

Project Part 2

Team

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Title

Santa Horror RPG

Project Summary

Santa and his elves kidnap children and keep them in the cellar of the North Pole. The user plays as a 6 year old child trying to escape from the workshop... but she encounters several obstacles barring her exit. The player progresses through the game by solving puzzles and defeating bosses. Users will be able to save and load games and view game statistics from current and past gameplay.

Data Storage

Save files and game statistics are saved in a MySQL database. The player can save games, load save files, and view past game data.

Project Requirements

User Requirements				
ID	Description	Topic Area	Actor	Priority
UR-01	As a Player I want to be able to play the game so that I can reach the boss battle	Game Play	Player	Critical
UR-02	As a Player I want to be able to save the game so that I can take a break from play.	Saving	Player	Medium
UR-03	As a Player I want to be able to load saved games so that I can start up where I left off.	Saving	Player	Medium
UR-04	As a Player I want to be able have the game accept my input of movement so that I can move throughout the game map.	Game Play	Player	Critical
UR-05	As a Player I want to be able to view game statistics so that I can see how well I did.	Ranking	Player	Low
UR-06	As a Player I want to be able to solve puzzles so that I can progress through the game.	Game Play	Player	High
UR-07	As a Player I want to be able to play a tutorial so that I can learn the controls in the game	Game Play	Player	Medium
UR-08	As a Player I want to be able to quit the game so I can close the application.	Game Play	Player	Medium
UR-09	As a Player I want to be able to interact with objects by clicking on them so that I can progress through the game.	Game Play	Player	Critical
UR-10	As I Player I want to fight a boss battle so that I can win the game	Game Play	Player	Critical

Business Requirements		
ID	Description	Priority
BR-01	The game should be Santa horror themed	High

Non-Functional Requirements			
ID	Description	Topic Area	Priority
NFR-01	The game should run at 60 fps	Performance	Medium
NFR-02	The game should provide instructions for gameplay to Player	Usability	High
NFR-03	The game should inspire a thrilling sense of excitement	Experience	Medium
NFR-04	The game requires Java to run	Platform Requirements	High
NFR-06	The game should provide stable gameplay	Performance	Low
NFR-07	Game levels are extensible through config files	Extensibility	Medium

Project Use Case Summary

Full Use Case Documents Below

Use Case ID	UC-01
Use Case Name	Play Game
Description	Player can play the game to reach the boss battle to satisfy UR-01

Use Case ID	UC-02
Use Case Name	Save Game
Description	Player can save the game at checkpoints to satisfy UR-02.

Use Case ID	UC-03
Use Case Name	Load Save File
Description	Player can load the game from a specific save to satisfy UR-03.

Use Case ID	UC-04
Use Case Name	Move Character
Description	Player can move character with the arrow keys to satisfy UR-04

Use Case ID	UC-05
Use Case Name	View Game Statistics
Description	Player can view game statistics by clicking a link on the home screen to satisfy UR-05.

Use Case ID	UC-06
Use Case Name	Solve Puzzles
Description	Player can interact with game objects and manipulate character location in order to solve puzzles satisfying UR-06

Use Case ID	UC-07
Use Case Name	Quit Game
Description	Player should be able to quit the game satisfying UR-08

Use Case ID	UC-08
Use Case Name	View Tutorial
Description	Player should be able to play through a tutorial to learn how to play the game satisfying UR-07

Use Case ID	UC-09
Use Case Name	Interact with Objects
Description	Player should be able to click on objects to interact with the environment to satisfy UR-09.

Use Case ID	UC-10
Use Case Name	Fight Bosses
Description	Player can fight bosses to complete levels in the game

Use Case Documents

Use Case ID	UC-01		
Use Case Name	Play Game		
Description	Player can solve puzzles and fight bosses to progress in the game.		
Actors	Player		
Pre-conditions	Actor has the game		
Post-conditions	The game quits		
Frequency of Use	Once per run of game		
Flow of Events		Actor Action	System Response
	1	Start Game	Initialize Game
			Display Main Menu
	2	Choose load game	Load Save File (UC-03)
	3	Press a move key	Move character (UC-04)
	4	Press interact key	Interact with object (UC-09)
	5	Choose to solve puzzles	Solve puzzle (UC-09)
	6	Press a move key	Move character (UC-04)
	7		Load new zone
	8	Choose save game	Save game (UC-02)
	9	Choose move character	Move character (UC-04)
	10	Choose Fight Boss	Fight Boss (UC-10)
	11	Defeats Boss	Check if Boss has been defeated
	12		Check if Boss was the final Boss
	13		Win Game
	14		Exit Game

Variation	<p>2. Instead of load game, Player can create new game</p> <p>3-9. The player will have the choice of six actions:</p> <ul style="list-style-type: none"> - View game statistics (UC-05) - Move (UC-04) - Save game (UC-02) - Solve puzzles (UC-06) - Fight Boss (UC-10) - Interact with Object (UC-09) <p>10. Player can lose to the boss, in which case the game goes back to the Load Save File</p>
Exception	Can't find image to display
Developer Notes	

Use Case ID	UC-02		
Use Case Name	Save Game		
Description	Player can save the game at checkpoints to satisfy UR-01.		
Actors	Player		
Pre-conditions	Player interacts with a save location in game		
Post-conditions	The database is updated with the save file		
Frequency of Use	However often the player wants to take a break from the game and return later		
Flow of Events		Actor Action	System Response
	1	Clicks Save	Display “Choose a Save Slot”
	2	Clicks “Slot 1”	Find Save File
	5		Saves game data to file
Variation	2. User may click any of 3 save slots		
Exception	Can’t find database system fails to save file.		
Developer Notes			

Use Case ID	UC-03		
Use Case Name	Load Save File		
Description	Player can load saved games to satisfy UR-02		
Actors	Player		
Pre-conditions	A game has been saved		
Post-conditions	The saved game has been loaded		
Frequency of Use	Whenever the Player wants.		
Flow of Events		Actor Action	System Response
	1	Clicks Load	Finds save slots
	2		Display save slots
	3	Clicks "Slot 1"	Loads game data from file
Variation	3. User may click any of 3 save slots		
Exception	Can't find database to load save file		
Developer Notes			

Use Case ID	UR-04		
Use Case Name	Move Character		
Description	Player can move character with the arrow keys to satisfy UR-04		
Actors	Player		
Pre-conditions	Game is loaded.		
Post-conditions	Character is moved to new location		
Frequency of Use	Throughout gameplay		
Flow of Events		Actor Action	System Response
	1	Press a move key	Moves character
	2		Checks if character moved to new zone
	3		Load Zone
Variation	2. Character might not move to a New Zone		
Exception			
Developer Notes			

Use Case ID	UC-05		
Use Case Name	View Game Statistics		
Description	Player can view game statistics by clicking a link on the home screen to satisfy UR-05.		
Actors	Player		
Pre-conditions	Game is loaded		
Post-conditions	Game statistics are displayed		
Frequency of Use	Whenever player chooses during game		
Flow of Events		Actor Action	System Response
	1	Click “View Stats” button	Display game statistics
Variation			
Exception			
Developer Notes			

Use Case ID	UC-06		
Use Case Name	Solve Puzzles		
Description	Player can interact with game objects and manipulate character location in order to solve puzzles satisfying UR-06		
Actors	Player		
Pre-conditions	Player activates puzzle		
Post-conditions	Player is awarded points for solving puzzle		
Frequency of Use	Periodically during gameplay		
Flow of Events		Actor Action	System Response
	1	Give input	Check input solves puzzle
	2		Swap Game Object
Variation	2. If puzzle isn't solved, player will repeat step 1		
Exception			
Developer Notes			

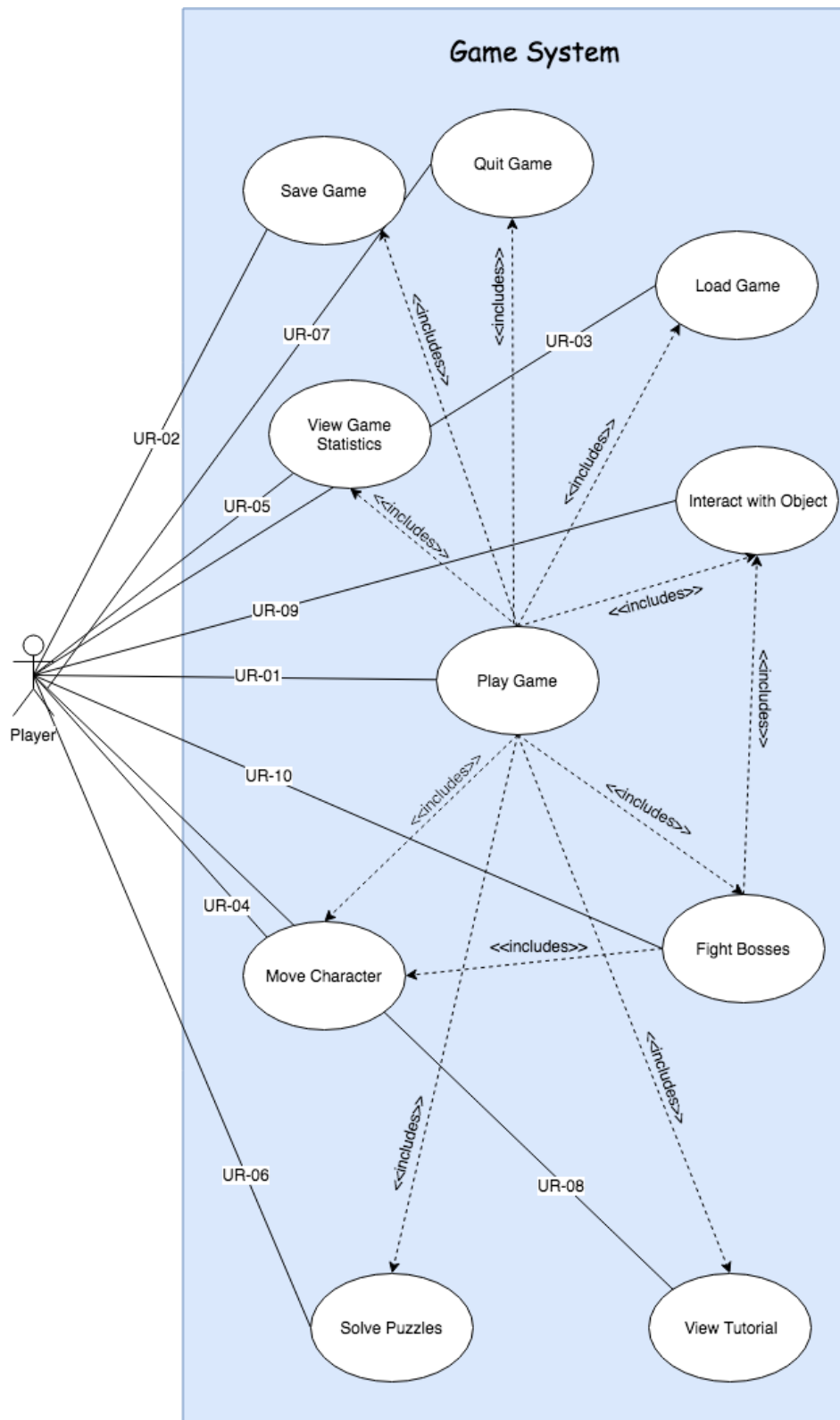
Use Case ID	UC-07		
Use Case Name	Quit Game		
Description	Player should be able to quit the game satisfying UR-08		
Actors	Player		
Pre-conditions	Game is loaded		
Post-conditions	Game is exited		
Frequency of Use	Whenever player chooses		
Flow of Events		Actor Action	System Response
	1	Click “Quit” button	Exit game
Variation			
Exception			
Developer Notes			

Use Case ID	UC-08		
Use Case Name	View Tutorial		
Description	Player should be able to play through a tutorial to learn how to play the game satisfying UR-07		
Actors	Player		
Pre-conditions	Game is loaded		
Post-conditions	Tutorial is displayed		
Frequency of Use	Whenever Player chooses		
Flow of Events		Actor Action	System Response
	1	Click “View Tutorial” button	Load tutorial
Variation			
Exception			
Developer Notes			

Use Case ID	UC-09		
Use Case Name	Interact with Objects		
Description	Player should be able to click on objects to interact with the environment to satisfy UR-09.		
Actors	Player		
Pre-conditions	Character is adjacent to and facing object		
Post-conditions	Object action is activated		
Frequency of Use	Throughout gameplay		
Flow of Events		Actor Action	System Response
	1	Press interaction key	Display object information
	2		Perform object action
Variation			
Exception			
Developer Notes			

Use Case ID	UC-10		
Use Case Name	Fight Bosses		
Description	Player can fight bosses to complete levels in the game		
Actors	Player		
Pre-conditions	Player has reached boss battle		
Post-conditions	Player wins or loses		
Frequency of Use	Periodically during gameplay		
Flow of Events		Actor Action	System Response
	1	Press arrow key	Move Character
	2	Navigate to object	Move Character
	3	Press activation key	Interact with Object
	4		Check Boss is defeated
Variation	4. Boss may not be defeated and will have to move and interact to figure out how to defeat the Boss		
Exception			
Developer Notes			

Overall Use Case Diagram



Activity Diagram

Diagram can be viewed in more detail on GitHub at “Diagrams/ActivityDiagram.[png/svg]”

NOTE: Liz said we could have just ONE big activity diagram for the whole game

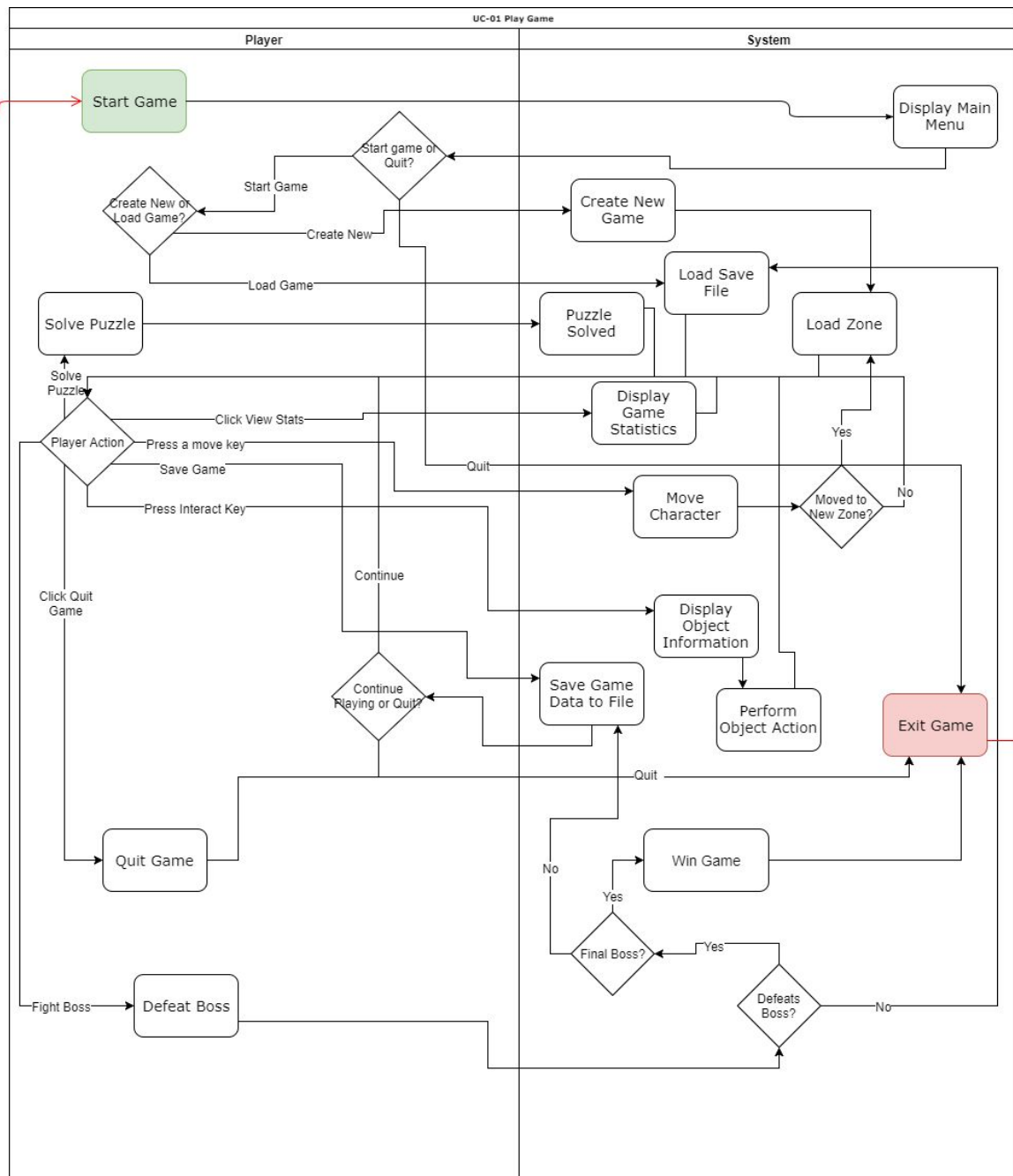
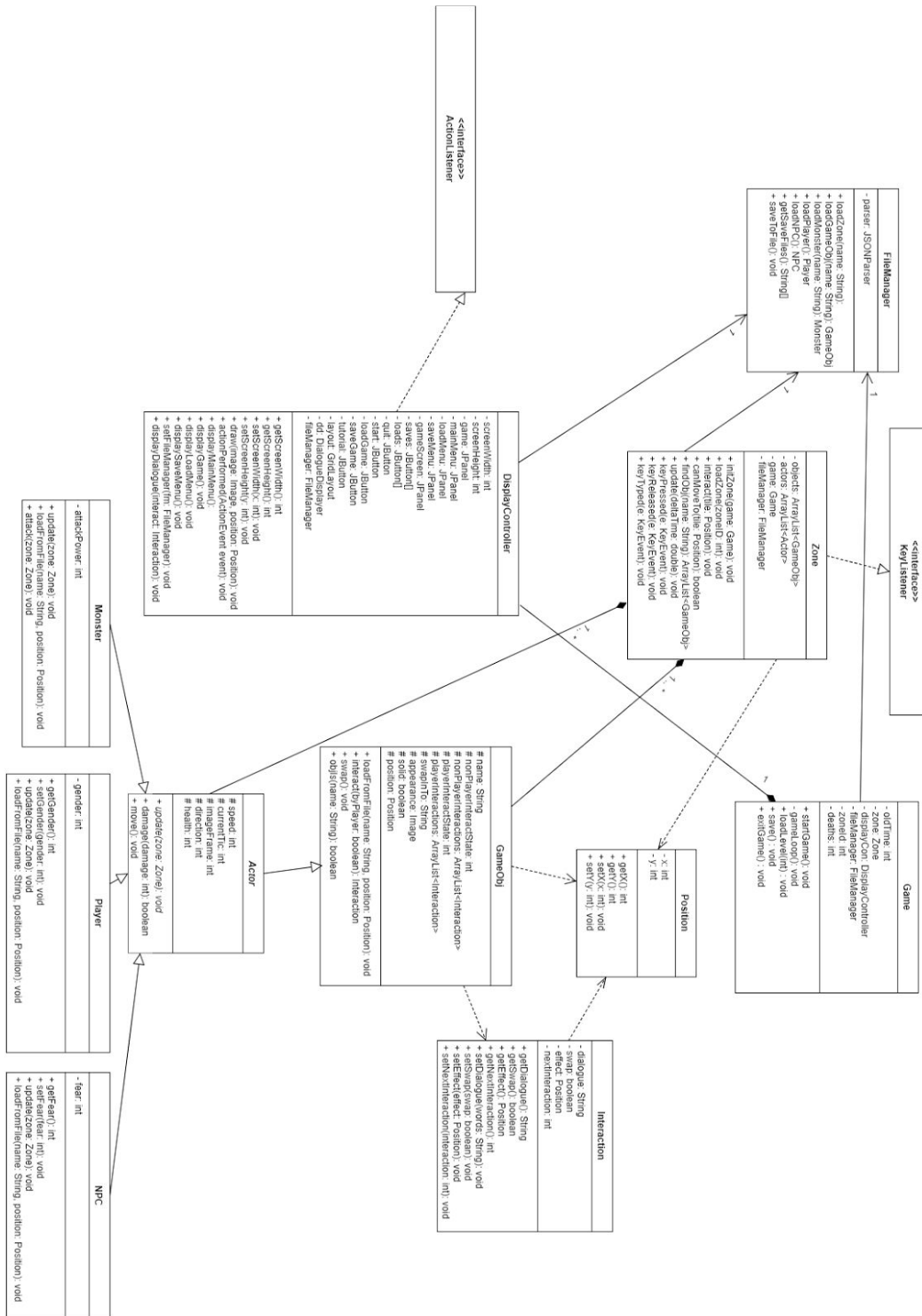


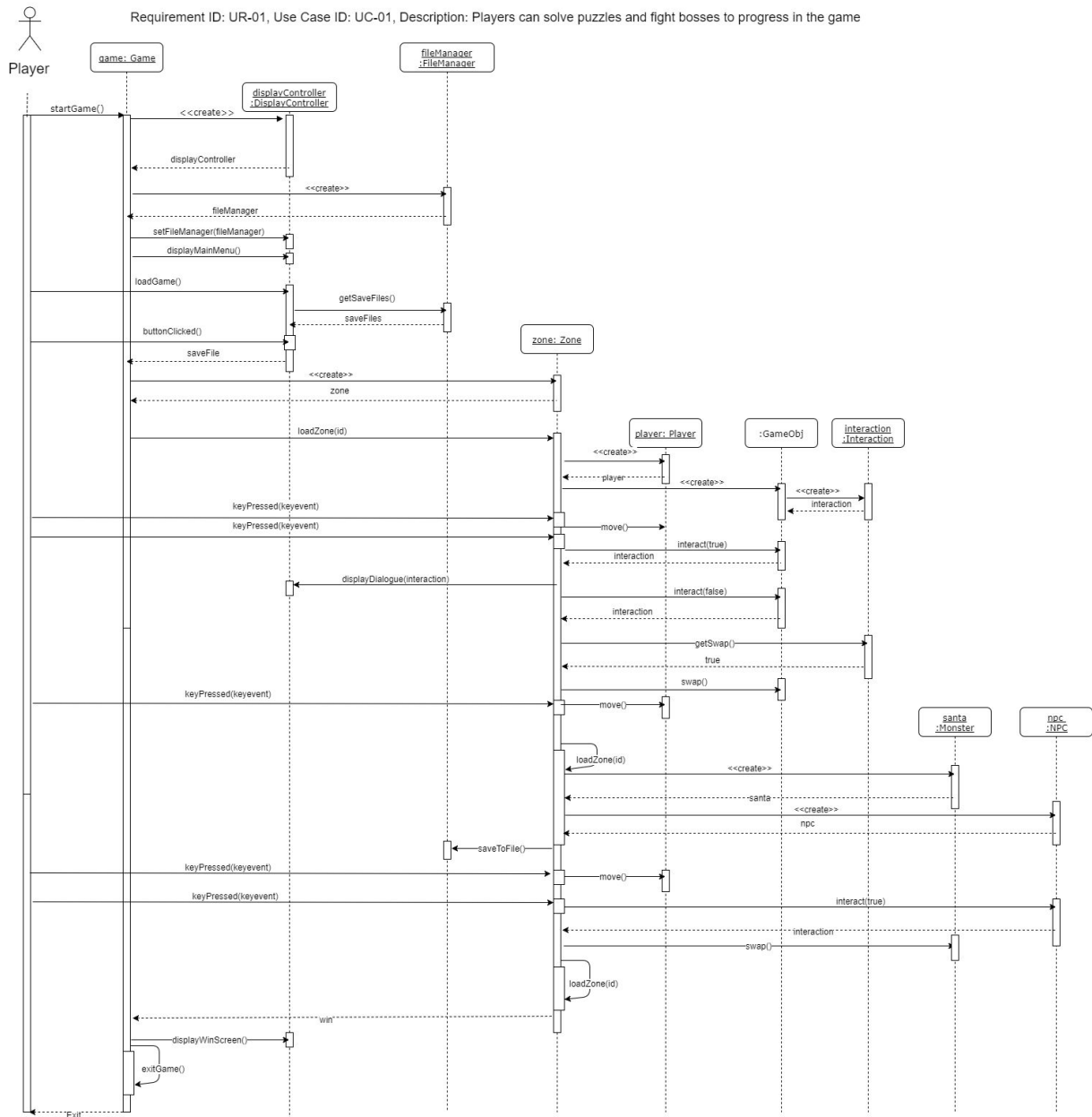
Diagram can be viewed in more detail on GitHub at “[Diagrams/ClassDiagram.\[png/svg\]](#)”



Sequence Diagram

Diagram can be viewed in more detail on GitHub at “Diagrams/SequenceDiagram.[png/svg]”

NOTE: Liz said we could have just ONE big sequence diagram for the whole game



UI Mockups



[Main Menu](#) [View Stats](#) [Quit Game](#)



