

Detailed Game Specification:- Atari Boxing (MRU Vision)

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Instructor: Marc Schroeder

Author(s): Michael Walker, Garrett Empey

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1. General Game Overview

The game shows a top-down view of two boxers, one white and one black. When close enough, a boxer, can punch the opponent, causing them to take a step back, and a short stun duration. When in range, executing a short punch "power punch", scores two points a long punch scores one point. There are no knockdowns or rounds. A match is completed either when a player lands 50 punches or two minutes have elapsed. After the two minute mark, a decision is made in favor of the boxer that landed the most punches. Ties are possible. Two boxers are always in front of each other and they can only move up, down, forward and backwards.

The game-play is simple but there are certain techniques that a skilled player could leverage to their advantage, such as getting a player on the ropes and juggling them between punches.

1. Game Play Details for Core 1-Player Version

Objectives and Rules

Upon launching the program, a splash screen is displayed and the user has the option to select one of the options of the 1-player or 2-player version. Once the mode is selected, a boxing ring appears on the screen. The white boxer is standing stationary in the top left corner of the ring just as the black boxer stands at the opposite corner of him. The game commences after an initial count down, and buzzer. \ *****DING*****.

Scoring

When a player's boxing character has lined up one of their boxing gloves to the opposing player's head and presses the punch key (assigned attack button) with good timing, the program will calculate the distance between the two boxers and determine the necessary punch in order to make contact with the opposing player's head, whether that be a long or short punch. The program itself will determine whether to punch with the right or left hand. If a short punch can make contact with the opposing player's head, that option will be chosen in order to score the player the most amount of points.

Winning/Losing

A winner is chosen one of two ways. Before a set timer (2 minutes is common) runs out, a boxer achieves a score of 50 points using any combination of long and short punches. The timer runs out and the boxer that has achieved the highest score is chosen as the winner. In this case, it is possible for their to be a tie.

Objects

Object or Object Type Name Properties Behaviors

Boxer.

- Intelligently determines which hand to use |
- Left/right jab
- Recoil from punch |

Boxing ring.

|

- Trampoline-like |
- Involuntarily pushes boxer off the ropes, back to their original position before taking a punch. | | Menu. Settings. |
- Tab through to select options.
- (possible mouse interaction depending on time)
- Choose your difficulty or handicap for each player (or the computer)
- PTS / TIME
- Sound.
- Networking. |
- Player VS Player.
- Player Vs AI.
- Settings.
- Change behavior of the AI.
- Lower your opponents speed, set a handicap.
- Set MAX points (MIN 20, MAX 200).
- Lower / Lengthen time. (1 minute min, 7 minute max).
- Sound settings, mute / un-mute music. Turn off crowd.
- (assumed completion of game, will require instruction from professor). |

Physics

Table 1: States of Boxer.

State	Name
Direction States 1. Fixed / Stationary.2. Going Forwards.3. Going Backwards.4. Going Right.5. Going Left.	
Punching States 1. Punch Right.2. Punch Left.3. No Punching.	

Table 2:

Stun timer.	[This timer will last 0.5 seconds. (Caused by a punch)]
Combo physics.	[(Player Bounces off punch) This dynamic sets up for (combos). If the player is on the (ropes), it's harder to 'duck' from the (next punch), a (barrage of hits) can be (landed) in this scenario. If the (attack button is held) down. (Player Bounces Off punch) Each punch moves the opponent slightly back and away from the boxer, aligning them towards the opposite glove of (Distance to be calculated). When hit a (stun timer) is active, 0.5 seconds.]
Distance from AI.	[If you move in to close, the computer becomes stronger.]

Asynchronous (Input) Events

Player	Event Name	Triggering Input Event	Description
Player 1.	[movement] [attack]	[W A S D] [C]	[W, moves player up. A moves player left, s moves player down d moves player right.] [C is the player1 attack.]
Player 2.	[movement] [attack]	[I J K L I] [N]	[I, moves player up. J moves player left, K moves player down L moves player right.][N is the player1 attack.]
Environment.	[main menu] [menu - selection] [SETTINGS]	[F12] [TAB] [ESC][F1]	[F12- Brings up player menu. From in game. (Yes / No) ? to make sure cat didn't sit on keyboard.][TAB -Switch Between Player V.S AI Player V.S Player][ESC - Exit game.][F1 - Sounds - Difficulty - FullScreen – Windowed – possibility of network settings.]
Player1 Player2	Combo Punching Blocking	Hold - [C / N]	[Hold - [C / N] If the opponent is on the ropes, and the attack button is held, it will automatically combo the opponent. If the attack button is held and the opponent is not on the rope, the players arm will be extended outwards, this can be used for defense. (Stops movement.)]

Synchronous (Timed) Events

Event Name	Trigger Timing	Description
[End of game]	[after 2 minutes 120 seconds of game play.]	[The game comes to an end, and either a Win / Tie is decision is made.]
[Start of game]	[Initial Timer].	[Either a 5 / 10 second timer. To allow for players to get situated]
[Stun]	[0.5 of a second]	(see game physics)

Condition-Based (Cascaded) Events

Event Name	Triggering Condition	Description
[Face hit]	[head goes back for .5 seconds]	(see game physics)
[Invert]	(left player goes to right of player), always facing each other.	[The players must always be facing each other For an example of a swap see page 2 image.]
[glove hit]	[defends punch]	[gloves can be used to block punches]
[collisions]	[player / opponent collides]	[If the fighters collide they stop in place.] *Blocking for ropes is possible.
[Prevent from leaving the ring]	[player collides with ropes]	[in the event that a player collides with the ropes, top ,left right, and bottom the player will stop in place]

Hypothetical Gaming Session

Source: <https://strategywiki.org/wiki/Boxing>

Boxing is played in one, two-minute round against the computer or another player. During that time, you score points by hitting your opponent's head. You can achieve a KO at 100 points, or else the player with the highest score at the end of the round is the winner (a tie is also possible). Hitting your opponent's hands does not count for points, and should be used by you as a blocking mechanism.

When throwing punches you need to take into consideration the distance to your opponent and how your fist is lining up with his head. If you are in too close your punches will be ineffective, and if you are too far away, you'll miss. You'll also need to move up or down to line your punch up with the opponent's head, rather than hitting his gloves, which has no effect.

1. Game Play Details for Core 2-Player Version

Two player game mode will behave the exact same way as a single player game. However during the 2 player game play a player handicap setting can be toggled from the System menu.

1. Sound Effects

Sound Effect Name	Brief Description	Event which Triggers Playback
[Face Punch]	[Using the original game sound. It makes a crunching sound]	[Hitting the enemy opponent.]
[Glove contact]	[when a punch is blocked, a very quiet sound is made. Using original game sound.]	[Gloves hit]
[Round start / End]	*DING DING DING *	[Starting / ending a round triggers this event.]
Sound-Track-Gameplay	Music	[Eye of the tiger.]
Sound-Track-Menu	Music	[A Creation by, Michael Walker, and Gareth Empey.]

1. Additional Features (Time Permitting)

2. Rounds (3)
3. Stamina.
4. Health.
5. Knock Out Chance.
6. On knockout rapid attack to get boxer up.
7. Some kind of ref NPC to do '10 count'
8. Stun animation of stars above boxers head, indication of KO. (Tweet Bird Sound)
9. Tournament mode of some sort.
10. Networking.
11. A hidden Easter egg (cheat) possible rocket launcher involved.

Built With

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