Retro Game Jam GDD Template

Game Title: GlitchCycle

Team Name: Group 30 (G 30)

Team Members

- Jeff Paller (21677646)

- Mridul Nohria (74243379)

- Raunak Khanna (89443253)

- Muhammad Ahsan Kalam (86275237)

Core Concept

Our game reimagines the classic Tron: Light Cycle (1982) arcade experience, where competing riders leave brightly colored trails behind them and must avoid colliding with any line—be it their own or an opponent's. **We introduce two modern twists** to elevate the core gameplay:

1. **Lateral Jump Mechanic** – Allows players to vault over their own or opponents' trails, turning near-collisions into skillful evasions.

2. **Shooting Mechanic** – Enables players to fire a projectile that can destroy the opposing rider if aimed and timed correctly, adding a new layer of offense and strategy.

These combined twists create fast-paced, tactical gameplay that builds upon the neon-dueling action of the original Tron.

Core Gameplay

In each round, players control light cycles that **continuously move** and **generate glowing trails**. The objective is to remain the last cycle standing by:

- **Avoiding collisions** with any trail (your own or your opponent's).

- **Using the lateral jump** to vault over threatening trails.

- **Strategically shooting** the opponent before they can outmaneuver or shoot back.

A single collision or successful shot immediately eliminates that player for the round. Through distinctive jump/shot/crash animations and audio cues, players receive clear feedback and a heightened sense of danger and reward.

Player Controls

Player 1 Controls

- **A** = Turn Left

- **D** = Turn Right

- **Q** = Jump Left

- **E** = Jump Right

- **C** = Shoot

Player 2 Controls

- **J** = Turn Left

- **L** = Turn Right

- **U** = Jump Left

- **O** = Jump Right

- **N** = Shoot

In Tutorial Mode, Player 2 is controlled by an AI.

Game Modes

Tutorial Mode

A single-player experience against an **AI opponent**. The AI demonstrates basic movement, providing a safe environment for learning the mechanics.

2-Player Mode

A **competitive local** mode for two players on the same device. Friends can face off across multiple arenas, utilizing both **lateral jumps** and **shooting** to outsmart each other.

Level & Progression

Game Structure

- **Five handcrafted levels** with unique wall/obstacle layouts.

- Accessible in 2-Player mode, ensuring variety and replay value.

Scoring System

A **persistent** scoring system tracks the total number of rounds each player has won. After each round:

- The surviving player increments their **cumulative** score.

- The game continues until players manually exit, allowing for extended rivalry over multiple rounds.

Timeline & Milestones

Week 1: Core Mechanics & Tutorial Mode Implementation

1. **Project Setup**

- Initialize Unity project, set up version control, configure settings.
    Assigned to: Jeff Paller

2. **Light Cycle Movement**

    - Implement continuous movement and turning, ensuring trailing mechanic.
        Assigned to: Jeff Paller

3. **Lateral Jump Mechanic**

    - Code the jump logic and cooldown for both players.
        Assigned to: Jeff Paller

4. **Basic Shooting Mechanic**

    - Implement shooting controls (C for Player 1, N for Player 2) and projectile collision.
        Assigned to:Mridul Nohria

5. **Scoring System**

    - Create persistent scoring logic to track total rounds won.
        Assigned to: Raunak Khanna

6. **Basic UI**

    - Display cumulative scores, jump cooldowns, and control info.
        Assigned to: Muhammad Ahsan Kalam

7. **Tutorial AI**

    - Basic AI that demonstrates movement, jumping, and shooting at a beginner level.
        Assigned to: Jeff Paller

Week 2: 2-Player Mode, Levels & Polish

1. **2-Player Mode**

    - Finalize controls for Player 1 & Player 2 and ensure all mechanics (jump + shoot) function properly in competitive play.
        Assigned to: Jeff Paller

2. **Level Design**

   ○ Handcraft five unique arenas with walls/obstacles to challenge jump & shooting strategies.
     Assigned to: Everyone

3. **Visual & Audio Polish**

   ○ Integrate animations and particle effects for jumps and shots, add retro neon aesthetics, and refine sound design.
     Assigned to: Mridul Nohria

4. **UI & Menus**

   ○ Improve main menu, mode selection, level selection, and in-game HUD for clarity on scores, cooldowns, etc.
     Assigned to: Raunak Khanna

5. **Balancing & Testing**

   ○ Playtest AI difficulty, fine-tune jump and shot speed, and fix major bugs.
     Assigned to: Jeff Paller

6. **Final Wrap-Up**

   ○ Record gameplay demo, update README/documents, and package the final build.
     Assigned to: Everyone

Assets

Models & Art:

Provide links or sources for sprites, models, and animations.

- https://opengameart.org/content/grid-hud Good map/grid like background for all levels.

  ○ Found on OpenGameArt

- For the bike/Player, we can use: https://opengameart.org/content/spaceship-building-kit
  ○ Found on OpenGameArt

- For the walls/obstacles on the map we can simply use Unity's shape tool to design a thin line following behind the player, and also to make the simple obstacles that will be for differing levels (rectangles, circles, etc).

- Jump animation for when jumping laterally:
  https://opengameart.org/content/warp-effect-2

  o Found on OpenGameArt.

- Simple explosion animation for when crashing
  https://opengameart.org/content/bubble-explosion
  o Found on OpenGameArt

Sound & Music:

Provide links or sources for music and sound effects.

- https://freesound.org/people/CJspellsfish/sounds/727650/ RETRO JUMP SOUND (for
  when using lateral jump movement).

  o found on FreeSound.

- https://freesound.org/people/squareal/sounds/237375/ CRASH SOUND EFFECT (might
  need to be clipped but still good for when player hits wall).

  o found on FreeSound

    ▪ Also, clip the beginning of this for a good turning sound effect.

- https://freesound.org/people/Timbre/sounds/561191/ MAIN MENU MUSIC, good
  loop-able music for a TRON vibe while selecting the level you want to play/upon start-up.

  o Found on FreeSound.

- https://freesound.org/people/Bertrof/sounds/131658/ SELECTION SOUND EFFECT,
  sound used for when a player selects say a level or something else in the main menu, as
  feedback confirmation that they clicked something/something was selected.

  o Found on FreeSound

- https://freesound.org/people/furbyguy/sounds/331876/ Good in game music (good music
  for a level to use)

  o Found on FreeSound

- https://freesound.org/people/Timbre/sounds/496186/ Good in game music (good music
  for a level to use)

  o Found on FreeSound

- https://freesound.org/people/3ag1e/sounds/745852/ Good in game music (good music
  for a level to use)

  o Found on FreeSound

- https://freesound.org/people/zagi2/sounds/223475/ Good in game music (good music for a level to use)

    o Found on FreeSound

- https://freesound.org/people/danlucaz/sounds/497109/ Good in game music (good music for a level to use)

    o Found on FreeSound

UI:

For our UI, we aim to create a retro-futuristic interface that complements the Tron-inspired aesthetic. Here's what we plan to include:

- **Fonts:**

    o Retro Font to use: https://fonts.google.com/specimen/Press+Start+2P

        ▪ Publicly given by Google Fonts

    o https://fonts.google.com/specimen/VT323?query=Vt This font compliments the above if we decide to use more than one.

        ▪ Publicly given by Google Fonts

- **Icons and UI Elements:**

    o **Icons:**

        ▪ If we need any icons in particular, this collection seems to have all the basic things: https://opengameart.org/content/grayscale-icons

            ▪ Found on OpenGameArt

    o **Main Menu:**

        - A custom-designed main menu featuring minimalist panels and neon-styled buttons.
        - Options will include:
            o **Play:** Launches the game and then prompts a level selection screen.
            o **Settings:** Opens a settings menu for adjusting game options like sound, controls, etc.
            o **Quit:** Exits the game.

        ▪ If we can't think of anything for the main menu, we can always use this: https://opengameart.org/content/game-icons-and-buttons

            ▪ Found on OpenGameArt

In-Game HUD:

- Custom-designed UI elements to display round scores and ability cooldowns with a retro neon aesthetic (likely simple text at top of screen in bright text).