

Jam Packed! – A Roller Derby Game for the Game Boy Advance

Summary

My final project will be a sports game like NBA Jam or Madden, but with a focus on Roller Derby. There will be a computerized team consisting of one jammer and three blockers. Players will control another jammer, with three computerized blockers serving as teammates. The main gameplay loop will be a regulation bout of flat track derby (Reference Video: https://youtu.be/0ld6gTd2LCM?si=5mYTAM-LuIYNY_JF), minus penalties. Each bout will last 10 minutes, divided into jams that are 2 minutes long (unless the player gets lead jammer and calls it early). Whichever team has scored the most points by the end of this bout wins!

Between the START and the GAME states will be a brief TUTORIAL state that explains the controls and scoring! If possible, I might animate this to walk through the basic rules of derby. This can also be accessed from the pause screen, if needed.

Win Case: Player's team scores more than the automated opponent.

Lose Case: Opposing team scores more than the player's team.

Controls

- **D-PAD** – Move the jammer up/down/left/right on the track
- **Start** – Start Game/Pause
- **A Button** – Apex Jump (**when prompted**)
- **B Button** – Whip (**when prompted**)
- **Left Shoulder** – Call the Jam (if lead jammer)

Animated Sprites

- Player and Opposing Jammer (using different palette rows)
- Tripods for both teams (different palette rows)
- Referees (On skates)
- Jam Timer (Non-Skating Official, just some dude standing with a whistle)
- Fallen Jammer (different palette rows for player/opponent)

Audio

- **Main Theme** -
<https://www.youtube.com/watch?v=Hvdfx9avekU&list=PLwJxqYuirCLkq42mGw4XKGQlpZSfxsYd&index=4> (I like this)

- **Start Theme -**
https://www.youtube.com/watch?v=FizE_hpRG3c&list=RDFizE_hpRG3c&start_radio=1 (Tony Hawk Pro Skater Theme, might compose something similar)
- **Win Theme – Ramblin Wreck from Georgia Tech**
https://www.youtube.com/watch?v=sl-kpodA3Tg&list=RDsI-kpodA3Tg&start_radio=1
- **Lose Theme – Same as main theme**
- **SFX**
 - **Lead Jammer Whistle (2 whistles)**
 - **End of Jam Whistle (3 sets of 4 whistles)**
 - **Start of Jam Whistle (1 mid-length whistle)**
 - All whistles featured here:
<https://www.youtube.com/watch?v=EX9qDroOkpA>
 - **Player Scores – GBA Bloop Sound Effect**
 - **Special Moves will both trigger audience uproar -**
<https://www.youtube.com/watch?v=xKPd8LVdsW4>
 - Will probably pull from this video
<https://www.youtube.com/watch?v=SoZhpnTuQBo>
 - **Collision Sound – GBA Crash Sound effect**

Backgrounds

- The track will be a separate background with parallax behavior so that the whole track is not on screen at the same time. The screen follows the movement of the PLAYER's jammer.
- There will be a background of spectators that will swap colors every few frames to simulate movement
- In the START state, there will be a horizontally moving background of roller skates behind the title text!

Cheat

I'm not sure about the specific implementation or mechanics, but I want players to have the option to disperse the tripod into 3 individual blockers, clearing a path on the track and allowing them to pass much more easily. I would have to find a way to implement this mechanic in a way that could not be mistaken for actual gameplay.

Implementation (Maybe)

Because derby is a contact sport, collision logic will be the most important to properly handle. I've used previous homework assignments to experiment with how to implement

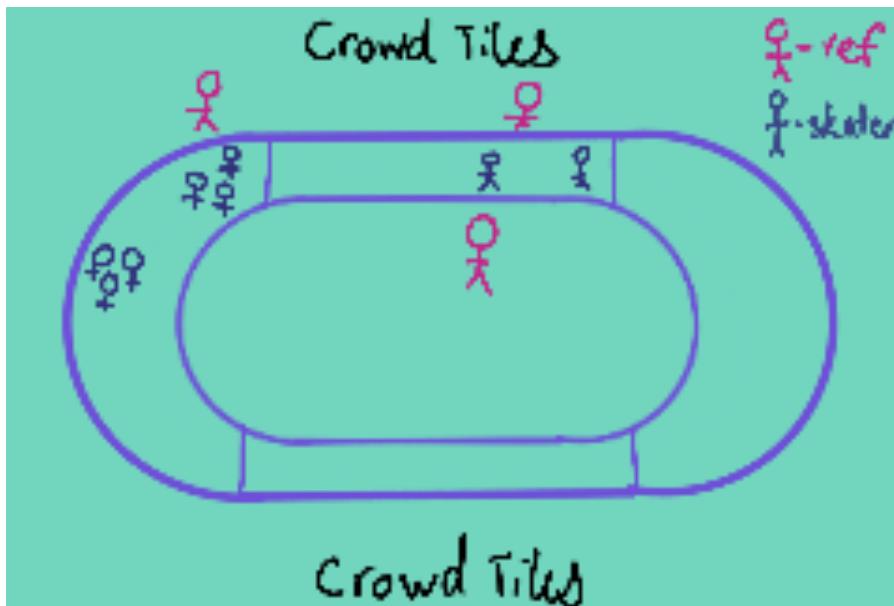
track boundaries and blocker/tripod movement. Finetuning and expanding these for sprites in Mode 0 will be important to this project, but I feel I have developed a strong understanding of the logic behind my ideas.

I would possibly need to review pseudorandom numbers in C to use for the computer-controlled jammer and blockers so that their movements are consistently random for engaging gameplay. Randomizing things like speed, starting position, and action states (for the jammer, moving around vs pushing the blockers) would create dynamic gameplay.

Between expanding previously implemented mechanics and this pseudorandomized movement, I feel that despite this project having the same topic as my previous homeworks, there is a significant enough difference to justify this concept.

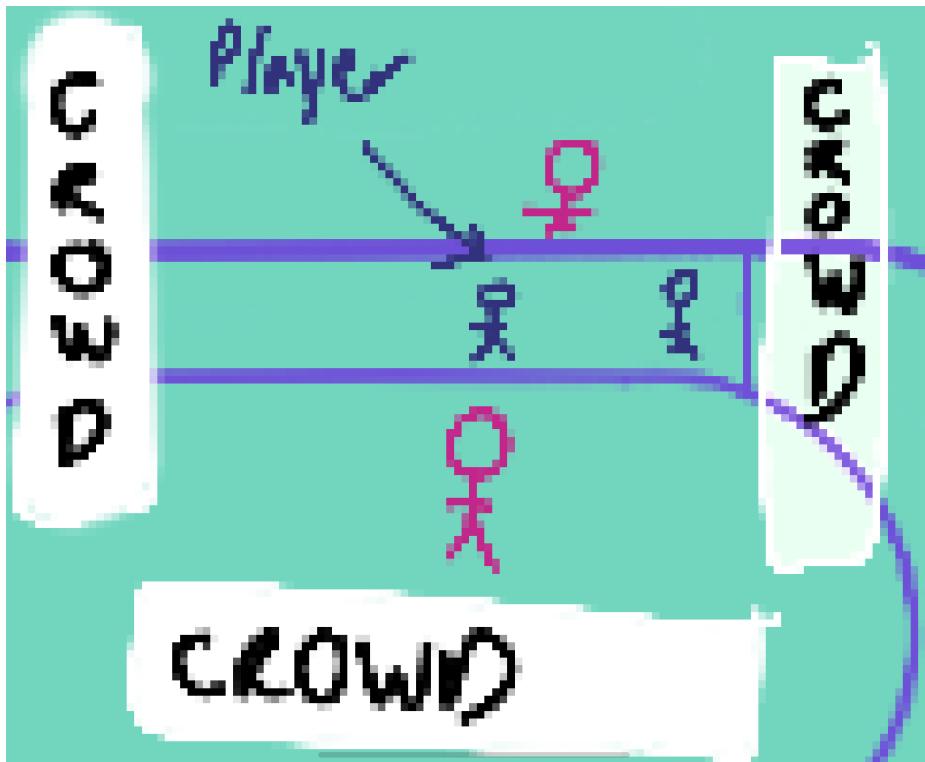
All jammers and blockers will be tall medium sprites, and jammers will have wide medium sprites when they are skating around the track.

Sketches



The track and crowd are separate backgrounds with separate tilesets, and the actual skater/referee sprites will look better than this.

Parallax Implementation



Sprite Ideas

