Game Design and Features List (LAGS):

Note: everything with a check mark is done, while everything with a box is not done.

Unique aspects:
- ✓ Unique music
- ✓ Unique jetpacks and clothing
- ✓ Unique laser patterns and colors
- ✓ Unique background pixel art
- ❑ Original gadgets
- ❑ Original vehicles

5-point features:
- ✓ [1 day] Add some music: a song for the title screen, death screen, and in-game.
- ✓ [2 days] Different laser types: there should be horizontal, vertical, and diagonal lasers and also small and large variants of EACH orientation. This involves a few changes; for example, a laser type must have a sprite and a unique polygon representing its collision boundaries.
- ✓ [1 day] Title screen: should display "Jetpack Joyride", "LAGS", and any other information necessary to initiate the game.
- ✓ [1 day] Death screen: should read from local state and display the total coins and highest distance, as well as the number of coins earned and distance travelled this round.
- ✓ [1 day] Death noises: play a sound every time the character dies.
- ✓ [1 day] Speeding background: the character should move as time progresses.
- ✓ [1 day] Debug mode: there should be a mode where things are easier to debug (character can move left/right, print data to screen, etc).
- ✓ [2 days] Spacebar/jetpack movement: vertical acceleration should be greater than gravity.
- ✓ [1 day] Coin noise: play a sound every time a coin is consumed.
- ❑ [1 day] Pause screen: pause the gameplay when the user presses the button
- ❑ [3 days] Full screen laser: laser should cover entire screen, only turn on one at a time

10-point features:
- ✓ [2 days] Moving character: get the camera to lock on the character, such that the x-offset varies, and the y-offset is constant.
- ✓ [4 days] Random coins: randomly pick a subset of a bunch of XML files describing relative positions of the coins, then display it on the infinite scrolling background. The XML files should also contain good patterns of coins.
- ✓ [4 days] Random lasers: randomly pick a subset of a bunch of XML files describing relative positions of the lasers (including the 8 different types), then display it on the infinite scrolling background. The XML files should also contain good patterns of lasers.
- ✓ [2 days] Distance/coin tracking saved to local state: on startup, load a file containing state data (coins and distance). On death, load the same file to check if you beat the high score.

- ❏ [3 days] Missiles: make randomly placed missiles (one per background panel) that kill you on contact.
- ❏ [1 week] Gadgets (2 weeks)
  - ○ Double coin: 2x each coin's value
  - ○ Magnet: Attracts nearby coins without touching them directly
  - ○ Hamster ball: roll a few meters after you die inside a hamster ball
  - ○ Gold Vehicles: Vehicles give you more money

15-point features:
- ❏ [2 weeks] Vehicles
  - ○ Lil Stomper
  - ○ Gravity-switcher
  - ○ Mr. Cuddles (The Dragon)
  - ○ Motorcycle Guy
  - ○ Profit Bird
- ❏ [4 days] Global leaderboard hosted in a web server. We would need some form of authentication.
- ❏ [1 week] Shop with jetpacks and gadgets: should fit in with the local state (use coins).
- ✓ [4 days] Collisions between lasers/coins and character: use the SAT (separating axis theorem) to find collisions, because not everything is a nice rectangle.
- ✓ [3 days] Infinite scrolling background: make the background automatically generate a new panel when the character reaches the end. This should also generate random coin/laser patterns from XML. It should also delete the old panels that are no longer visible to save memory.
- ❏ [1 week] Achievement system: make a fully-fledged achievement system that gets saved to local state. The hard part is making all the achievements because there would be so many.

Dependencies:
Some tasks depend on other tasks, so here's a rough outline of the order that core features should be implemented. Once these are done, the other tasks should work.

- ✓ Get the screen to display with a certain FPS
- ✓ Display a scrolling background
- ✓ Display the character with basic movement (space for up/down, arrows for left/right) + interaction with gravity
- ✓ Randomly place lasers on the map and make them kill the character on contact
- ✓ Get background music working
- ✓ Somehow keep track of the distance travelled and coins