Gate:Crash

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CST-452 Development Release Notes

Grand Canyon University

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Revision: 1.2.0

Date: 2/12/2023

Summary:

This code release focused on revamping the random map generation of the game and restructuring the visuals of the game to be orthographic instead of isometric. This code release also saw the development and incorporation of the player movement and combat input, as well as the first stages of the enemy context steering AI. The release implements an orthographic tilemap using a z-as-y sorting axis. Development implemented the improved “DungeonGenerator” script and the “TileMapPainter” script that provide the path for the random map generation and draw the proper terrain onto the map respectively. This code drop also includes the improved primary assets that are to be used for the generation of the map, including grass, and wall rule tiles that are able to automatically adjust the displayed tile based on their position relative to their neighboring tiles. Finally this code drop includes the initial stages of the Context Steering enemy AI (artificial intelligence). These scripts are the “AIData” script, for containing the colliders that are detected by the AI, the Detector abstract class script, that defines a “Detect(AIData aiData)” class for use for it’s inheritor scripts, the “ObstacleDetector” and “TargetDetector” scripts that are used to detect the obstacles and player respectively, and finally the “EnemyAI” script which is used to call the Detector scripts simultaneously. Finally, the code drop contains the implementation of the key player movement and combat input scripts which are the “PlayerAttack” script that manages the player attack inputs, the “PlayerLook” script that manages the player look direction, the “PlayerMovement” script that manages the player movement inputs, and the “WeaponRotate” script that manages the position of the player’s weapon relative to the player look direction.

Requirements:

This code release supports the following features:

Feature:	**User Story:**
Random Map Generation	As a system, I would like to randomly generate a map for the player to navigate.
Random Map Generation	As a system, I would like to spawn the player character at a starting point in the map so that the player is now present in the round.
Player Movement	As a player I would like to press the left analog stick left, or "A" on the keyboard so that the character moves left.
Player Movement	As a player I would like to press the left analog stick right, or "D" on the keyboard so that the character moves right.
Player Movement	As a player I would like to press the left analog stick up, or "W" on the keyboard so that the character moves up.
Player Movement	As a player I would like to press the left analog stick down, or "S" on the keyboard so that the character moves down.

Player Movement	As a player I would like to press “B” on the gamepad, or "LEFT SHIFT" on the keyboard so that the character dodges/rolls.
Player Combat	As a player I would like to press “Right Trigger” on the gamepad, or "Left Click" on the mouse so that the character attacks using their equipped weapon.
Player Combat	As a player I would like to use the right analog stick on the gamepad, or move the mouse so that I can precisely aim my weapons.
Enemy AI	As an enemy, I would like to detect when the player is within my detection radius, so that I may prepare to act in response.

Reports:

Requirements Delivered: 23.07% (9/39)

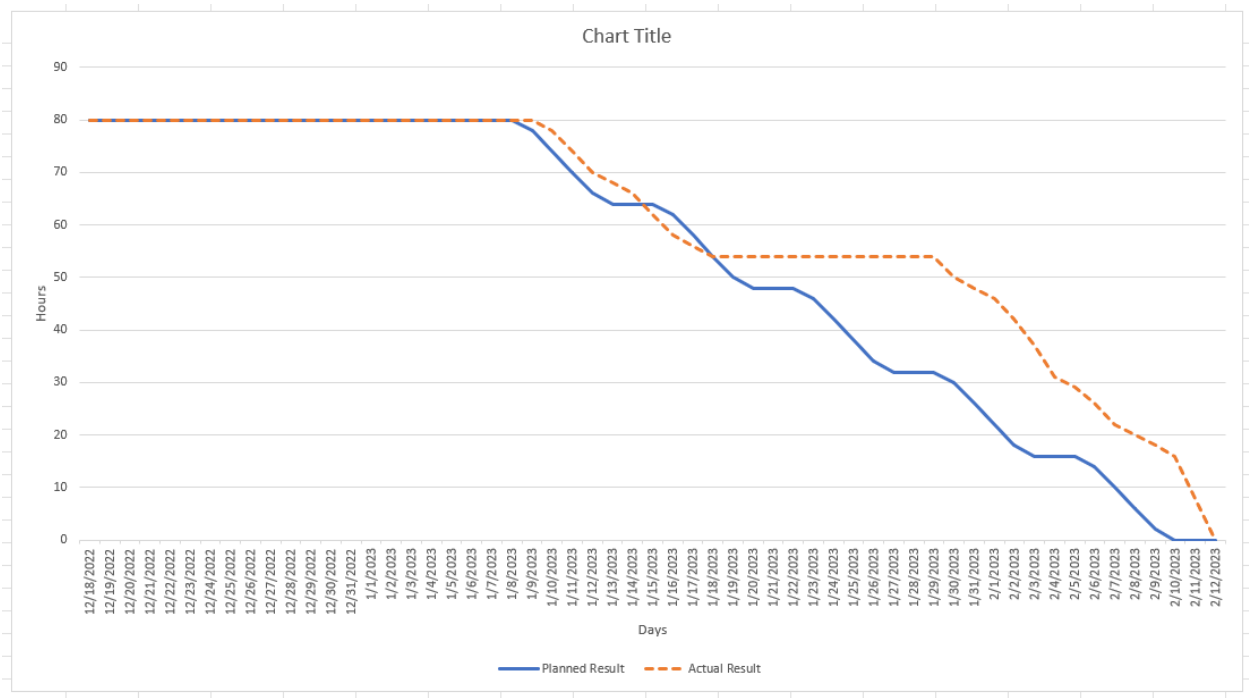
Requirements Delivered to Date: 25.64% (10/39)

Requirements Taken Out of Scope: 0

Burndown Chart:

Day	Planned	Actual	Planned Result	Actual Result	Total Planned Hours For Milestone
12/18/2022	0	0	80	80	**80**
12/19/2022	0	0	80	80	
12/20/2022	0	0	80	80	
12/21/2022	0	0	80	80	
12/22/2022	0	0	80	80	
12/23/2022	0	0	80	80	
12/24/2022	0	0	80	80	
12/25/2022	0	0	80	80	
12/26/2022	0	0	80	80	
12/27/2022	0	0	80	80	
12/28/2022	0	0	80	80	
12/29/2022	0	0	80	80	
12/30/2022	0	0	80	80	
12/31/2022	0	0	80	80	
1/1/2023	0	0	80	80	
1/2/2023	0	0	80	80	
1/3/2023	0	0	80	80	
1/4/2023	0	0	80	80	
1/5/2023	0	0	80	80	
1/6/2023	0	0	80	80	
1/7/2023	0	0	80	80	
1/8/2023	0	0	80	80	

1/9/2023	2	0	78	80
1/10/2023	4	2	74	78
1/11/2023	4	4	70	74
1/12/2023	4	4	66	70
1/13/2023	2	2	64	68
1/14/2023	0	2	64	66
1/15/2023	0	4	64	62
1/16/2023	2	4	62	58
1/17/2023	4	2	58	56
1/18/2023	4	2	54	54
1/19/2023	4	0	50	54
1/20/2023	2	0	48	54
1/21/2023	0	0	48	54
1/22/2023	0	0	48	54
1/23/2023	2	0	46	54
1/24/2023	4	0	42	54
1/25/2023	4	0	38	54
1/26/2023	4	0	34	54
1/27/2023	2	0	32	54
1/28/2023	0	0	32	54
1/29/2023	0	0	32	54
1/30/2023	2	4	30	50
1/31/2023	4	2	26	48
2/1/2023	4	2	22	46
2/2/2023	4	4	18	42
2/3/2023	2	5	16	37
2/4/2023	0	6	16	31
2/5/2023	0	2	16	29
2/6/2023	2	3	14	26
2/7/2023	4	4	10	22
2/8/2023	4	2	6	20
2/9/2023	4	2	2	18
2/10/2023	2	2	0	16
2/11/2023	0	8	0	8
2/12/2023	0	8	0	0



Working Code Demonstration:
https://www.loom.com/share/8e357a5ff19c49e3be63a3e18ac2f47a

GitHub Link:
https://github.com/Giovanni-E-Martinez/Senior-Capstone