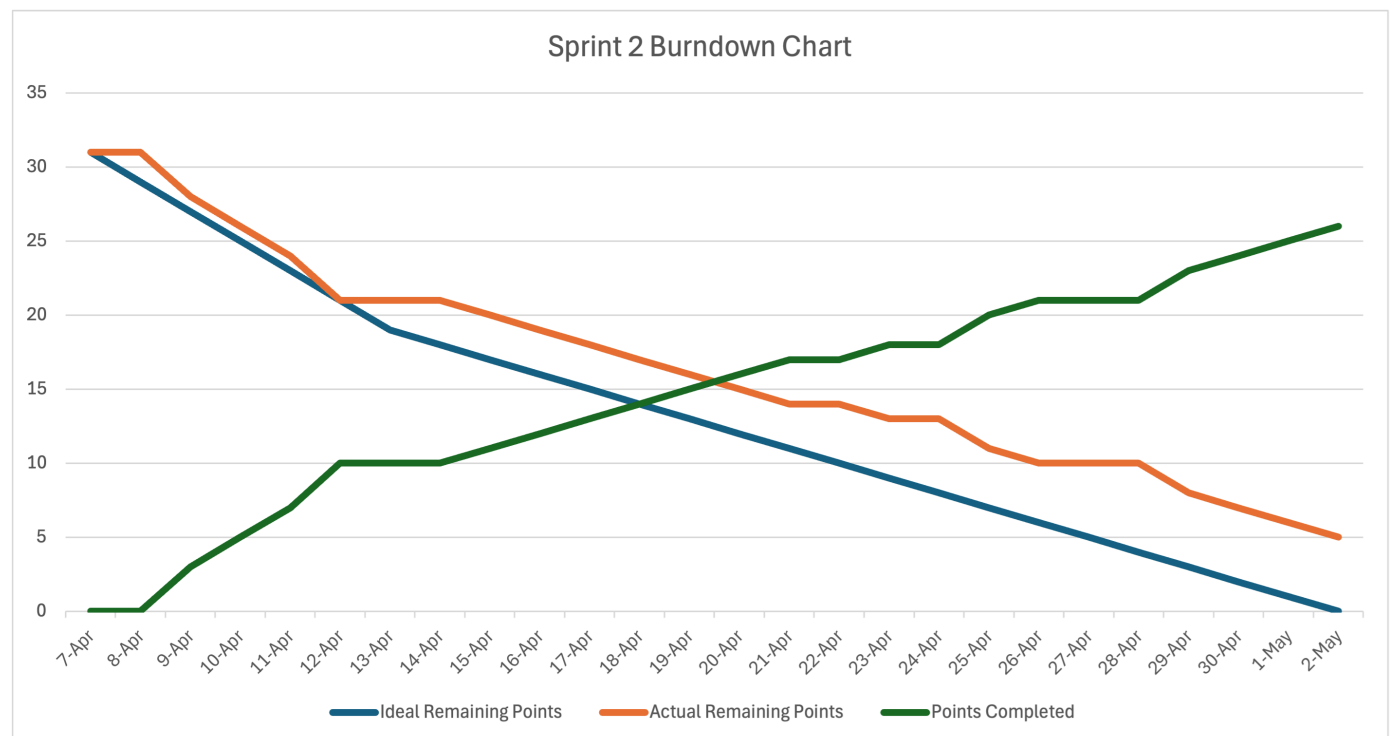
Initially, we considered that the feature was necessary to implement to increase accessibility for vision-impaired users and simply improve the functionality of the interactive textbook to support easy reading. However, we decided not to develop the feature because the font size can be adjusted with the existing zoom in and out function of the browser page. In addition, the utilization of the existing function in the browser appears to present the content better than the built-in function at the frontend of the application. Therefore, we will drop this task and not implement it in the later sprints.

## 🔧 Challenges

1. Difficult to understand the structure of the original interactive textbook
2. Finding the right solution to backend storage
3. Having a steep learning curve when familiarizing with the previous programming files
4. Having problems in time management between the workload of this project and other subjects

## 📈 Team Performance

Burndown Chart



During Sprint 2 of the interactive textbook development project, the team exhibited consistent progress and adaptability, despite initial delays relative to the ideal sprint trajectory. The Sprint 2 burndown chart reflects that while the team's

actual progress initially lagged behind the planned ideal, significant momentum was gained in the latter half of the sprint. After addressing early challenges, the team was able to align closely with the ideal progress line by the sprint's conclusion, demonstrating strong teamwork, effective problem-solving, and an ability to recover and deliver within the sprint timeframe.

The primary objective of this sprint was to integrate previously developed content and application features into a newly designed frontend layout, supported by an improved backend storage solution. Key deliverables included the complete redesign of the interactive textbook's layout to enhance readability and user navigation. The homepage was successfully implemented with three distinct tabs—chapters, videos, and quizzes—enabling users to easily access relevant content. Each chapter was divided into introductory sections and subject-specific segments to provide a seamless learning experience. To optimize performance, all images, videos, and thumbnails were migrated from local storage to Cloudinary, significantly reducing load times.

In addition to these structural improvements, new functionalities were introduced. A dark mode feature was added, accessible via a toggle on the upper right corner of the webpage, allowing users to comfortably read in low-light environments. Quiz frames were resized to display results without requiring users to scroll, thereby improving usability. Interactive elements were incorporated using lightweight JavaScript functions, preserving video file sizes while enhancing user engagement through pop-up hints positioned accurately within the content. Furthermore, the alignment of text paragraphs was refined to ensure a natural, top-to-bottom reading flow on each page, addressing previous layout inconsistencies.

Despite substantial progress, one planned feature—the implementation of an adjustable font size function—was deliberately omitted. Upon evaluation, it was determined that the browser's native zoom capabilities offered a more efficient and user-friendly solution compared to building a separate font adjustment feature within the application. Consequently, this task was formally removed from the project backlog and will not be pursued in future sprints.

Overall, Sprint 2 resulted in significant advancements toward the project's goals, greatly enhancing the usability, accessibility, and performance of the interactive textbook. The team's ability to adapt and deliver under evolving circumstances positions the project strongly for continued success in subsequent sprints.

### **Actions to do**

1. Improve the deployment of the application with the comments from our client and supervisor
2. Add new chapters to the interactive textbook
3. Implement the analytics feature of user behavior when using the interactive notebook
4. Develop a table of contents for the textbook