

main

1 Branch 0 Tags

Go to file

Go to file

Code

...

Toby-exe	Update README.md	8d25378 · 2 years ago
src	Completed Documentation	3 years ago
README.md	Update README.md	2 years ago

README

Afro Fighter



Atari ST game

Tobias Wondwossen & Jayden Mingle

1. General Game Overview

Afro Fighter is a 2D side-view fighting game that puts players in control of an Afro fighter who appears on the right side of the screen. A 3-second countdown starts the fight, during which players must utilize a combination of punches, kicks, and fireballs to defeat their opponent on the left. Defense is also crucial, as players can block, jump, and crouch to avoid incoming attacks. The objective is to deplete the opponent's health from 100 to zero before one's own health is reduced, thereby determining the winner of the fight.

Future updates will feature a 2 - player game mode allowing players to put their skills to the test against their friends



2. Game Play Details for 1-Player Mode

2.1 Menu UI and Logic

The game will launch into a menu screen with the Afro Fighters logo and two game mode options; 1-player and 2-player .



The 1-Player mode commences with the player's avatar positioned on the right side of the arena, while the opponent is situated on the left, accompanied by their respective health/information bars. A countdown, starting from three, will be displayed in the center of the screen, with each number displayed for a duration of two seconds.

3

2

1

Upon completion of the countdown, the word "Fight" will be displayed in the center of the screen for a duration of two seconds. Player controls will then become active, and the opponent will begin executing its pre-programmed movements.

FIGHT!

2.1.3 Game Over State and UI

There are two possible Game Over states, one for a Win and a Loss

Win Message and UI

If the player has beat the opponent this message will remain on screen until the player has chosen one of the two menu options; Play Again or Back to Main Menu (Sprite WIP)

WINNER!

Loss Message and UI

If the player has lost to the opponent this message will remain on screen until the player has chosen one of the two menu options; Play Again or Back to Main Menu (Sprite WIP)

SKILL
ISSUE

2.2 Objectives and Rules

2.2.1 Combat Mechanics

Health

In this game, both the player and their opponent start with a 250px width health bar. The objective is to maintain one's own health bar, ensuring that it is not depleted before their opponent's. Each combat move has a distinct impact on the player's health, and it is crucial to execute these moves strategically to achieve victory.

Offensive and Defensive States

Offensive/Defensive Moves	Description	Damage (pixels removed from health)	Keybind
Light Attack	A straight punch	-8px	W
Heavy Attack	A side kick	-16px	←
Ranged / Super	A projectile fireball	-64px	F
Block	A boxing highguard	Halves incoming damage from the above attacks	→ (press and hold)

Movement States

State	Description	Keybind
Idle	Boxing "Orthodox Stance"	None / Default State
Running	Fast shuffle of feet, allowing player to move either left or right across the screen by increments of 4 pixels	• Right: A • Left: D

State	Description	Keybind
Jump	Allows player to change its y position. Player can still change its x position in this state	Space
Crouching	Player goes down on one knee	↓
Slide	If the player is Running and Crouches at the same time they will Slide for as long as they crouch	↓ if in Running state

2.2.2 Opponent

Since the Opponent isn't controlled by a user's inputs, it operates under the following states:

Approach

The opponent will be facing the Player at all times. If the distance between the Player and the opponent is greater than or equal to 16px, the opponent Moves forward towards the player using the appropriate movement input.

Combo

This is the default state that the Opponent will be in. In this state, it will perform a series of moves that go as follows: 3x Light Attack , Block , Heavy Attack , Crouch , Jump , Heavy Attack , Block . Each move will be performed 1 second apart.

2.3 Scene Objects

Note: Coordinates given are assuming $(0,0)$ is the top left corner of the screen, and that sprites are drawn from their top left corner aswell.

Afro Fighter

Properties	States	Combat Moves	Image
- Size : 98px by 64px - Orientalion : Upright and facing right if it is a player, left if it is the opponent - Has Hitbox that is equal to its size - x and y coordinates Intitaly at (446, 264) for the player, (100,264) for the opponent	- Idle - Running - Jumping - Sliding - Crouching	- Light Attack - Heavy Attack - Super / Ranged - Block	

Afro Fighter Mechanics

Movement Boundaries:

The Afro Fighter has the capability to traverse the full width of the 640 pixel arena by using any of its movement states as many times as desired. Its jump state will allow it to reach a maximum height of 164 pixels from its initial y-coordinate . Furthermore Afro Fighter is restricted from descending below its default y-coordinate of 264 , which marks the starting point of the arena floor.

The player and the opponent both have complete control over the direction the Afro Fighter faces. In the event that they come to close such that their hit boxes collide , they are unable to advance forward until one executes a jump over the other.

Combat Rules

All of the Combat moves but Super / Ranged can be used as many times as desired.

In order for the Afro Fighter to unlock its Super / Ranged ability it must block to consectutive Heavy Attacks from its opponent.

Fire Ball Projectile

Properties	Behaviour	Image
- Position Integers, x and y coordinate - Size: 50px by 80px - Hit Box is a rectangle with the same dimensions as its size	Travels accross on screen y-vector until it undergoes a collision	

Health and Info Bar



TOBY

Object	Properties	Behaviour	Image
Health-bar	- Size: 250 x 36 px - Position integers, x and y coordinate	Displays player health	
Avatar-Name	- Size: 26 x 8 px - Position integers, x and y coordinate	Displays avatar name	
Avatar-Profile-Img	- Size: 48 x 48 px - Position integers, x and y coordinate	Displays profile picture of avatar	

Arena

Object	Properties	Behaviour	Image
Arena-Floor	- Size: 640 x 48 px - Position Integers, x and y coordinate	Displays arena floor	
Arena	Size: 640 x 400 px	Displays Health and info bar , Arena Floor and Background	

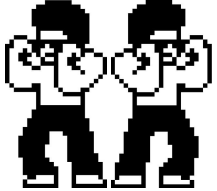
2.4 Animations

All player animations will have a left and right variant to account for the 2 directions a player can face.

Movement Animations

Animation	Behaviour	Properties	Image / Sprite Sheet
Idle	A bobbing up and down movement	- Size: 64 x 96 px - Duration: 35/70th of a second per frame	
Running	A fast shuffle walk	- Size: 64 x 96 px - Duration: 35/70th of a second per frame	
Jump	An airborne rising motion	- Size: 64 x 96 px - Duration: while airborne is set to true	
Crouch	Kneeling position	- Size: 64 x 96 px - Duration: while crouch-state is set to true	
Slide	A soccer slide tackle	- Size: 64 x 64 px - Duration: while running-state & crouching-state are set to true	
Death	A defeated lying down pose	- Size: 64 x 32 px - Duration: while health = 0px	

Combat and Defense Animations

Animation	Behaviour	Properties	Image
Light Attack	A straight punch	- Size: 64 x 96 px - Duration: 35/70th of a second per frame	
Heavy Attack	A side kick	- Size: 64 x 96 px - Duration: 35/70th of a second per frame	
Super / Ranged Attack Imbue	A fire charge-up pose	- Size: 64 x 96 px - Duration: 35/70th of a second per frame	
Block	A boxing highguard	- Size: 64 x 96px - Duration: 35/70th of a second per frame	

2.5 Asynchronous Events

2.5.1 Movement Keybinds

Movement	Key Bind	States Requested
Move right	A	Changes Running State for player to True , sets Rs Running Animation to True

Movement	Key Bind	States Requested
Move left	D	Changes Running State for player to True , sets Ls Running Animation to True
Slide	K	Changes Slide State for player to True , sets Ls or Rs slide animation to True (base on orientation)
Jump	Space	Changes Jump State for player to True , sets Ls or Rs jump animation to True (base on orientation)

2.5.2 Combat Keybinds

Combat Move	Key Bind	States Requested
Light attack	W	Changes Light Attack State for player to True , sets Light Attack Animation to True
Heavy attack	J	Changes Heavy Attack State for player to True , sets Heavy Attack Animation to True
Super / Ranged attack	F	First checks if Consectutive Block Count >= 2, if True Super / Ranged Attack imbue animation is set to True . Draw Fire Ball is set to True
Block	L	Changes Block State for player to True , sets Ls or Rs Block animation to True (base on orientation)

2.6 Synchronous Events

Event Name	Triggering Input Event	Description
Intro prompt	2 seconds between each word	"3,2,1, FIGHT!"
Opponent combo	a 35/70th of a second separates each action	The combo consists of the following actions: Light Attack (x3) , Block , Heavy Attack , Crouch , Jump , Heavy Attack , Block .

2.7 Condition Based Events

Note: "PtP" stands for "player to player"

Event Name	Triggering Input Event	Description
Simple-Hitbox-Collision-PtP	Player hitbox collides with the hitbox of opponent, or boundary	Sets player collision state to True
Damage-HitBox-Collision-PtP	A Simple-Hitbox-Collision is detected while any of the Combat States are True	Updates player health value based on attack endured
Bounds-Checking for arena	Simple-HitBox-Collision is dectected against arena boundary (end of arena width on either side)	sets Idle state for player to True
Opponent direction	The opponent's x-position relative to the player's x-position	The opponent must always face the player; - If Player x-position > opponent x-position, set opponent's right-idle state to True - If Player x-position < opponent x-position, set opponent's left-idle state to True
Opponent movement	The opponent's distance from the player	If distance between Player x-position and opponent x-position is > 16px, have opponent move forward in their current direction until they are within 16px of the player

2.8 Hypothetical Gaming Session

The user is given the choice of a 1-player or 2-player game on the title screen when the game first launches. When a game mode is selected, the screen switches to the relevant game version.

Upon entering a game mode, the arena with the players and their respective healthbars will be displayed. A prompt reading "3, 2, 1, FIGHT!" w be appear and the player(s) will be given control of their respective characters.

As the fight starts, both characters are on the screen, facing each other. The player controlling the human character begins by running toward the opponent, attempting to get close enough to perform a light attack. The computer opponent jumps, avoiding the attack. The computer opponent then jumps again and performs a heavy attack, but the player successfully blocks it.

Both characters move back and forth, exchanging light attacks and blocks. The player successfully blocks another heavy attack from the computer opponent, causing their super meter to fill up. The player performs a super move, landing a powerful blow on the opponent that takes away 64 pixels of health.

The computer opponent retaliates with a combination of light and heavy attacks, but the player is able to block and dodge, avoiding significant damage. Both characters continue to exchange blows, with the player landing a few more light attacks and the computer opponent performing another heavy attack.

As the fight progresses, both characters begin to lose their health to light attacks. The computer opponent attempts another heavy attack, but the player is able to block it, filling up their super meter once again. The player performs another super move, landing a final blow that takes away the remaining health of the computer opponent. The player wins the round and is shown a "WINNER" message and is given the choice to "PLAY AGAIN" or "RETURN TO MAIN MENU"

3. Game Play details for 2-player Mode

All the gameplay elements of 1-Player Mode apply to 2-Player Mode but the CPU-Player is replaced with a second actual player. The second player will have the same moveset and controls as the first player

P1 WINS

P1 WINS!

P2 WINS

P2 WINS!

4. Sound Effects

Sound effect name	Brief Description	Event that triggers playback
Main Theme	"Help urself Dyn remix" found on youtube	User starts the game
Attack	"woosh" sound effect like swinging a bat through the air - duration of a second	any of the players inputs an attack key
Attack connects	sound of a boxing glove hitting a punching bag - duration of a second	any of the players inputs an attack key and a collision is detected
Super	charge up sound effect - duration of a second	Super/Ranged attack input is pressed

5. Additional Features (Time Permitting)

5.1.1 More attacks:

- crouching punch/kick
- jumping punch/kick
- elbow
- energy blast (smaller than ultimate move)

5.1.2 Multiple rounds:

A round is over when one of the players' healthbar reaches 0px. The first player with 2 ko's wins the match. The Number of player ko's is displayed next to their name and healthbar. If both players are tied in ko's entering the 3rd round and the 3rd round ends in a draw, a sudden death round will occur with both players having decreased health.

5.1.3 Stun meter:

As a player takes hits that aren't blocked, a meter next to the healthbar fills up. When this meter fills up, the next hit a player takes will knock them to the ground and put them in a state where they can't do anything for 2 seconds.

The meter will be 96px x 16px and will fill up at the following rates:

Move	Stun
Light Attack	+16px
Heavy Attack	+24px
Ranged / Super	+48px

5.1.4 Finishing move:

When a player is knocked out at match point, the player that's still standing will have the option to perform a mortal kombat style finishing move.

5.1.5 "Smarter" CPU:

The `opponent` has a chance to perfectly counter the player by reading input. For example the real player could enter the input to punch and the cpu would block. Outside of this phase the CPU will perform actions based on distance to the player and a predetermined sequence of moves.

5.1.6 Difficulty levels

Releases

No releases published

Contributors 1



Toby-exe Tobias Wondwossen

Languages

C 98.5% **Assembly** 1.5%