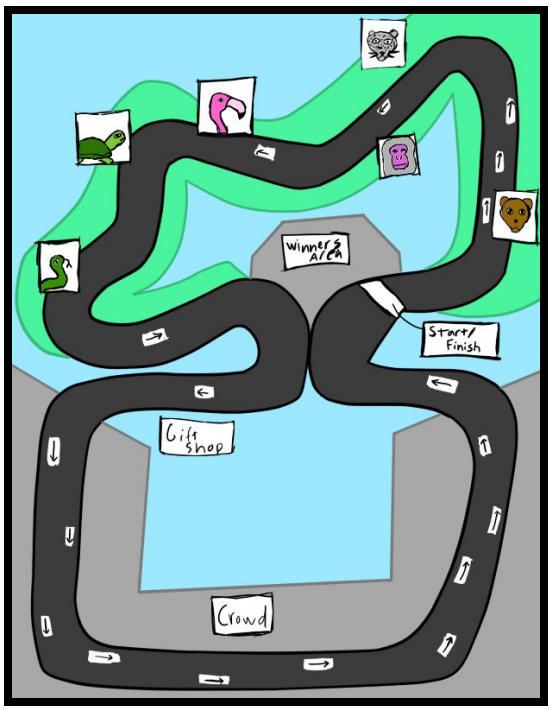
Farmula 1: Barnout



GDD Template Written by: Benjamin “HeadClot” Stanley
Special thanks to Alec Markarian

- Choose powerups before the race that are different for each player
    Theme / Setting / Genre
    Core Gameplay Mechanics Brief
    Targeted platforms
    Influences (Brief)
        -Super Mario Kart (SNES game)
        -Mario Party (N64 game)
    The elevator Pitch
    Project Description

What sets this project apart?
    Core Gameplay Mechanics (Detailed)
        - Racing with 2-4 players
        - Split-screen multiplayer
        - Track obstacles and speed boosts
        - Choose powerups before the race that are different for each player
        - Drifting and Drafting

Story and Gameplay
    Project Lore:
    Gameplay (Brief)
    Gameplay (Detailed)

Assets Needed
    - 2D
    - Sound
    - Code
    - Animation

Schedule
        - Sprint 1
        - Sprint 2
        - Sprint 3

Overview

Theme / Setting / Genre

- The game is a 2D, top-down, party-style racing game that takes place on a zoo-themed track.

Core Gameplay Mechanics Brief

- Racing against 1-3 other players
- Split-screen multiplayer
- Track obstacles and speed boosts
- Choose powerups before the race that are different for each player
- Drifting and Drafting

Targeted platforms

- Windows
- Mac
- Linux

Project Scope

- Game Time Scale
    - ~350 total hours
    - MVP in 9 weeks
- 6 members
    - Core Team
        - Alex Borman
            - Team Leader
            - Programmer
        - Tyler Eichten
            - Artist/Graphic Designer
            - Programmer
        - Brandon Johnson
            - Programmer
        - Will Collicott
            - Programmer
        - Josh Fosdick
            - Programmer
        - Michael Maple
            - Sound Designer/Composer
- Licenses / Hardware / Other Costs
    - Unity
    - Adobe Suite
    - PaintTool SAI
    - Logic Pro X
- Total Costs with breakdown
    - All tools are already paid for, and no outside assets will be used. The time used to develop the game and assets is the only production cost.

Influences (Brief)

- **Super Mario Kart (SNES game)**
    - We have all played Super Mario Kart and all agreed that it had a good mix of intense, quick periods of gameplay, as well as an ability to provide great replay value. We are confident that this blend applies to a wide demographic and will retain a high number of players who try the game.
- **Mario Party (N64 game)**
    - Our game is a multiplayer-based game that feeds off of the group environment of Mario Party. We envision a finished product that is appealing to those who have enjoyed playing Mario Party. Our track environment and item mechanics mimic the silliness and casual atmosphere of Mario Party.

The Elevator Pitch

Our game is a 2D top-down racing game that will employ many of the vapid tactics of the party game genre, including comeback potentials, fast paced action, and split second decision making. This ensures that it will stand out as a party game that people will be extremely competitive with as well as an easy to understand racing style.

Project Description

The game is a top-down, 2D racing game for 2-4 players. It takes place in a post-apocalyptic themed zoo with animal characters racing around a go-kart style track. The track itself has several turns in either direction and loops back to itself, and races will be three laps. The track also contains different types of terrain (rough grass, oil spills, etc.), speed boosts (as a rectangle on the track that players can drive over), and obstacles that should be avoided. Players will begin the game by first selecting their character (this is only an aesthetic choice). Next, the players are put in a random order and they take turns selecting from a list of power-ups. After each player has four power-ups, the

racing portion of the game begins. The screen layout changes to a split-screen view for each player, depending on how many players are in the game (split in half down the middle for two players, and split into four screens for three or four players, with one screen left blank for three players) After transitioning to this screen, there is a brief countdown and then the race starts. When racing, each player will need to avoid obstacles and other players while also trying to hit as many speed boosts as possible. Other than by directly colliding with other players, racers can affect the game by using the power-ups they chose earlier. The power-up list contains a mix of single-use and cooldown-based power-ups that can be used at any time if they are available. These power-ups include personal buffs as well as weapons that can be used against other players. Each race will last for around 5 minutes, after which the players can decide whether to start a new race or go back to the main menu. Other game modes such as eliminating a player each lap or a longer tournament-style competition, as well as additional tracks may be added at a later time. To maintain the party-game feel, races are kept short and tracks will be designed to occasionally be frustrating and unfair, but not so much that it becomes unfun.

What sets this project apart?

- A unique character base
- A humorous track setting and environment
- Split-screen multiplayer

Core Gameplay Mechanics (Detailed)

- *Racing with 2-4 players*
    - Each player drives around a looped track, competing to finish 3 laps first. Each kart functions identically but will have different character art and each player starts with different power-ups to set them apart. Crashing into obstacles and other players will slow the player down or cause them to come to a complete stop, although it will be easy to get back up to speed. Each kart will have the same top speed for the entire race unless it is changed by a power-up or boost on the track.
    - Drive using the triggers and a joystick on a controller.each player will have their own controller.

- *Split-screen multiplayer*
    - The screen will be split into 4 equal sections, and each player will have one section dedicated to them. These sections will have a camera focused on their respective player, centered a small distance in front of their kart. The camera will rotate along with the player when they turn. There will also be a minimap track overview in the center of the screen.
    - A camera object will follow along with the players as they traverse the track.

- *Track obstacles and speed boosts*
    - Scattered around the track will be various objects and terrain that will affect kart performance for the player that runs into/over them. This will include slippery and rough parts of the track, speed boosts that when driven over instantly set kart speed above the normal max speed temporarily (they will

gradually go back down to the normal max speed). There will also be walls and moving obstacles that will instantly stop anyone that collides into them.
    - Colliding into or driving over an obstacle will instantly affect that player.

- ***Choose powerups before the race that are different for each player***
    - Each player selects from a list of powerups in a randomly selected order. These are either single-use or cooldown-based effects that instantly affect one or all players when it is triggered. The effects range from a buff to the player that uses it to debuffs for all other players. Each player will have four power-ups that can be triggered at any time if they are available.
    - After character selection, a new menu appears and players take turns choosing from the list of power-ups until every player has four.

- *Drifting and Drafting*
    - Players will be able to drift to move around tight corners more easily. This will be a skill-based action (keep the joystick in a specific area for maximum drifting affect). Drafting will allow a player to follow closely behind another player and gain a short speed boost. This is mainly used to pass other players without directly affecting them.
    - Drifting will be done by pressing a specific button while turning, and drafting is triggered by driving closely behind another player.

Story and Gameplay

Project Lore:

- A modern day zoo is taken over by the animals after being oppressed by employees and visitors. With their new found freedom the animals decide to use the zoo as a ground for racing with the abandoned cars of the humans.

Gameplay (Brief)

- There will be multiple animal characters that all race on a track based on a zoo map. Areas of the track are the gift shop, various habitats of the animals, and a crowd viewing area. Animal characters will include Hippos, Giraffes, and Penguins to name a few.

Gameplay (Detailed)

- The game's backstory/origin is a zoo that has been treating the animals badly of late. One day, the animals decide to unite and overthrow the zoo's ground. They kick out all of the zoo employees as well as the visitors. They decide to use the zoo's grounds and facilities as a racetrack so that they can mingle though the competition of racing. Since they have complete access to all areas, they build their racetrack through the zoo's gift shop, animal habitats, the zoo stadium for shows, and the concourses around the displays. The giraffes, flamingos, hippos, emus, and zebras all rally around their new freedom. They use cars left behind by the zoo visitors when they fled the scene of the takeover as cars to race in. When it comes to racing, each race will consist of 3 laps of the track.

- The game will be played by 2-4 players in a split screen setting. Each character's kart will have the same attributes, but with different artwork to match the animal driving it. The game's players will need to avoid items dropped by other players, as well as avoid various obstacles placed on and around the track. All of the karts will have a uniform top speed, but speed boosts and obstacles can either temporarily increase or decrease the speed of the player using the item. The game is played with

controllers, where the joysticks and triggers will control the steering and acceleration.

- In the split screen concept, each player will have either a half of the window (2 players), or a quadrant of the screen (4 players). The game's POV is in a top down format, with the camera following the player as they traverse the track. The camera is placed just behind the center of the kart's location on the screen with enough of a buffer zone so that the player can see a reasonable amount of the track in front of them.

- Being a zoo, there will be many obstacles placed on and around the track, slippery sections will make your character spin out, and hitting certain obstacles will slow you to a complete stop. Additionally, contact with other players will also affect the player.

- Each player will also have power ups. The player will start the race with a set number of items to use throughout the race. The player will have 4 items to choose from. After character selection, the players will take turns choosing which items they want and how many of each they wish to have for the race.

- There will be two different turning mechanics. For starters the karts will have a traditional automatic drifting mechanism. This will work just like driving a car around a turn. Furthermore, there will also be a drift button on the controllers which will allow the kart to take sharper corners when engaged. This will be a skill-based mechanic that will be much more difficult to master than the traditional turning style.

Assets Needed

- 2D

- *Textures*
  - Grass
  - Track
- *Characters*
  - Zebra
  - Snow Leopard
  - Giraffe
  - Ostrich

- Sound

- *Vehicle Spot FX*
  - Car horns
  - Engine/Exhaust sounds
  - Crashing
  - Tires screeching
  - Vehicle break down sounds
  - Drifting sounds

- **Sound List**
  - *Character Hit/ Sound List*
    - Uses power up/passes opponent (excited scream)
    - Crashes/gets passed (distressed scream)
  - *Spot FX*
    - Ready, Set, Go beeper
    - Finish line sounds
  - *Ambiences*
    - Crowd noises
    - Outdoor environment sounds
  - *Music*
    - UI/Menu theme
    - Racetrack themes
    - Victory theme

- Code

- *Character Scripts*
  - Control Script (Complete with rotating camera)
  - Powerup script(s)
- *Ambient Scripts (Runs in the background)*
  - Place checking script
  - Lap completion script
  - Sound playing script(s)
- *Environmental Scripts (Map editing, etc)*
  - Map pathing script
  - Checkpoint script (Needed for verifying lap completion and recovering from certain environmental effects)
  - Terrain mapping script (grass, water, road, etc.)

- Animation

- Environment Animations
  - Start/Finish Line Checkered Flag
  - Fluid Crowd Waving/Cheering
- Character Animations
  - Player
    - Speeding Up/Slowing Down
    - Steering
    - Impact
    - Using Item
    - Drifting

Schedule

- Sprint 1 | *3 Weeks*
- Cars driving
- Split screen
- Map environment
- Basic controls
- 5 - 7 Sound Loops

- Sprint 2 | *3 Weeks*
- Obstacles/Terrain/Collisions
- Pathing/Checkpoint system
- Integral game mechanics
- Basic Character Animations

- Sprint 3 | *3 Weeks*
- Menu
- Mini map
- UI
- End screens
- All sound effects & loops
- Finalized gameplay