# Team 1 – S2 Studios : Sprint 2 Retrospective
# Project Name: Tempus Elemental


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**What went well.**
During at least one of our in person meetings, we met in the VR lab of Lawson (B131). These machines already had Unity installed and it allowed every one of our members to be able to participate, rather than having to have multiple people work from the same laptop. During this meeting we were able to coordinate most of the individual work we've completed up to that point and it was genuinely fun to see it all come together. Especially when we saw the original art for the characters interacting with crazy leg and arm animations. We definitely improved on communication since the first sprint, and everyone had a clear and defined task to do. The game is legitimately fun to play, and it gives us hope that this game may become more than just a school project.

Following are the tasks that were successfully completed in Sprint 2.

- Distance Learning versus in class lectures were discussed at length. It was determined that distance learning lectures was by far the superior method to learning.

- Dash function was successfully implemented. It allows players to dash/sprint to the direction they were facing at the cost of Time/Health.

- The time distortion functionality and dash functionality are now mapped to the same button. The dash is based on a tap while the time distortion creation script has been modified to only activate after being held for a certain amount of time.

- There are now five total powerups, three of which change the player's current time distortion.
    - Time addition
    - Attack damage increase
    - Slow down distortion
    - Speed up distortion
    - Freeze distortion

- Two new time distortions have been added, a time speed up (to include the speed of the player), and a time freeze.

- Testing and balancing has changed some values, such as how long the attack button must be held to charge up a ranged attack.

- A menu has been created, which allows the user to choose the number of players, switch the chosen map, and choose the gamemode.

**What went wrong.**
Time management. During this sprint, our team spent less time in the beginning of the sprint, and much more near the end. While we were able to finish everything on time, the final push in the last few days was very draining.

Game Controllers. To be more precise we had some serious issues with the way unity handles the scene transition which hindered our progress for a few days. We did not have enough experience with unity engine to find the issue earlier which caused long sessions of bug fix and rewrites.

Unit testing. We started adding unit tests in this sprint but it took more than what we anticipated to set up unity's unit testing system and get familiarized with it.

While we finished every task that we assigned ourselves, the following are the tasks that we believe we can improve.

- The dash mechanic currently has no cooldown, and can be easily abused despite the time cost behind using it.

- We originally had lofty ambitions of a melee combo attack, but in the end we have a simply executed rapid attack that works just as well.

- While our unit testing script worked, we didn't feel we had enough coverage of the various models in the game.

- The King of the Hill game controller rapidly steals life from everyone not in the zone, even while no one is in it. While this still works, it wasn't originally intended.

**What we can improve.**
The second sprint went very well for our team. However there are always ways to improve. The project has already gotten more complex, so we have to keep our heads on. We believe we reached our goals for Sprint 2, so now we just need to polish off the game.

Following are the areas and ways that we can improve on the next sprint.

- Dashing ability without cooldown allows player dashing around with unnoticable cost of life/health. What we can improve for the next sprint is either add cooldown to the dash function or we need to increase the cost of dash, so that we can encourage fast-paced gameplay as well as the fairness of the gameplay.

- Dashing would be better if we have an animation assign to it. It should show player is making an effort to spend health to dash. An animation can be helpful for player to keep track the ability.

- Player indicator can be consolidated. Right now we have 3 ways of indicating player's health: Corner UI, health slide bar and color transparency of the player. It would be best that some of them can be consolidated into one.

- Attack speed needs to be tuned. While testing, we found that spamming attack is a very common strategy, we need to add more delays between attack and/or tune the parameters of attacking to persuade players to use more calculated strategies for attack.