Sprint 1 Planning Document

Team 1 - S2 Studios

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Sprint Overview

The purpose of this sprint is to successfully create a foundational and working game prototype in which we can test the different user story test cases on top of and begin piecing together the game one feature at a time.

This process involves getting set up with the baseline codebase for Unity and Github for every member of the team and making a movable character in a prototype map with basic weapons (swing and shoot) and the ability to slow down time. Once these are achieved, it will be our next goal to concentrate the ability to slow down time to a player selected concentrated circular area on the map. In this concentrated circle, all objects that pass through or were already there and moving or had yet to move will also need to be programmed to slow down. Once these are all finished, the baseline requirement of the game's mechanical functionality is complete. The next goal would be to implement a metering system for time to be used as punishment and currency for using attacks, receiving attacks, and measuring lifeline. **It should also be noted that testing will be performed using live inputs and some scripted events, given this is a videogame.**

Scrum Master

Harrison Chen

Scrum Meeting Schedule

We are going to have 2 meetings every week after class, each meeting is going to be an hour long and 1 meeting on the weekend.

Risks/Challenges

A few team members have not used C# and/or Unity prior to this experience. For the time being of this sprint, some overhead will be present when becoming familiar with the workflow and project's progress in terms of language and platform.

Current Sprint Details

User Story 1

As a User, I want to control the movement of my character

#	Task Description	Estimated Time	Owner
1.	Implement the Scene with Camera	3 Hrs	Mehran
2.	Implement Player Character	3 Hrs	Brian
3.	Add prototype art for Character	3 Hrs	Harrison
4.	Implement Character Movement	4 Hrs	Eli
5.	Create movement animation for character	4 Hrs	Harrison
6.	Implement Player Hitbox	3 Hrs	Mehran

Acceptance Criteria:
- Given that the camera is set up, when the user starts the game, then they will be able to see the game.
- Given that the player character, art, and animation are created, when the user observes the game, they will know where they are in the game.
- Given that hitboxes and movement are finished, when the user presses buttons, they will interact with the game.

User Story 2

As a User, I want to have an intricate map to maneuver around

#	Task Description	Estimated Time	Owner

#	Task Description	Estimated Time	Owner
1.	Add prototype art for map	4 Hrs	Brian
2.	Set the boundaries of the map	4 Hrs	Han
3.	Add walls and obstacles	3 Hrs	Brian
4.	Add collision detection	4 Hrs	Eli

Acceptance Criteria:
- Given that there is art for the map, when the user plays, (then) the user should feel more immersed into the game world.
- Given that the boundaries of the map have been set up, when I move the players, (then) the players should not be able to walk off the edge of the screen.
- Given that the walls and obstacles have been added in, when I play the game, (then) the players should have to maneuver through the map, rather than it being an open field.
- Given that collision detection has been integrated to the walls & obstacles, when the player moves into them, then they will not walk through them.

User Story 3

As a user, Players should be able to Melee single.

#	Task Description	Estimated Time	Owner
1.	Implement player Melee attack	5 Hrs	Eli
2.	Add simple attack animation	4 Hrs	Mehran
3.	Add prototype art for sword	3 Hrs	Harrison

Acceptance Criteria:
- Given that the player melee attack is implemented, when the user hits the attack button, then the player will visually attack.
- Given the attack animation for the melee is created, when the user attacks, then they will know that they are attacking.

- Given the art for the sword is created, when the user attacks, then the user will understand exactly where their attacks land.

User Story 4

As a user, I want to be able to play with up to 3 friends.

#	Task Description	Estimated Time	Owner
1.	Recognize different inputs	3 Hrs	Mehran
2.	Have player prefabs identify their user.	4 Hrs	Han
3.	Detect player collisions	4 Hrs	Eli
4.	Assign unique color per player	3 Hrs	Michael

Acceptance Criteria:
- Given that multiple inputs have been set up according to their player prefabs, when a controller sends a input, then only that user's character will respond.
- Given that player collisions have been set up, when a player runs into another player, then the players will bump into each other rather than pass through each other.
- Given that unique colors have been assigned, when each player picks up their controller, then they will be able to identify their character based on color.

User Story 5

As a user, have a time (health) system per player

#	Task Description	Estimated Time	Owner
1.	Create time (health) system per player	5 Hrs	Michael
2.	Transfer time between players	5 Hrs	Mehran

#	Task Description	Estimated Time	Owner
3.	Detect collisions of attacks	3 Hrs	Eli
4.	Determine the giver and receiver of time	3 Hrs	Harrison
5.	Create indicators for player's Time/Health	6 Hrs	Brian

Acceptance Criteria:
- Given the time system per player is implemented, when the users play, then they will see their character's "time" tick down over time.
- Given the transfer of time between players is finished, when the user lands an attack, then the user will be able to gain time and the other user will lose time.
- Given the collision detection of attacks is completed, when the users attacks, time transfer will be executed.
- Given that the U.I. indicators have been set up, when the user loses time, the user will then visually see it on the screen.

User Story 6

As a user, I will die when I run out of time

#	Task Description	Estimated Time	Owner
1.	Create player death animation	6 Hrs	Harrison
2.	Destroy player object	3 Hrs	Harrison
3.	Check for when player's time runs out	3 Hrs	Eli

Acceptance Criteria:
- Given the player death animation is created, when the user runs out of time, they will know they are dead and have no time remaining.
- Given the destroy player object is implemented, when the user loses, the user's character is removed from the map.

● Given the check for when the player's time runs out, when the user runs out of time, the player death animation and the destroy player object will be invoked.

User Story 7

As a user, I want each player to have a default time slow down distortion

#	Task Description	Estimated Time	Owner
1.	Accept input to start time distortion	3 Hrs	Michael
2.	Implement manipulation of object speed within distortion	6 Hrs	Michael
3.	Create time distortion art effect	6 Hrs	Michael
4.	Distortion causes player to lose their own time faster	3 Hrs	Michael

Acceptance Criteria:
● Given the input is tracked by the player and the art effect is finished, when the user holds the "time distortion" button, then the player should visually see the distortion of time.
● Given that the manipulation of objects within the time distortion is completed, when the user distorts time, then all other players and attacks in that distortion will slow down.
● Given the distortion where the player loses their own time faster is finished, when user initiates time distortion, then the player will start losing time at a faster rate

User Story 8

As a user, I want to be able to charge and release a ranged attack.

#	Task Description	Estimated Time	Owner

1.	Implement different attack keyboard/Controller inputs(tap=attack,hold=charge)	4 Hrs	Han
2.	Create a ranged "bullet" object.	3 Hrs	Han
3.	Create ranged attack art	5 Hrs	Han
4.	Detect player range attack collisions	3 Hrs	Eli
5.	Implement movement while aiming stops	5 Hrs	Han
6.	Implement Costs for "Throw"	3 Hrs	Brian

Acceptance Criteria:
- Given that different attack keyboard/Controller inputs are differentiated, when the user holds the attack key/button, then their character will be able to charge an attack.
- Given that ranged projectile is created, when users utilize it, then they can attack other players from range.
- Given that ranged attack art is created, when users observe the ranged attack art, then they will be able to see projectiles being fired from them or at them.
- Given that player's range attack collisions are implemented, when collisions are detected, then both targets and projectiles should react to the collision, projectiles should stop traveling(disappear) and targets should implement "hit" animation and functionalities. When projectiles do not come into collision with any objects along their trajectory and hit a wall the projectiles should disappear.
- Given that movement while aiming stops is implemented, when users decide to charge a ranged attack, then they will have to stop their movement to do so. When users are moving, then they cannot start charging an attack while moving at the same time.
- Given that The cost for "Throw" is implemented, when user successfully initiated a range attack, then the user should have their Time/Health deducted by certain amount.

User Story 9

As a user, I want to have random power up spawns (that increase my time remaining)

#	Task Description	Estimated Time	Owner
1.	Create powerup object	3 Hrs	Brian
2.	Implement random power up spawn points	6 Hrs	Brian
3.	Implement collisions between players only	3 Hrs	Han
4.	Cause player's time (health) to increase upon pickup	4 Hrs	Mehran
5.	Create powerup art	5 Hrs	Harrison

Acceptance Criteria:
- Given that the random powerup spawn points are implemented, when the user plays the game, the user will be unable to predict where the powerups will spawn.
- Given that the collisions between players only is implemented, when an attack goes through a powerup, then a powerup will remain.
- Given the basic powerup functionality is implemented, when the user picks up the powerup, the player's time will increase.
- Given that powerup art is created, when the user plays the game, the user will see the powerup.

User Story 10

As a user, I want the game to be balanced

#	Task Description	Estimated Time	Owner
1.	Balance the cost of time distortion	4 Hrs	Mehran

2.	Balance each player's starting time	4 Hrs	Harrison
3.	Balance the amount of time stolen from other players	4 Hrs	Mehran
4.	Balance the severity of slowing down time	4 Hrs	Michael
5.	Balance the movement speed of players	4 Hrs	Eli
6.	Balance the speed, cost & charge time of the ranged attack	4 Hrs	Han
7.	Balance the spawn rate of powerup & amount of time restored	4 Hrs	Brian

Acceptance Criteria:
- Given that the cost & severity of time distortion is balanced, when the user performs these actions, then it should help them win without it seeming overpowered.
- Given that player's starting time is balanced, when users are assigned to this fixed amount of starting time, then the time each user has should be sufficient to fight until there is only one player left.
- Given that the amount of time can be stolen from other players is balanced, when users successfully attack another user, then the amount of time transferred from one to another should be enough to encourage players to seek chances to attack others, but not too much that once players get hit, there is no chance for them to bounce back in the game.
- Given that the movement speeds of players are balanced, when the players move around the map, then it should feel comfortable and action packed without seeming out of control.
- Given that the speed, cost, & charge time of the ranged attack is balanced, users will feel comfortable using ranged attacks throughout the game without feeling at a disadvantage to do so or overpowered.
- Given that the powerup spawn rate and restoration time are balanced, the powerups then become a useful yet scarce item that adds length to the gameplay without turning the powerups into superfluous items or the game into a mad dash for powerups.

TIME TABLE WORKLOAD AND TOTAL (In Hours)

Harrison	Mehran	Brian	Han	Michael	Eli	TOTAL
31	30	32	32	30	30	185

Remaining Backlog

Functional Requirements

1. As a player, I would like to chain melee attacks into a combo for more dynamic gameplay.
2. ~~As a player, I would like to have a ranged attack, that costs time to "throw."~~
3. ~~As a player, I would like to charge my attack to use the ranged throw, this would stop movement.~~
4. ~~As a player, I would like to be able to aim while charging the attack.~~
5. As a player, I would like to have a backstab mechanic in which a player can inflict/take more time when meleeing another player from behind.
6. As a player, I would like to be able to dash through attacks/arrow from ranged weapons.
7. ~~As a player, I would like to distort time in a radius around me to add a twist/challenge to those fighting me (costs extra time).~~
   Powerups:
8. As a player, I would like to pick up power-ups that allow me to further explore the idea of time, by permanently changing my time distortion mechanic.
9. ~~As a player, I would like the default time distortion to slow the time around me.~~
10. As a player, I would like to have a power-up that changes my distortion to speedup time.
11. As a player, I would like to have a power-up that changes my distortion to freeze time around me.

12. As a player, I would like consecutive identical distortion power-up pickups to multiply the effect of the distortion.
13. As a player, I would like a power-up that slows time.
14. As a player, I would like a powerup that changes my distortion to rewind time.
15. ~~As a player, I would like a one-time pick-up that increases my remaining time.~~
16. ~~As a player, I would like a HUD text indicator to show my time remaining.~~
17. As a player, I would like a radial circle to indicate the time remaining.
18. ~~As a player, I would like to play with my friends.~~
19. ~~As a player, I would like to play with at least three friends.~~
20. As a player, I would like a sudden death implementation when there is a tie.
21. As a player, i would like the sudden death mode to have less time than standard as well as the removal of the time steal mechanic.
22. ~~As a player, I would like to play against my friends or strangers.~~
23. ~~As a player, I would need to steal "time" from other players, creating competition and survival instincts to occur between players.~~
24. ~~As a player, I would like to differentiate myself from the people I am facing visually using customization options or character options.~~
25. As a player, I would like to know when I am about to die (via visual indicator).
26. As a player, I would like to have a option menu for game mode values.
27. As a player, I would like to switch teams between players.
28. As a player, I would like to vote for the next game mode/map.
    Game modes:
29. As a user, I would like a game mode that pits players together in a deathmatch free for all, last player standing wins.(FFA)
30. As a user, I would like a game mode that pits two teams against each other in a deathmatch to run the other team's cumulative time out. (TDM)
31. As a user, I would like a game mode in which players play to capture the most time from different points on the map in a king of the hill style game. (KOTH)
32. As a user, I would like a game mode that causes stolen time to instead fill up a U.I. bar in the player's color. The player who contributed the most after the bar is filled wins, infinite respawns (after timeout). (FTB)
33. As a player, I would like to be able to select game modes that has players capture flags to homebase. (CTF)

34. As a user, I would like a vanilla gamemode FFA without any powerups.
35. As a user, I would like to own a large quantity of seconds to use as currency.
36. If time allows, I would like to play a adventure mode that has a story line.(Adv)
37. If time allows, I would like to have a lobby to organize online play.
38. If time allows, I would like to be able to integrate online and local play.
39. If time allows, I would like a reward for successive wins.
40. If time allows, I would like to play the game on different platform.
41. If time allows, I would like to play with/against with players from different platform.
42. If time allows, I would like the game be able to record my match history.
43. If time allows, I would like to save my single player game process.
44. If time allows, I would like to use time as a currency to buy rewards, such as randomized cosmetic items.
45. If time allows, I would like to pair against strangers online.
46. If time allows, I would like to pair with strangers online.
   Kits:
47. If time allows, I would like to choose between multiple characters with different "kits."
48. If time allows, I would like to have each character look aesthetically different.
49. If time allows, I would like to have a character that starts with more time, but moves a bit slower.
50. If time allows, I would like to have a character that moves faster, but steals less time from other players.
51. If time allows, I would like to have a character that steals more time from other players, but starts with less time.

(Non-Functionals are on the following page)

Non-Functional Requirements

1. ~~As a player, I would need to move consistently and one to one with my inputs with lowest input delay possible. (Response time)~~
2. As a player, I would like the game's interface to be easy to pick up but difficult to master. (UI)
3. ~~As a player, I would like to have a melee attack that feels like an attack that has impact; action and reaction sort of animation or visual effects.~~
4. ~~As a player, I would like the game to be very responsive(low response time) because it's a real time video game.~~
5. If time allows, I would like the game to have a wide selection of maps.
6. If time allows, I would like the game to have a custom map creator.
7. If time allows, I would like the game to have an adventure co-op mode.
8. If time allows, I would like the game to have war fog or limitations on vision of the player.
9. If time allows, I would like the game to have a floodlight/blind mode of gameplay mixed with a split screen form of gameplay.
10. If time allows, I would like the game to have more than one game mode or custom lobby type.
11. If time allows, I would like the game to have a sparklight mode of gameplay where the player can only see around the character when the character performs an attack on a nearby object or player.
12. If time allows, I would like the game to look sleek and smooth in its animations and art style.
13. If time allows, I would like the music and sound effects to really immerse me in the game.
14. If time allows, I would like the game to have scalability of the UI for different platform. (Usability)
15. If time allows, I would like the game to have colorblind mode. (Accessibility)
16. If time allows, I would like the game sessions and player files to be safe and secure so that the game is not vulnerable to hacking. (Security)