

Name Danny Sheffield

Mark _____/50

1. Brief introduction __/3

My Role in Dinosaur Hunter will be graphics and sound.

Graphics:

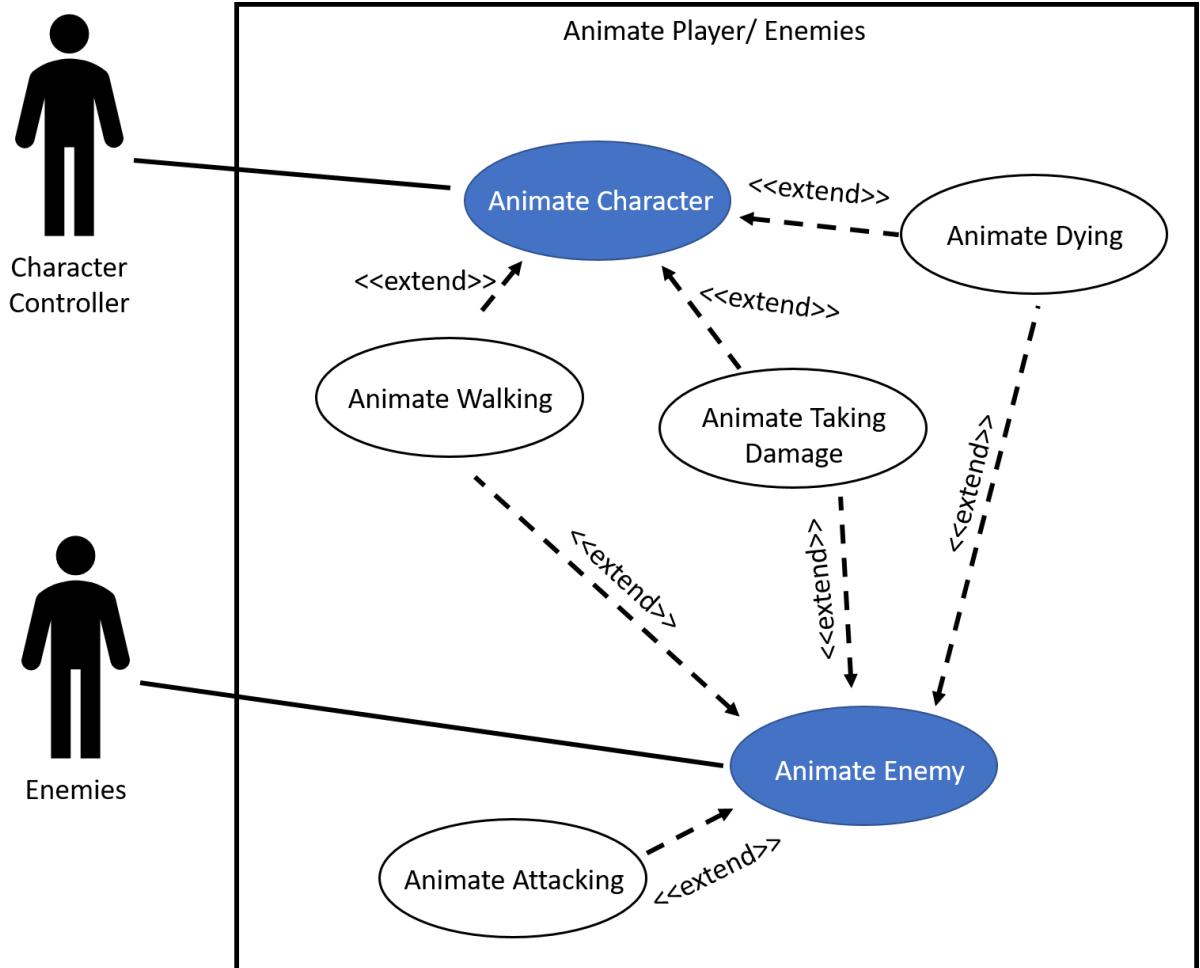
I will design the 3D player and enemies for the game and create animations so that they react to certain stimuli in the game.

Sound:

There will be sound effects associated with certain actions the character and enemies perform. I will load these sound files and ensure they play at the appropriate times. There will also be dynamic background music; one track for the title menu; one track for gameplay when no enemies are around; and one soundtrack for when there are enemies near the player.

2. Use case diagram with scenario _14

Use Case Diagrams



Scenarios

Name: Animate Character

Summary: The Character Controller activates an action animation.

Actors: Character Controller

Preconditions: Player input is moving character, character is taking damage from an enemy, or character health has reached zero.

Basic sequence:

Step 1: One of the preconditions above has been met.

Step 2: Call appropriate animation

Step 3: Display Animation

Post conditions: Animation has completed.

Priority: 2

Name: Animate Enemy

Summary: The Enemy Controller activates an action animation.

Actors: Enemy Controller

Preconditions: Enemy is moving, enemy is taking damage from player, Enemy health has reached zero, or enemy is attacking player.

Basic sequence:

Step 1: One of the preconditions above has been met.

Step 2: Call appropriate animation

Step 3: Display Animation

Post conditions: Animation has completed.

Priority: 2

Name: Animate Walking

Summary: A movement animation plays for player/ enemies while they are moving.

Actors: Enemy Controller, Player Controller

Preconditions: Enemy is moving, or input from the player is being received to move the main character.

Basic sequence:

Step 1: One of the preconditions above has been met.

Step 2: Call walking animation

Step 3: Display Animation

Post conditions: Animation has completed.

Exceptions:

Step 1: Animation will not play if the game has not begun, the game is paused, or game over has been signaled. Take damage and death animations will take precedence and will play rather than the walking animation if their preconditions have been met.

Priority: 2

Name: Animate Take Damage

Summary: An animation will play on player/ enemy objects to react to taking damage.

Actors: Enemy Controller, Player Controller

Preconditions: An enemy has taken damage or the player has taken damage.

Basic sequence:

Step 1: One of the preconditions above has been met.

Step 2: Call take damage animation

Step 3: Display Animation

Post conditions: Animation has completed.

Exceptions:

Step 1: Animation will not play if the game has not begun, the game is paused, or game over has been signaled. Death animation will play rather than the take damage animation if health has reached zero.

Priority: 3

Name: Animate Dying

Summary: An animation will play on player/ enemy objects to react to health reaching zero.

Actors: Enemy Controller, Player Controller

Preconditions: An enemy or the player has taken damage that has caused its health to reach zero.

Basic sequence:

Step 1: One of the preconditions above has been met.

Step 2: Call take dying animation

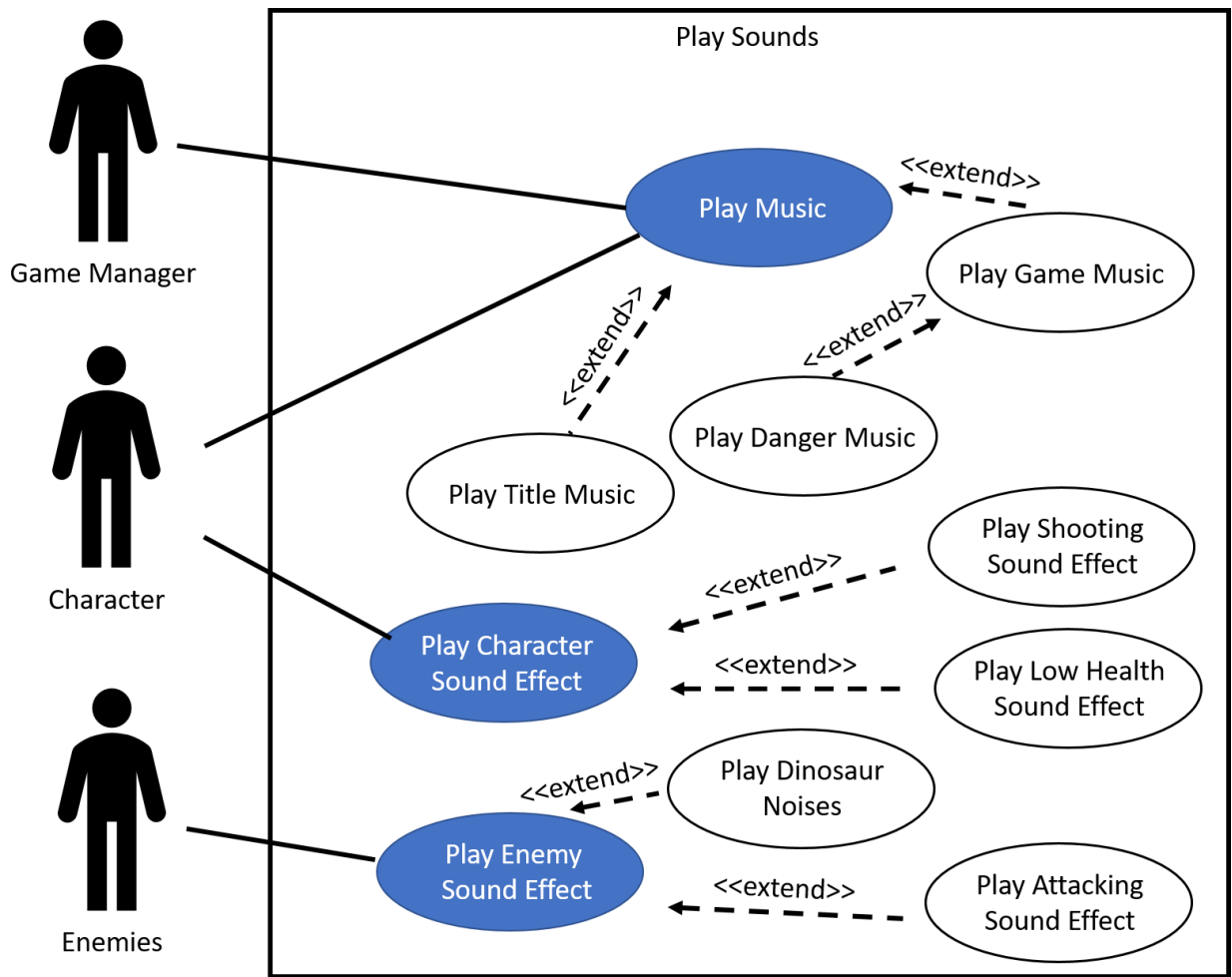
Step 3: Display Animation

Post conditions: Animation has completed.

Exceptions:

Step 1: Animation will not play if the game has not begun, the game is paused, or game over has been signaled.

Priority: 3



Scenarios

Name: Play Music

Summary: Plays background music.

Actors: Game Manager, Player Controller

Preconditions: The game has been opened.

Basic sequence:

Step 1: The game is opened

Step 2: Background music plays

Step 3: The game is closed

Post conditions: The game has been closed

Priority: 3

Name: Play Title Music

Summary: Music plays for the title screen

Actors: Game Manager

Preconditions: The title page is visible on screen.

Basic sequence:

Step 1: The UI has displayed the title screen

Step 2: The Game Manager queues the title music

Step 3: The game is started

Post conditions: The “start game” button on the title menu has been pressed.

Exceptions:

Step 1: The title music will not play at any time other than when the title menu is open.

Priority: 3

Name: Play Game Music

Summary: Background game music will be played

Actors: Character Controller

Preconditions: A new game has begun or all enemies near the character have been killed/ left the area

Basic sequence:

Step 1: A new game has begun/ all nearby enemies have been eradicated

Step 2: Play game music

Step 3: Stop music when game exited or there is an enemy nearby

Post conditions: The player exits to the title menu or an enemy has entered the invisible proximity sphere extending around the player

Exceptions:

Step 1: The game will only play when the game is being played and there are no enemies near the player.

Priority: 3

Name: Play Danger Music

Summary: Background game music will be played

Actors: Character Controller

Preconditions: A game has begun and there are enemies near the player

Basic sequence:

Step 1: There are enemies near the player

Step 2: Play danger music

Step 3: All enemies around the player have been eradicated or the game has been exited. Stop the danger music.

Post conditions: All enemies around the player have been eradicated or the game has been exited

Exceptions:

Step 1: This music will only play when the game is being played and there are enemies near the player.

Priority: 3

Name: Play Shooting Sound Effect

Summary: A sound effect will play whenever the character shoots

Actors: Character Controller

Preconditions: A game has begun and the player shoots

Basic sequence:

Step 1: The player presses the shoot button

Step 2: Play sound effect

Post conditions: The sound effect has been played

Exceptions:

Step 1: This sound effect will only be played when the game is being played and the player has pressed the shoot button.

Priority: 3

Name: Play Low Health Sound Effect

Summary: A sound effect will play whenever the character's health is low (health under 10% will be used as an example)

Actors: Character Controller

Preconditions: A game has begun and the player's health is low

Basic sequence:

Step 1: The player's health has dropped below 10%

Step 2: Play sound effect

Post conditions: The sound effect has been played

Exceptions:

Step 1: This sound effect will only be played when the game is being played, and the character's health above zero, but below 10%.

Priority: 3

Name: Play Dinosaur Noises

Summary: A sound effect will play whenever an enemy is near the character

Actors: Enemy Controller

Preconditions: A game has begun and an enemy is near the player

Basic sequence:

Step 1: The player character has entered the invisible proximity sphere around an enemy

Step 2: The enemy plays the dinosaur noise sound effect

Post conditions: The sound effect has been played

Exceptions:

Step 1: Each enemy will only play this sound effect once, then a flag will be set to prevent them from playing it again. Enemies will be dispatched quickly, so this is to prevent the same sound effect from being played too frequently. Even if the same enemy leaves the area and comes near the player again, the sound effect will not be replayed.

Priority: 3

Name: Play Attack Sound Effect

Summary: A sound effect will play whenever an enemy attacks the character

Actors: Enemy Controller

Preconditions: An enemy attacks the player

Basic sequence:

Step 1: An enemy attacks the player

Step 2: The sound effect is played

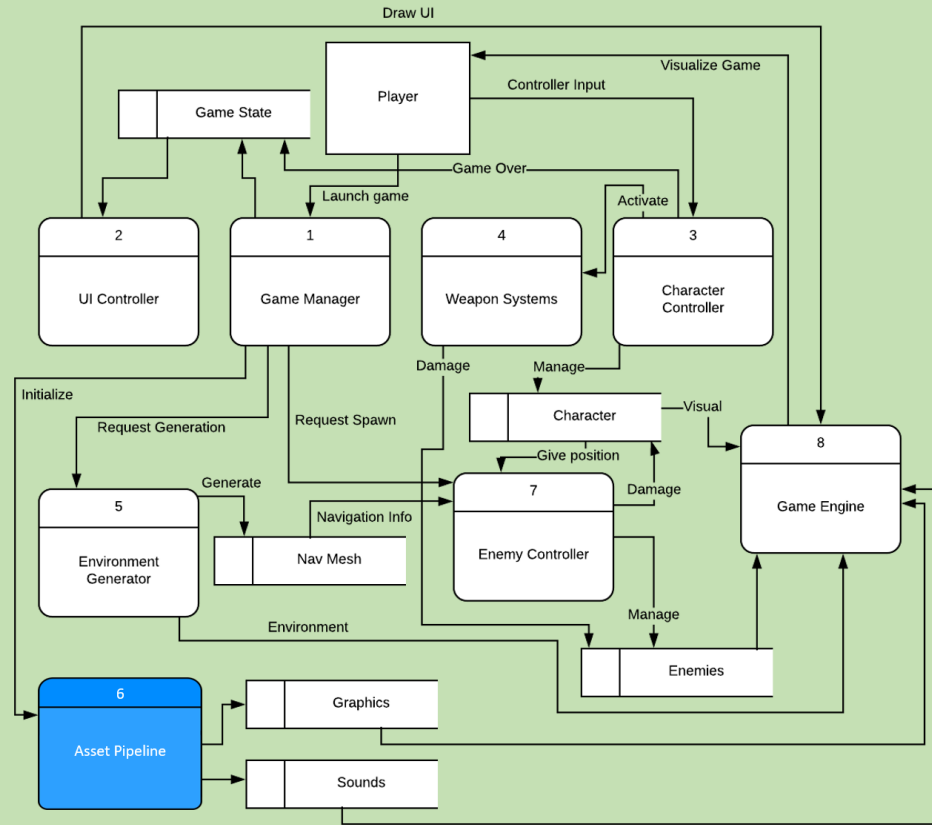
Post conditions: The sound effect has been played

Priority: 3

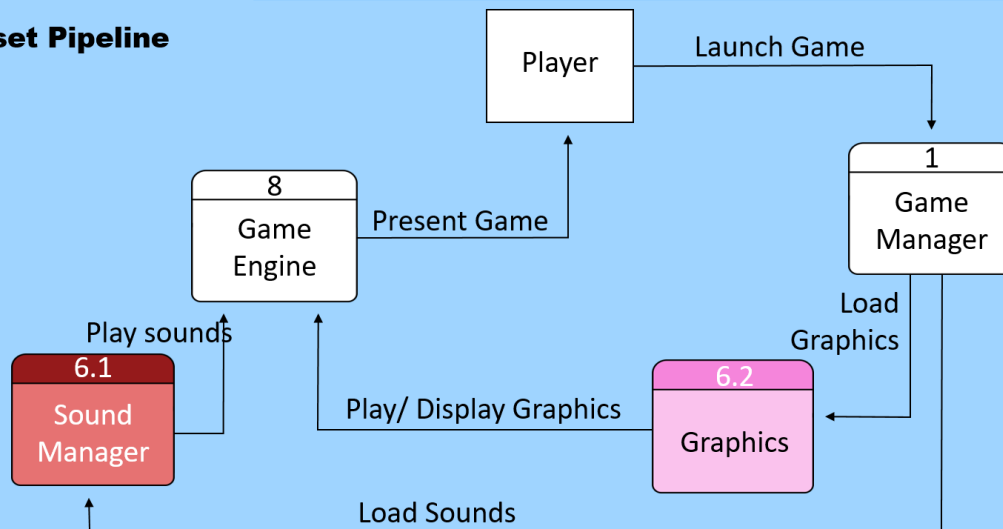
3. Data Flow diagram(s) from Level 0 to process description for your feature ____14

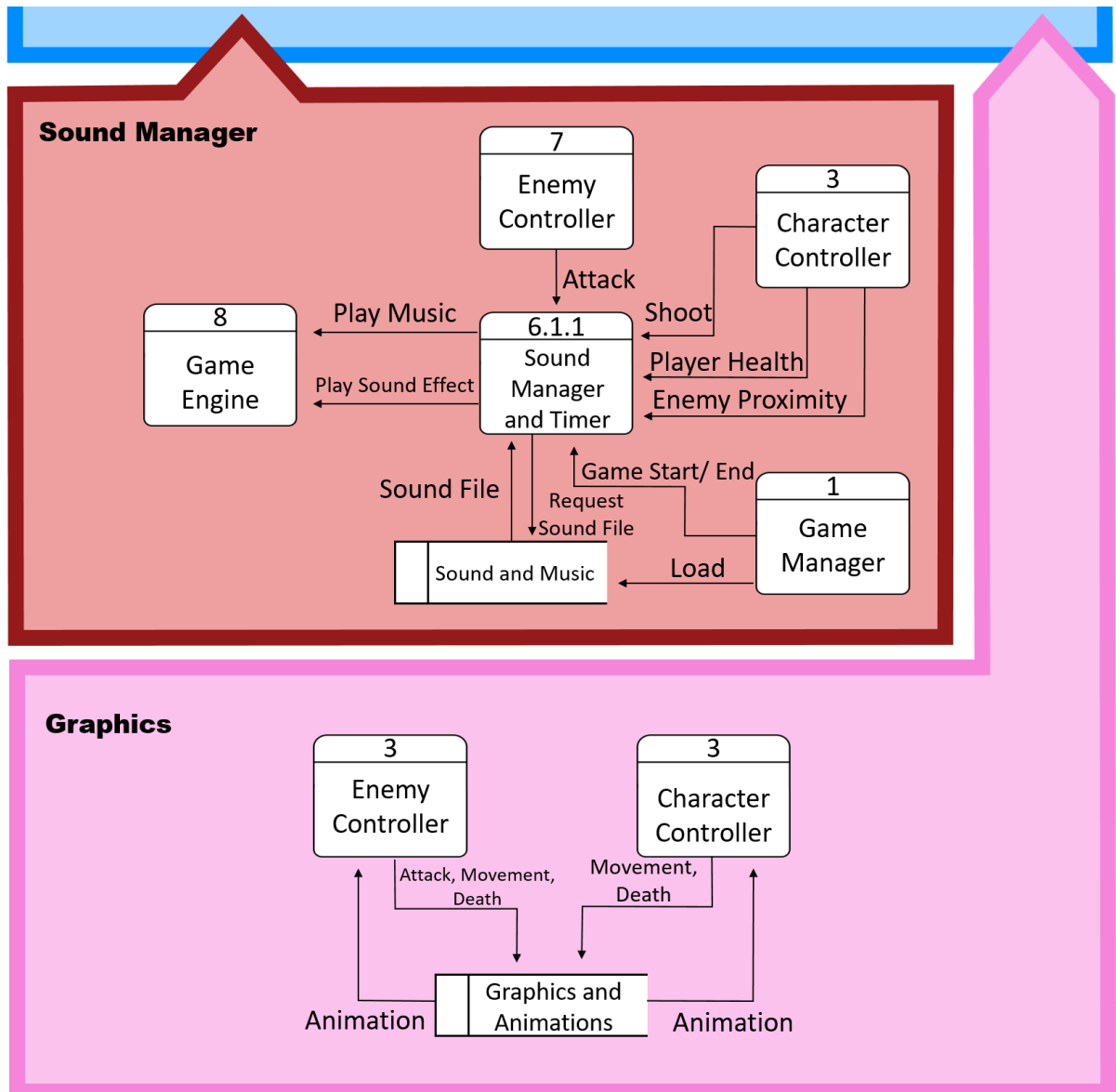
Data Flow Diagrams

Diagram 0



Asset Pipeline





Process Descriptions

Sound Manager:

IF the Character Controller calls the shoot function, THEN play the shoot sound effect.

IF the Character is attacked, THEN check health level.

WHILE health is below 10%, play low health sound effect.

END WHILE

IF Enemy calls attack function, THEN play attack sound effect

WHILE Game is being played, play Game Music

WHILE Enemy is inside the invisible sphere object surrounding the player character, stop Game Music, and play Danger Music.

END WHILE

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END WHILE
WHILE in the title screen, play Title Screen Music
END WHILE
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Graphics:

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WHILE Player Character is moving, play Walking Animation
END WHILE
WHILE Enemy is moving, play Walking Animation
END WHILE
IF Enemy calls attack function, play Attack Animation
IF Enemy's health reaches zero, play Dying Animation
IF Player Character's health reaches zero, play Dying Animation
IF Player is attacked by Enemy, play Take Damage Animation
IF Enemy collides with Player's Bullet object, play Take Damage
Amination
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4. Acceptance Tests _____9

[Describe the inputs and outputs of the tests you will run. Ensure you cover all the boundary cases.]

Sound Effects:

Shoot Sound Effect

Press shoot key while playing the game to make sure the sound effect plays.

Press shoot key while paused to make sure the sound effect does not play.

Press shoot key while in the title screen to make sure the sound effect does not play.

Attack Sound Effect

Let Enemy attack Player Character. Make sure sound effect plays.

Dinosaur Noises Sound Effect

Let enemy get close to the Player Character. Make sure sound effect plays once, and does not play again.

Low Health Sound Effect

Let Player Character's health fall below 10% to make sure the sound effect plays.

Increase the Player's health to make sure the sound effect stops.

Go to the title menu to make sure the sound effect stops.

Let the sound effect play all the way through to make sure it repeats.

Music:

Title Music

Open the game to make sure the title music automatically plays.

Start a game to make use the title music stops.

Go back to the title menu from the game to make sure the title music plays.

Let the title music play all the way through to make sure it repeats

Game Music

Start a game to make sure the game music starts.

Go near enemy to transition to Danger Music, then go away from enemy. Make sure Game Music starts again.

Let music play all the way through to make sure it repeats.

Danger Music

Go near enemy to cause danger music to play. Go away from enemy to make sure Danger music stops.

Animations:

Walking

Move character in all directions. Make sure animation is functioning normally. Have character take damage while walking to make sure nothing breaks. Have character stop walking to make sure it stands normally.

Attacking

Position the player character near an enemy to make sure the enemy attack animation plays. Move around enemy to make sure the enemy will do the attack animation in all directions.

Dying

Let player health go to zero. Make sure dying animation is visible before the game over causes a new screen to pop up.

Let enemy health reach zero. Observe dying animation before the enemy object is deleted.

Take Damage

Allow player character to take damage. Make sure the animation is working properly.

Allow an enemy to take damage. Make sure the animation is working properly.

Make sure on killing blow, Take Damage animation is not played, but rather the Dying Animation.

5. Timeline ____/10

Work Items for Graphics

Task	Duration (PWks)	Predecessor Task(s)
1. Build/Import Character Model & Attach to Character Object	1	-
2. Build/Import Dinosaur Model & Attach to Enemy Object	2	-
3. Create/Import Character Model Animations	2	1
4. Create Dinosaur Model Animations	3	2
5. Design Skin for Character Model	2	1

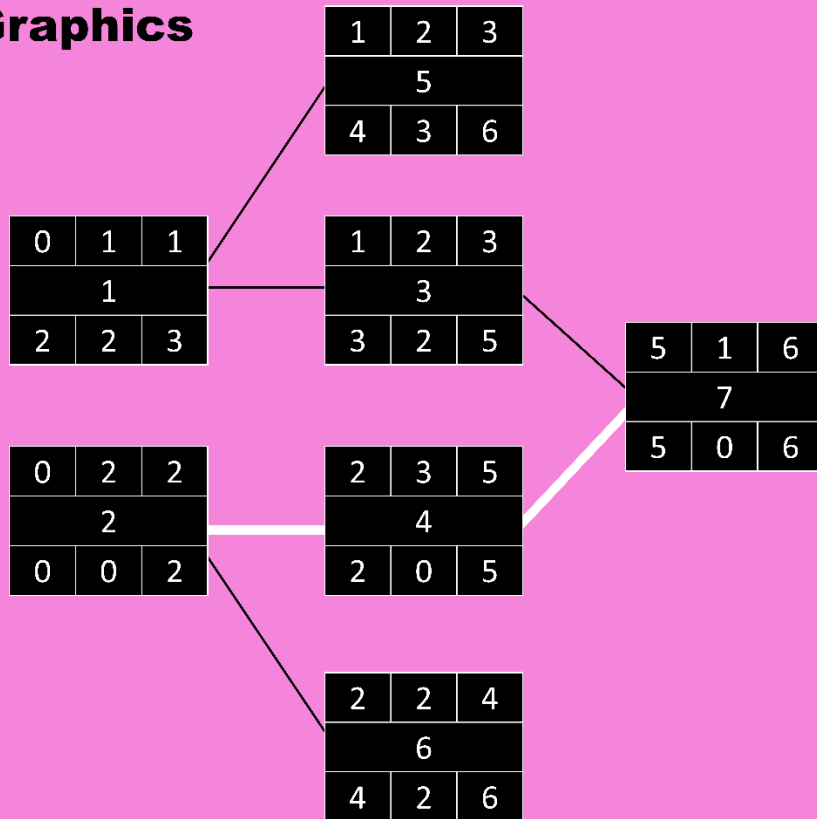
6. Design Skin for Dinosaur Model	2	2
7. Test Animations	1	3,4

Work Items for Sound

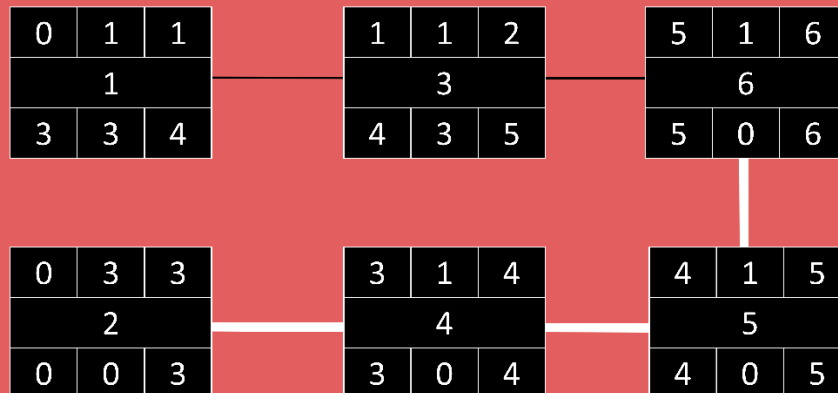
Task	Duration (PWks)	Predecessor Task(s)
1. Create/Import Sound Effect Library	1	-
2. Create/ Import Title Music, Game Music, Danger Music	3	-
3. Connect Sound Effects to Character/ Enemies	1	1
4. Create Invisible Sphere Around Player Character	2	2, 3
5. Connect Music	1	4
6. Test Sounds	1	3,5

Pert diagrams

Graphics

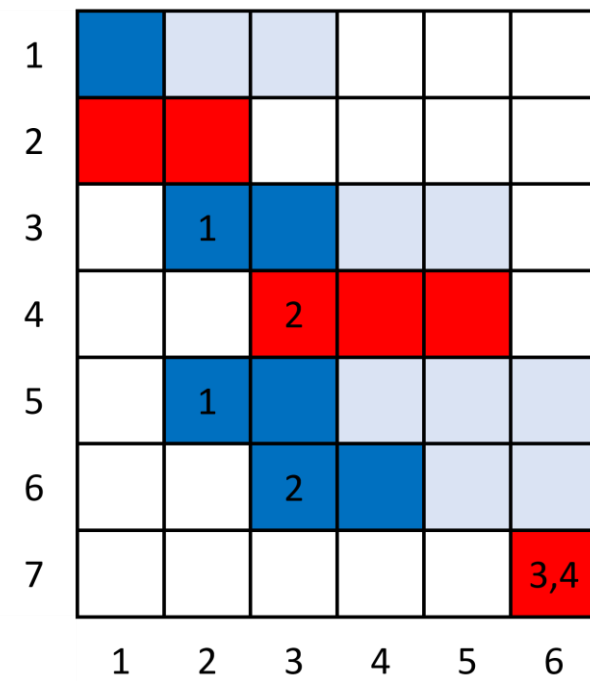


Sound



Gantt timeline

Graphics Gantt Chart



Sound Gantt Chart

