# DUNGEON CODER

## Team 23 - Sprint 1 Retrospective


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**What went well?**

In Sprint 1, we were to establish most of the user stories we mentioned in out Sprint 1 planning document. Things were going a little slow in the beginning due to the setup of the new technologies involved in the project. The entire team were new with the libGDX framework we are using for the game and also MySQL for the database. The only thing we were familiar with was Java. It took a lot of time and effort to learn the API of the framework and complete the user stories, but once our team became familiar with the basics progress quickly rose.

Following are the tasks that were successfully completed in Sprint 1.

- As a user, I would like to be able to register an account.
    - The user is able to register an account from the website. They are able to login from the website and also the application to gain access to the game for users and the control center for teachers.
    - The backend server was setup to handle various requests from the client.
    - The database is able to save the account information.

- As a student or player, I would like to be able to easily browse and repeat a stage.
    - The user is able to navigate into the instructional mode to view the list of stages. They are able to repeat a stage anytime they want.

- As a student or player, I would like to be able to save my progress manually and automatically.
    - As the game has not been created yet, the save functionality has been implemented to allow game data to be saved in a text file in the local machine.

- As a student or player, I would like to be able see difficulty, objective and explanation of a stage.
    - The user is able to select a stage in the instructional mode to view the difficulty, objective and explanation of a stage before the user decides

to play the stage. The user is also able to view the deadline of the stage.

- As a student or player, I would like to be able to get hints on a stage.
    - The user is able to click on a button to view the hints on the stage.

- As a player, I would like to have an achievements system in the game.
    - The user is able to view and browse through all the achievements in the game.

- As a teacher, I would like to keep track of my students' progress.
    - The teacher is able to login into the website to view the student's progress.
    - The client is able to update the students' progress in the database.

- As a teacher, I would like to edit the point values of different tasks.
    - The teacher is able to edit the point values of different tasks.
    - The website is able to update the point value in the database.

- As a student, I would like to play as a normal player after I finish working on assignments.
    - The user is able to enter the main story and free battle modes when the user has completed all the tasks that have a deadline in the instructional mode.

- As a student, I would like to see how many attempts I took to complete my tasks.
    - The user is able to view the number of attempts they have taken in a stage.
    - The client is able to update the number of attempts in the database.

- As a teacher, I would like to be able to set a deadline for the students to complete the stage.
    - The teacher is able to update the deadline for the each task from the website.
    - The website is able to update the deadline for each task in the database.

**What did not go well?**

Although we were able to implement most of the user stories, still there were a few tasks which remained unsuccessful. We did not have enough time to complete these task as the initial setup of the new technologies took a lot of time. Also, we underestimated and overestimated on the amount of hours for several of our task. We also chose too many user stories for Sprint 1.

- As a user, I would like to be able to manage my information.
    - We encountered issues with the service we decided to use for the website. Initially, we decided to use GitHub Pages to host the website, but we soon realized that GitHub Pages only supported static pages. The website needed to be dynamic as we needed to update the information on the website based on the database. Henced, we did not have enough time to setup the functionality to manage the user information.

- As a teacher, I would like to be able to assign grades and leave comments on the gradebook.
    - Similarly with the task before this, the problem faced also halted the progress on the gradebook.

- Implement code evaluator.
    - The workload of the UI and backend server was higher than anticipated. Hence, we did not manage to make much progress on the code evaluator.

- Implement an alert when achievement was reached.
    - One of our members that was in charge of handling the achievement page, however, this task has proved to be rather difficult. We could not find a good way to implement this function before the Sprint review, hence, we could not finish this task.

- Creating and running unit tests.
    - We were planning to create and run unit tests but we did not anticipate the amount of work we had to do to complete the other user stories. Hence, we did not have unit tests but instead manually tested the work we did.

**How should you improve?**

During Sprint 2, there are a few different ways we will try to improve individually and as a team. We realized that this group project takes a larger amount of coordination that previously anticipated. We would be working on these several aspects to hopefully improve in Sprint 2:

- More accurately estimate hours required for each task.
    - After misestimating on several of the task in Sprint 1, we had learned more about how much hours are required for each task. This hopefully will help us allocate more accurate hours for tasks in Sprint 2 and allow us to complete everything in a timely manner.

- Improving team coordination
    - To solve the issue of coordination, our group will now hold longer meetings. During these group meetings, we will not only discuss what we worked on, current issues, and what we plan on completing in the near future, we would also try to have group coding sessions where we could help each other on the problems we faced and also connect the project together.

- Work on testing
    - In Sprint 1, we had not made much progress on creating and running unit tests for some of the features in the game. As a result, we had encountered an unexpected recurring crash in the game during the Sprint review. Hence, we would try to setup a portion of our time in Sprint 2 to handle testing to prevent this situation from happening again during the Sprint review.