



Sprint 3 Planning Document

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Sprint Overview:

The goal of this sprint is to polish the game play and add some finer details to the game, such as music, animations, new game modes, and achievements. A major part of this sprint will be getting the EOS SDK to work as we had problems with some of the function calls during the last sprint.

Scrum Master: Nathan Simon

Meeting Plan:

Sundays at 2:00pm

Thursday at 9:00pm

Risks and Challenges:

Some risks and challenges that we are going to face this sprint include the EOS SDK and finishing on time. A big difference between this sprint and the previous two is that we cannot tack incomplete user stories onto the next sprint. This means that we have to pay extra close attention to our acceptance criteria and make sure that we are meeting all of them. The EOS SDK is also a challenge during this sprint because it is currently hindering our vision of online multiplayer gameplay and there seems to be little documentation on the internet.

Current Sprint Detail:

Player Story #1

As a player, I want to enjoy the soundtrack.

#	Description	Estimated Time	Owner
1	Music	5hrs	Andrew
2	Mute Music	2hrs	Andrew
3	Music Volume	2hrs	Andrew
4	Test: Edit the music volume options via a testing document	1hr	Andrew

Acceptance Criteria:

- Given the music is implemented correctly, if the game is launched, original music will play.
- Given that the options are implemented correctly, if the mute button is pressed, then music will not play at all.
- Given that the options are implemented correctly, if the volume settings are changed, then the music at any point in the game is going to have a different volume depending on what was set.

Player Story #2

As a player, I want to be able to add users as friends to my account.

#	Description	Estimated Time	Owner
1	Add Friends	3hr	Andrew
2	Remove Friends	2hr	Andrew
3	Show List of Friends	1hr	Andrew
4	Test: Add and remove a friend via testing document.	1hr	Andrew

Acceptance Criteria:

- Given that the friends are implemented correctly, if a user wants to add a friend in-game, they can do that and update their Epic friends list.
- Given that the friends are implemented correctly, if a user wants to remove a friend in-game, they can update their Epic friends list.
- Given that the main menu is implemented correctly, if a user wants to add or remove friends, there will be a corresponding button on the main menu.

Player Story #3

As a player, I want to see completed animations.

#	Description	Estimated Time	Owner
1	Lion animations	4hr	Andrew
2	Monkey animations	4hr	Andrew
3	Kangaroo animations	4hr	Andrew
4	Penguin animations	4hr	Andrew
5	Panda animations	4hr	Andrew
6	Test: Use testing document to show off the different animations	1hr	Andrew

Acceptance Criteria:

- Given the animations are implemented correctly, if a user completes an action, then there will be a unique animation that plays.
- Given that the animations are implemented correctly, if a user isn't inputting anything, then an idle animation will play.
- Given that the characters are implemented correctly, each class will move differently.

Player Story #4

As a player, I want to be able to play on different looking maps.

#	Description	Estimated Time	Owner
1	Set up map subclass system	4 hrs	Wes
2	Build map 1	3 hrs	Wes
3	Build map 2	2.5 hrs	Wes
4	Build map 3	2.5 hrs	Wes
5	Test: Show off the different maps using testing documents	1.5 hrs	Wes

Acceptance Criteria:

- Given the map system is set up properly, when the user selects a map in the game settings screen, then the game should load the correct map with all of the correct assets.
- Given the map system is set up properly, when the user selects a map, then each map should have distinct features from the others.

- Given the map system is set up properly, when the user exits any of the maps, the victory screen will load and is linked properly to the map info.

Player Story #5

As a player, I want to have a digestible tutorial to learn the rules of the game.

#	Description	Estimated Time	Owner
1	Write out instructions for the tutorial	2 hrs	Wes
2	Setup UI's for tutorials	3 hrs	Wes
3	Add tutorial into the gameplay	4 hrs	Wes
4	Test: Write out testing document to play through the tutorial	1.5 hrs	Wes

Acceptance Criteria:

- Given the user opens the game, when the user clicks the tutorial button, then the tutorial screen should pop up.
- Given the user selects the tutorial option, when the user moves through the tutorial, the UI should progress properly.
- Given the user goes through the tutorial, when the user reaches the end of the tutorial, the UI should disappear and the user should be able to start a game.
- Given the user goes through the tutorial, when the user reaches the end of the tutorial, the user should understand the base gameplay mechanics of Ball of the Wild.

Player Story #6

As a player, I want a way for other players to view my ranking.

#	Description	Estimated Time	Owner
1	Update the Victory Screen UI to add ranking	2 hrs	Wes
2	Integrate the ranking system into the UI	3 hrs	Wes
3	Test: Write out testing document to show how a ranking updates and displays in the victory screen	1 hr	Wes

Acceptance Criteria:

- Given that a game has ended, when the victory screen displays, the user's rankings system should display along with the other users in the game's ranking.
- Given the user's ranking increases, when the current game ends, the user's new ranking should display.

- Given that player 1 has a ranking, when the player plays multiple games, the ranking should remain consistent or increase based on game performance.

Player Story #7

As a player, I want to be able to unlock achievements.

#	Description	Estimated Time	Owner
1	Come up with a few achievements players can unlock	3 hrs	Nathan
2	Create stat fields to go along with the achievements	1 hrs	Nathan
3	Keep track of stats in game	5 hrs	Nathan
4	Send stats to the database at game end	4 hrs	Nathan
5	Test: Artificially send stats to the database to make sure that achievements unlock once the threshold is passed using a testing document	1 hrs	Nathan

Acceptance Criteria:

- Given that the achievements have been set up correctly, a user can see unlockable achievements in their Epic Games account.
- Given that the achievements have been set up correctly, when a user accomplishes the requirements for an achievement, that achievement will unlock.
- Given that the achievements have been set up correctly, a user will be able to see how close they are to getting an achievement in their Epic Games Account.

Player Story #8

As a player, I want to be able to unlock new characters and abilities as I get better at the game.

#	Description	Estimated Time	Owner
1	Create achievements to unlock characters	2 hr	Nathan
2	Prevent a player from selecting a character they have not unlocked	5 hrs	Nathan
3	Unlock a character when a player gets the corresponding achievement	4 hrs	Nathan
4	Test: try to select locked characters when starting a game, unlock a character and select it using a testing document	1 hrs	Nathan

Acceptance Criteria:

- Given that the character lock and unlock algorithms are implemented correctly, when a player plays Ball of the Wild for the first time, then they will only be able to play as the panda.
- Given that the character lock and unlock algorithms are implemented correctly, when a player completes a specific task playing as the most recent character they unlocked, then they will get an achievement and unlock a new character.
- Given that the character lock and unlock algorithms are implemented correctly, when a player unlocks a new character, that character will become playable.

Player Story #9

As a player, I want to gain experience after completing a challenge in challenge mode.

#	Description	Estimated Time	Owner
1	Create experience values for different challenge modes	1 hrs	Nathan
2	Keep track of stats during game play	3 hrs	Nathan
3	Upload experience gained to the database	4 hrs	Nathan
4	Test: play games in challenge mode and verify that the player receives experience using a testing document	1 hrs	Nathan

Acceptance Criteria:

- Given that the challenge mode experience system is implemented correctly, when a player finishes a challenge mode game, they should see how much experience they gain on the victory screen.
- Given that the challenge mode experience system is implemented correctly, when a player finishes a challenge mode game, their experience stat should update in the database.
- Given that the challenge mode experience system is implemented correctly, when a player finishes a challenge mode game, the experience they earned will be based on how well they performed.

Player Story #10

As a player, I want a sniper game mode with rules like when you miss a shot, you also lose a point.

#	Description	Estimated Time	Owner
1	Create a button to launch game mode from menu	3 hrs	Henry
2	Adjust the scoring system implementation	4 hrs	Henry
3	Create penalties if the rules were not met	3 hrs	Henry
4	Test and debug the passing with testing documents	1 hr	Henry

Acceptance Criteria:

- Given the game mode is implemented correctly, when the player clicks on the “sniper mode” button from the menu, it takes them to the map and the game starts.
- Given the game mode is implemented correctly, if a player executes a super shot and does not make a goal, then they will lose a point.
- Given the game mode is implemented correctly, if a player executes a super shot and does not make a goal, then they will be stunned for 5 seconds.

Player Story #11

As a player, I want to have a challenge mode where I have to deal with different restrictions.

#	Description	Estimated Time	Owner
1	Create a button to launch game mode from menu	3 hrs	Henry
2	Decrease time limit to holding the ball	4 hrs	Henry
3	Add restrictions like reduced speed to the mode	2 hrs	Henry
4	Players cannot use their abilities in challenge mode	2 hrs	Henry
5	Test and debug the passing with testing documents	1 hrs	Henry

Acceptance Criteria:

- Given the game mode is implemented correctly, when the player clicks on the “challenge mode” button from the menu, it takes them to the map and the game starts.
- Given the game mode is implemented correctly, the player cannot sprint in the challenge mode.
- Given the game mode is implemented correctly, if the player does not get rid of the ball in 5 seconds, they will be stunned.
- Given the game mode is implemented correctly, the player’s do not have access to their abilities.

Player Story #12

As a player, I want to be able to join the same lobby as my friends before a game.

#	Description	Estimated Time	Owner
1	Implement functionality to host a lobby	5 hrs	Alex
2	Implement functionality to join a lobby	5 hrs	Alex
3	Test and debug hosting and joining with testing documents	2 hrs	Alex

Acceptance Criteria:

- Given the lobby system is implemented correctly, players should be able to create a lobby before they start a game.
- Given the lobby system is implemented correctly, players should be able to join a lobby that another user has created before the game starts.
- Given the lobby system is implemented correctly, all players should have their game start when the host starts the game.

Player story #13

As a player, I want to be able to choose the size of the teams in my games.

#	Description	Estimated Time	Owner
1	Add to pre-match menu an option to set team size	1 hr	Alex
2	Modify lobby functions to limit lobby size based on player input	3 hrs	Alex
3	Test and debug team sizing with testing documents	2 hrs	Alex

Acceptance Criteria:

- Given the team resizing works as intended, hosts should be able to modify the number of players allowed in their lobby.
- Given the team resizing works as intended, teams should be as close as possible to equal size when the game starts.
- Given the team resizing works as intended, hosts should not be able to start a game if the teams are not fair.

Player story #14

As a player, I want a ranking system when I play online.

#	Description	Estimated Time	Owner
1	Use EOS services to base a ranking system on player stats	5 hrs	Alex
2	Using ranking system when joining a game to join a game with the most similar skill level	5 hrs	Alex
3	Test and debug the ranking system and matchmaking with testing documents	2 hrs	Alex

Acceptance Criteria:

- Given the ranking system works as intended, there will be a way for other players to discern a player's skill based on their rank.
- Given the ranking system works as intended, the players rank will be based on recognizable game statistics.
- Given the ranking system works as intended, players will be placed in a lobby with players closer to their skill level when possible when joining a random lobby.

Player Story #15

As a player, I want a king of the hill mode, where a team needs to keep the ball within a limited area on the field for a determined amount of time to win.

#	Description	Estimated Time	Owner
1	Create a button to launch game mode from menu	3 hrs	Henry
2	Create the zones where points will be scored	4 hrs	Henry
3	Change the scoring system for the game mode	3 hrs	Henry
4	Debug and test the charts using testing documents	2 hrs	Henry

Acceptance Criteria:

- Given the game mode is implemented correctly, when the player clicks on the "king of the hill" button from the menu, it takes them to the custom map and the game starts.
- Given the game mode is implemented correctly, when the player stands with the ball in one of the zones, their team's points will go up.
- Given the game mode is implemented correctly, the team's score will not go up if the player is in the zone without the ball, or has the ball and is not in the zone.
- Given the game mode is implemented correctly, the game will end once a team's score reaches 50 points.

Remaining Backlog:

Functional Requirements:

1. ~~As a user, I want to be able to create an account.~~
2. ~~As a user, I want to be able to login to my account once I have created it.~~
3. ~~As a user, I want to be able to reset my password.~~
4. ~~As a user, I want to be able to delete my account.~~
5. ~~As a user, I want to be able to update my information.~~
6. ~~As a player, I want to be able to navigate the menus easily.~~
7. ~~As a player, I want to be able to change the resolution the game runs in.~~
8. ~~As a player, I want to be able to add users as friends to my account.~~
9. ~~As a player, I want to be able to challenge my friends to private games.~~
10. ~~As a player, I want to be able to join the same lobby as my friends before a game.~~
11. ~~As a player, I want to be able to play online with strangers.~~
12. ~~As a player, I want to be able to choose the time duration of my games.~~
13. ~~As a player, I want to be able to choose the size of the teams in my games.~~
14. ~~As a player, I want to be able to choose the size of the ball in my games.~~
15. ~~As a player, I want to be able to choose the size of the field in my games.~~
16. ~~As a player, I want to see who scored a goal in the game.~~
17. ~~As a player, I want an assist system to see who helped the player who scored a goal.~~
18. ~~As a player, I want an experience system with different levels to progress through.~~
19. ~~As a player, I want to gain experience from completing a game, with extra experience if I win.~~
20. ~~As a player, I want to gain experience from things like the amount of time I held the ball, or number of goals/assists scored.~~
21. ~~As a player, I want an overtime match in the game if the timer runs out and the score is tied.~~
22. ~~As a player, I want to have a sandbox mode to train my skills offline.~~
23. ~~As a player, I want to have a digestible tutorial to learn the rules of the game.~~
24. ~~As a player, I want to be able to unlock achievements.~~
25. ~~As a player, I want a ranking system when I play online.~~
26. ~~As a player, I want a way for other players to view my ranking.~~
27. ~~As a player, I want to enjoy the soundtrack.~~
28. ~~As a player, I want to be able to unlock new characters and abilities as I get better at the game.~~
29. ~~As a player, I want to be able to easily see a scoreboard with a timer during gameplay.~~
30. ~~As a player, I want to be able to see my in-game abilities and see the cooldowns if I have already used them.~~
31. ~~As a player, I want different classes to have different stats and abilities.~~
32. ~~As a player, I want to be able to play as multiple different player classes.~~
33. ~~As a player, I want a way to communicate with my teammates.~~

- ~~34. As a player, I want customizable game modes with rules like when you miss a shot, you also lose a point.~~
- ~~35. As a player, I want to be able to swap out key mappings.~~
- ~~36. As a developer, I want a time limit on how long a player can hold the ball to encourage teamwork.~~
- ~~37. As a developer, I want shots with the ball to be more powerful if consecutive passes were recently made.~~
- ~~38. As a developer, I want there to be a limit on how often and how long a player can sprint.~~
- ~~39. As a developer, I want characters to be modular so they can be added, removed, or edited later.~~
- ~~40. As a developer, I want developer tools built into the game (frame rate, usage, etc) to monitor performance.~~
- ~~41. As a player, I want to be able to see a victory screen that displays game statistics.~~
- ~~42. As a player, I want to be able to pick up the ball and have it move around with the player model.~~
- ~~43. As a player, I want to be able to pass around the ball during the game.~~
- ~~44. As a player, I want to see completed animations.~~
- ~~45. As a player, I want to be able to play on different looking maps~~
- ~~46. (if time allows) As a player, I want to have character customization.~~
- ~~47. (if time allows) As a player, I want to play a game offline with AI bots.~~
- ~~48. (if time allows) As a player, I want my matches to be made based on player skill.~~
- ~~49. (if time allows) As a player, I want to have a challenge mode where I have to complete difficult tasks.~~
- ~~50. (If time allows) As a player, I want to gain experience after completing a challenge in challenge mode.~~
- ~~51. (if time allows) As a player, I want a king of the hill mode, where a team needs to keep the ball within a limited area on the field for a determined amount of time to win.~~
- ~~52. (if time allows) As a player, I want controller support.~~

Non-Functional Requirements:

1. Be able to run the game at 720p 30 fps, with ping less than 200ms.
2. Be able to play an interactive tutorial from the main menu whenever the user wants.
3. Be able to integrate Epic Games authentication and security protocols.
4. Be able to keep game files small for the sake of clarity and modularity.