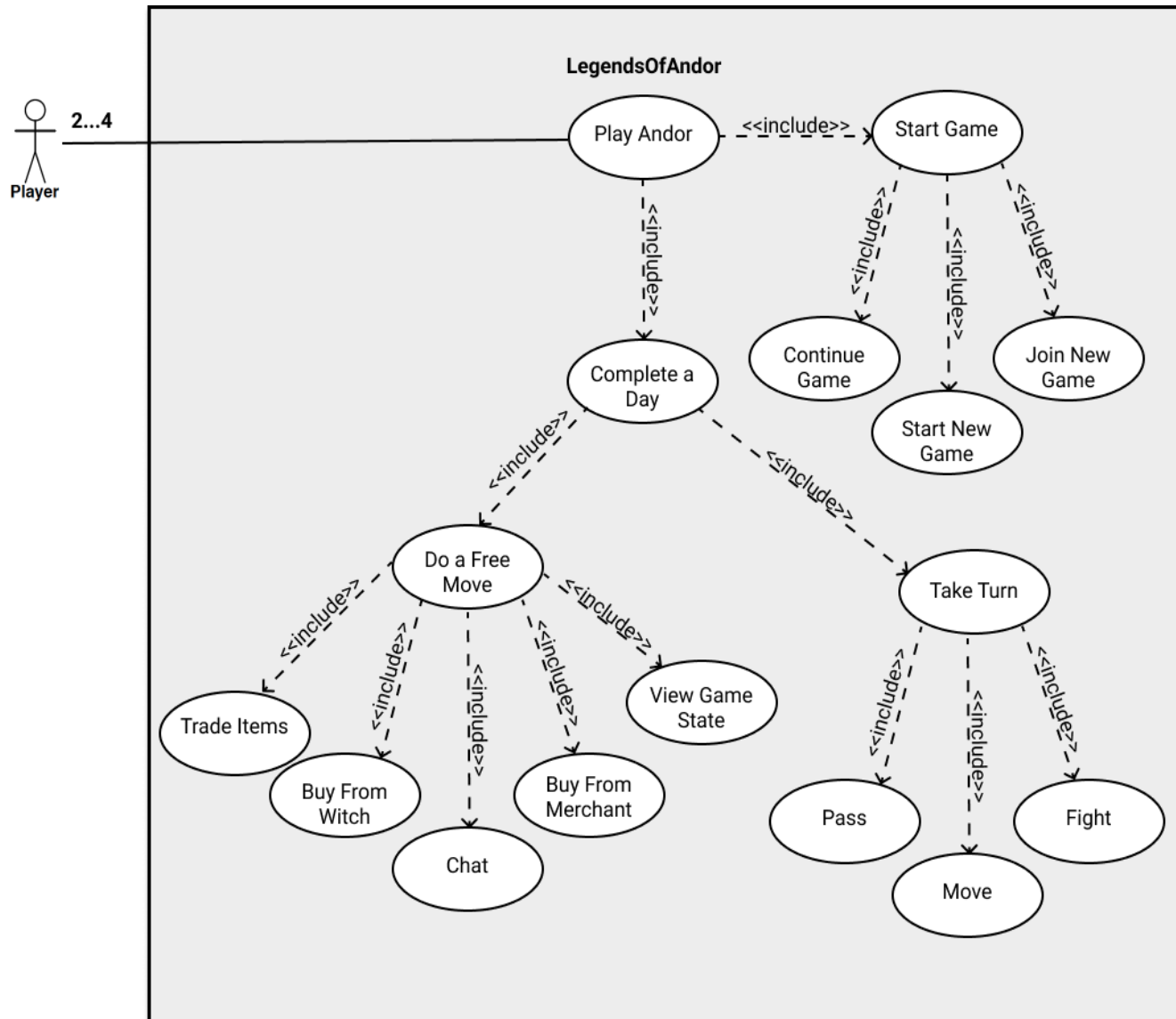Milestone Two: Use Cases

Figure 1: Legends of Andor Use Case Diagram

This document details a use case model for Legends of Andor. The use cases and their relationships are summarized above in Figure 1. The individual descriptions of each use case are as follows:

Play Andor

Use Case: Play Andor
Scope: LegendsOfAndor
Level: Summary
Intention in Context: The intention of the *Player* is to play a game of Legends of Andor in collaboration with other players.
Multiplicity: 2-4 *Players* can play Legends of Andor concurrently. A given player can have multiple games saved but can only play one game at a time.
Primary Actor: *Player*
Secondary Actors: *Player* (play role of other heroes), *Narrator, Monster*
Facilitator Actors: *Exit Button, Save Button, Quit Without Saving Button*
Main Success Scenario:
1. *Player* logs on to the *System*.
2. *Player* asks *System* to Start a Game.
3. *Players* Complete a Day.
   Step 3 is repeated until the game is completed.
4. *System* informs the *Players* that they won the game.

Extensions:
3a. *Narrator* moves to space N.
   3a.1. *System* informs *Players* that they lost the game.
3b. Too many *Monsters* arrive at the castle.
   3b.1. *System* informs *Players* that they lost the game.
3c. *Player* informs *System* that they would like to exit the game using the *Exit Button.*
   3c.1. *Player* informs *System* that they would like to Save by using the *Save Button.*
      3c.1.1 *System* informs other *Players* that *Player* is saving and exiting.
      3c.1.2 *System* informs *Player* that the game is saved and logs *Players* off the game.
   3c.3. *Player* informs *System* that they would like to Quit without saving by using the *Quit Without Saving Button.*
      3c.3.1 *System* informs other *Players* that *Player* is quitting.
      3c.3.2 *System* logs *Players* off the game. The game is permanently over.

Start Game

Use Case: Start Game
Scope: LegendsOfAndor
Level: User Goal
Intention in Context: The intention of the *Player* is to begin a game of Legends of Andor in collaboration with other players.

Multiplicity: Multiple *Players* can start a game concurrently. A given player can start a new game, join a new game, or continue a game. However, they can only play one game at a given time.
Primary Actor: *Player*
Secondary Actors: *Player* (other players in the game)
Main Success Scenario:
1. *System* requests *Player* to select from the options of <u>Start new Game</u>, <u>Join New Game</u>, or <u>Continue Game</u>.
2. *Player* informs the *System* their choice.
   Proceed to the relevant use cases of <u>Start New Game</u>, <u>Join New Game</u>, or <u>Continue Game</u>.

Start New Game

Use Case: Start New Game
Scope: LegendsOfAndor
Level: Subfunction
Intention in Context: The intention of the *Player* is to start a new game of Legends of Andor.
Multiplicity: Only one *Player* can start a new game.
Primary Actor: *Player*
Secondary Actors: *Player* (other players joining the game)
Facilitator Actors: *Character Buttons, Back Button, Start Game Button, Exit Button*
Main Success Scenario:
1. *Player* instructs *System* of number of players to wait for.
2. *System* informs *Player* the game is ready to start once enough players join the game.
3. *System* asks *Player* to select a character.
4. Each *Player* informs *System* of their desired character using *Character Buttons*.
5. *System* performs the initial game set up after all *Players* have selected their characters.
Extensions:
   (1-5)a. *Player* informs *System* that he wishes to cancel the game using the *Exit Button*. Use case ends in a failure.
   1b. *Player* informs *System* that they want to play with friends.
      1b.1 *System* generates game code and displays it to *Player*. Use case continues at step 2, but other players can only join the game by entering the code.
   2a. *Player* informs *System* that they wish to go back and select a new number of players using the *Back Button*. Use case continues at step 1.

Join New Game

Use Case: Join New Game
Scope: LegendsOfAndor
Level: Subfunction
Intention in Context: The intention of the *Player* is to join a game another player has started.
      Multiplicity: 1-3 *Players* can join a new game.
Primary Actor: *Player*

Secondary Actors: *Player* (other players joining the game)
Facilitator Actors: *Character Buttons, Back Button, Start Game Button, Exit Button*
Main Success Scenario:
1. *System* requests the game code from the *Player*.
2. *Player* enters the code to the *System*.
3. *System* verifies the code and informs *Player* of successful code entry.
4. *System* requests *Player* to select character.
5. Each *Player* informs *System* of the selected character using *Character Buttons*.
6. *System* does the initial game set up after all players have selected their characters.

Extensions:
(2-6)a. *Player* informs *System* that they wish to cancel the game using *Exit Button*. Use case ends in failure.
3a. *Player* enters invalid game code. Use case will return to step 2.

Continue Game

Use Case: Continue Game
Scope: LegendsOfAndor
Level: Subfunction
Intention in Context: The intention of the *Player* is to continue to play a previously saved game.
Multiplicity: 2-4 *Players* can continue a previously saved game.
Primary Actor: *Player*
Secondary Actors: *Player* (other players re-joining the game)
Facilitator Actors: *Back Button, Continue Game Button, Exit Button*
Main Success Scenario:
1. *Player* informs *System* of the saved game that they wish to continue from a list of their saved games.
2. *System* informs *Player* the game is ready to start once all *Players* have re-joined the game.
3. *System* loads the requested saved game.

Extensions:
(1-3)a. *Player* informs *System* that they wish to exit using the *Exit Button*. Use case ends in failure.

Complete a Day

Use Case: Complete a Day
Scope: LegendsOfAndor
Level: User Goal
Intention in Context: The intention of the *Players* is to complete a day.
Multiplicity: 2-4 *Players* work together to complete a day.
Primary Actor: *Player*
Secondary Actors: *Player* (play role of other heroes), *Narrator, Monster*

Main Success Scenario:
1. *Player* performs Take Turn.
Step 1 and 2 are repeated for each player in a turn-by-turn basis until the tokens of all Players are moved to the sunrise box.
2. *Player* informs System that they wish to Do a Free Action.
*This can happen at any time during any Player's turn **unless otherwise specified** and can be repeated zero to many times.*
3. *System* informs *Players* that they have used all their time for the day.
4. *Narrator* moves up one space.
5. *Monsters* move forward one space in the direction of the arrows.

Extensions:
1a. *Player* informs *System* that they would like to end their day early.
    1a.1. *System* moves the token for that *Player* to the sunrise box.
4a. *System* displays a Legend Card corresponding to the *Narrator's* new space.
    4a.1. *System* carries out the actions required by the Legend Card.
    4a.2. If any *Player* uses a shield against a negative event card, the actions of that card are not carried out.

Take Turn

Use Case: Take Turn
Scope: LegendsOfAndor
Level: Subfunction
Intention in Context: The player's intention is to complete their turn.
Multiplicity: One, because it can only be one player's turn at a time.
Primary Actor: *Player*
Main Success Scenario:
1. *System* informs *Player* that it is now their turn.
2. *Player* executes exactly one of the following actions and *System* updates game state accordingly:
    a. Move
    b. Fight
    A Player can only fight if they start their turn on the same space of the monster, or if they are the archer or if they have a bow and start their turn on the adjacent space to a monster.
    c. Pass
3. *Player* informs *System* that they would like to end their turn.

Extensions:
3a. *System* informs *Player* that their turn is over because they ran out of hours.

Pass

Use Case: Pass
Scope: LegendsOfAndor

Level: Subsubfunction
Intention in Context: The player's intention is to pass their turn.
Multiplicity: Only one *Player* can pass their turn at a time.
Primary Actor: *Player*
Facilitator Actor: *Pass Button*
Main Success Scenario:
1. *Player* informs *System* that they would like to pass their turn using the *Pass Button*.
2. *System* moves *Player* up one hour on the time track.
3. *System* informs *Player* that their turn is over.

Move

Use Case: Move
Scope: LegendsOfAndor
Level: Subsubfunction
Intention in Context: The *Player's* intention is to move somewhere else on the board.
Multiplicity: Only one *Player* can move at a time.
Primary Actor: *Player*
Facilitator Actor: *Back Button*
Main Success Scenario:
1. *System* highlights all the spaces that *Player* can move to, depending on the number of hours that *Player* has left in their day.
2. *Player* selects the space they want to move to, and *System* informs them how many hours it takes to move there.
3. *Player* confirms their selection and *System* moves them to the new space.
4. *System* moves *Player's* token up the appropriate number of hours on the time track.
5. *System* performs any automatic actions required on new space (ie. uncover fog) and informs *Player* of changes in game state.

Extensions:
3a. *Player* presses *Back Button* instead of confirming their selection. Use case continues at step 2.
4a. *Player* uses wineskin to move. Each half of a wineskin used allows *Player* to move one space. *Player's* token does not advance on the time track for these moves. Use case continues at step 5.
4b. *Player* uses medicinal herb to move. *Player* is allowed to move the number of spaces written on the herb. *Player's* token does not advance on the time track for those moves. Use case continues at step 5.

Fight

Use Case: Fight
Scope: LegendsOfAndor
Level: Subsubfunction
Intention in Context: The *Player's* intention is to fight against a monster.

Multiplicity: 1-4 *Players* because a *Player* can fight the monster alone or invite other *Players* to fight with them.

Primary Actor: *Player*

Secondary Actor: *Monster, Narrator, Rubble*

Main Success Scenario:

1. *System* moves *Player's* token up one hour on the time track.
2. *System* rolls *Player's* dice.
3. Immediately after rolling, *System* asks *Player* if they want to use any of the items in their possession to help in the fight.
4. *Player* confirms their item selection with *System.*
5. *System* calculates the score for the *Player* by adding together the highest dice number and strength points.
6. *System* calculates the scores of the *Monster*.
7. *System* compares the scores of the *Monster* versus the *Player.* The appropriate number of willpower points are subtracted from the losing side.
8. *System* informs *Player* that the battle is over when the *Player* wins or loses.
   a. *Player* loses when:
      i. *Player* decides to discontinue the battle:
         1. *System* resets the stats of the *Monster*.
      ii. *Player* has no more hours on the time track.
         1. *System* resets the stats of the *Monster*.
      iii. *Player* has no more willpower points:
         1. *System* subtracts one strength point from *Player.*
         2. *System* adds three willpower points to the *Player.*
         3. *System* resets the stats of the *Monster.*
   b. *Player* wins when:
      i. *System* informs *Player* that the *Monster* has no willpower:
         1. *Player* chooses reward according to which *Monster* they defeated.
         2. *System* removes the *Monster* from the board.
         3. *Narrator* moves forward one space.

Extensions:

(1-8)a. *Player* is on a space with *Rubble*. The *Rubble* acts as a *Monster* in the use case.
In step 8, no reward is chosen if the Player wins; rather the rubble is removed from the space.

1b. *Player* informs *System* that they would like to invite some available *Players* to join their fight.
   1b.1. *System* asks those *Players* if they would like to join the fight.
   1b.2. *Players* inform the *System* that they want to join the fight.
      1a.3.1. *System* informs original *Player* that the fight request was accepted. Use case continues at step 1, but each subsequent step is repeated for each *Player*.
   1b.3. *Players* inform *System* that they would not like to join the fight.
      1a.3.1. *System* informs original *Player* that the fight request was rejected. Use case continues at step 1.

3b. *Player* chooses to use witch's brew.
This item cannot be used with the helm.
   3b.1. *System* doubles the dice values of the *Player.*

3c. *Player* chooses to use a medicinal herb.
    3c.1 *System* adds points to *Player's* total points according to the value of the herb.
3d. *Player* chooses to use the helm.
This item cannot be used with the witch's brew.
    3d.1. *System* adds equal dice values together for the final score.
3e. Wizard *Player* informs *System* that they would like to flip a die of any *Player's* roll.
7a. *Player* loses the round but uses a shield.
    7a.1. No willpower points are subtracted from that *Player.*
8a. *Player* informs *System* that they would like to continue the fight for another round. Use case repeats from step 1.

Do A Free Action

Use Case: Do A Free Action
Scope: LegendsOfAndor
Level: Subsubfunction
Intention in Context: The player wants to complete an action that does not cost any time.
Multiplicity: Multiple *Players* can <u>Do a Free Action</u> at a time.
Primary Actor: Player
Main Success Scenario:
1. *Player* informs *System* that they would like to <u>Do a Free Action</u>.
2. *Player* executes exactly one of the following actions and *System* updates game state accordingly:
   a. <u>Buy From Merchant</u>
   Player must be on a merchant space.
   b. <u>Trade Items</u>
   Players must be on the same space, or one Player involved in the trade must have a falcon to use. The falcon can only be used to trade small items (gold, gemstones, witch's brew, helm).
   c. <u>Buy From Witch</u>
   Player must be on the same space as the witch.
   d. <u>Chat</u>
   e. <u>View Game State</u>
   f. *Player* collects a Rune Stone on their space.
   g. *Player* collects a Gemstone on their space.
   h. *Player* collects a Medicinal Herb on their space.
   i. *Player* picks up a farmer on their space.
   j. *Player* drops off a farmer on their space.
   If Player is at the castle, the farmer becomes a shield.
   k. *Player* empties a well.
   Player must be stopped on that space.
   l. *Player* uses a telescope to see adjacent fog tokens.
   Player must be in possession of a telescope and must be stopped on that space.

m. *Player* uses a medicinal herb to increase their willpower points according to the number on the herb.
Player must be in possession of a medicinal herb.
3. *System* informs *Player* that their free action has been completed.

Buy From Merchant

Use Case: Buy From Merchant
Scope: LegendsOfAndor
Level: Subsubfunction
Intention in Context: The *Player* would like to purchase something from the *Merchant*.
Multiplicity: Multiple *Players* can buy from the *Merchant* at a time.
Primary Actor: *Player*
Secondary Actor: *Merchant*
Main Success Scenario:
1. *System* navigates to the *Merchant* pop-up window.
2. *Player* informs *Merchant* of the item they would like to buy by clicking on the item.
3. *System* places the object on the *Player's* character card and subtracts the amount of gold that that item costs (2 gold).
4. *Player* informs *System* that they are finished buying from the *Merchant*.
5. *System* navigates back to the main game board.
Extensions:
3a. *Player* does not have enough coins for an item.
    3a.1 *System* informs *Player* that they are unable to buy the item.
3b. *Player* does not have room on their character board for the item.
    3.b.1 *System* informs *Player* that they are unable to buy the item.
5a. *Player* wishes to buy another item from *Merchant.* Use Case repeats from step 1.

Trade Items

Use Case: Trade Items
Scope: LegendsOfAndor
Level: Subsubfunction
Intention in Context: *Player* would like to trade items with another *Player*.
Multiplicity: Two *Players* are involved in each trade. Multiple *Players* can trade at a time.
Primary Actor: *Player*
Secondary Actor: *Receiving Player*
Main Success Scenario:
1. *System* navigates to a trading pop-up window.
2. *Player* informs *System* which *Player* they would like to trade with by clicking on the icon of the *Receiving Player* they would like to trade with.
3. *Player* informs *System* of the item they would like to give to *Receiving Player* by clicking on the item.
4. *System* informs *Receiving Player* of requested trade.

5. *Receiving Player* informs *System* that they accept the trade.
6. *System* places the object in the *Receiving Player's* character card and removes it from the *Player's* character card.
7. *Player* informs *System* that they are finished trading.
6. *System* navigates back to the main game board.

Extensions:
6a. *Receiving Player* informs the *System* that they reject the trade.
    6a.1. *System* informs *Player* that the trade was rejected.
    6a.2. *System* navigates back to the main game board.

Chat

Use Case: Chat
Scope: LegendsOfAndor
Level: Subsubfunction
Intention in Context: The player would like to chat with the other player(s).
Multiplicity: Multiple *Players* can chat at a time
Primary Actor: *Player*
Secondary Actors: *Player* (other players in the game)
Facilitator Actors: *Chat Window*
Main Success Scenario:
1. *Player* informs *System* that they would like to chat by clicking on the *Chat Window* in the bottom corner of the screen.
2. *System* opens *Chat Window*.
3. *Player* types message into *Chat Window*.
4. Other *Players* respond if they would like to.
5. *Player* informs *System* that they are finished chatting by minimizing the *Chat Window*.
6. *System* navigates back to the main game board.

Buy From Witch

Use Case: Buy From Witch
Scope: LegendsOfAndor
Level: Subsubfunction
Intention in Context: The player would like to buy the witch's brew from the witch.
Multiplicity: Multiple *Players* can buy from the witch at a time.
Primary Actor: *Player*
Main Success Scenario:
1. *System* navigates to a pop-up window.
2. *System* places the witch's brew in the *Player's* character card and subtracts the amount of gold that it costs.
3. *Player* informs *System* that they are finished buying from the witch.
4. *System* navigates back to the main game board.

Extensions:
    2a. *Player* does not have enough coins for an item.
        2a.1 *System* informs *Player* that they are unable to buy the item.
        2a.2 *System* navigates back to the main game board.

View Game State

Use Case: View Game State
Scope: LegendsOfAndor
Level: Subsubfunction
Intention in Context: The player would like to view the state of a certain part of the game.
Multiplicity: Multiple *Players* can view the game state at a time.
Primary Actor: *Player*
Facilitator Actor: *Close Button*
Main Success Scenario:
1. *Player* informs *System* that they would like to view the game state by clicking on an icon on the board (monster, player, castle, merchant, etc.).
2. *System* navigates to a pop-up window for that icon which displays relevant information about it.
3. *Player* informs *System* that they are finished viewing the game state by pressing *Close Button*.
4. *System* navigates back to the main game board.