GAME DESIGN DOCUMENT

Eggscape
Subtitle: "Balance the Egg, Dodge the Danger!"

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Game Analysis

Eggscape is a fast-paced, physics-based platformer that tests players' reflexes and precision. Using reversed gyroscope controls, players balance a fragile, running egg while avoiding falling logs. The game combines physics-driven mechanics with a simple yet engaging challenge that grows in intensity over time.

Mission Statement

"To create an addictive and challenging platformer where players balance skill, reflexes, and quick thinking to protect the fragile egg and dodge relentless obstacles."

Genre

- Physics-Based 2D Platformer

Platforms

- Android

Target Audience

Casual gamers, ages 8+, who enjoy quick, skill-based challenges. Ideal for mobile gamers looking for a mix of reflex-driven gameplay and quirky mechanics.

Unique Selling Points (USP)

1. Innovative **reversed gyroscope controls** for balancing.
2. Dynamic gameplay that scales in difficulty with the player's performance.
3. Minimalist yet vibrant visual style with quirky animations.
4. Engaging and fast-paced gameplay loops suitable for short mobile sessions.

Core Gameplay

- The egg runs automatically across the platform.
- Players tilt their device to counterbalance the egg, but the gyroscope controls are reversed for added challenge.

- Falling logs drop randomly from the top of the screen, and players must avoid them by maintaining balance or timing their movements.

Gameplay Mechanics

Egg Movement

- The egg's position shifts based on the player tilting their device.
- Reverse gyroscope mechanics: Tilting the device left moves the egg right, and vice versa.

Falling Logs

- Logs fall at random intervals and speeds.
- Logs increase in frequency as the game progresses.

Collision

- If the egg collides with a log or falls off the platform, the game ends.

Scoring System

- Players earn points based on how long they survive.
- Bonus points are awarded for successfully dodging multiple logs in quick succession.

Level Design

General Design

- Infinite runner-style level where difficulty increases over time.
- Background changes dynamically to signal progress (e.g., day-night cycles, shifting landscapes).

Hazards

- **Falling Logs**: Core obstacle. Variations include:

- **Small logs**: Easier to dodge but fall faster.
- **Large logs**: Slower but cover more space.

Control Scheme

Gyroscope Mechanics

Input	Action
Tilt Device Left	**Move egg right (reversed).**
Tilt Device Right	**Move egg left (reversed).**

Touch Input

Input	Action
Tap Screen	**Pause/Resume game.**

Game Aesthetics & User Interface

Art Style

- Minimalist 2D art style with smooth animations.
- Quirky and vibrant egg character with an expressive face.

Background Design

- Dynamic and parallax-scrolling backgrounds that shift with game progress.

UI Design

- **Main Menu**:

    - Start Game
    - Settings
    - High Scores
- **In-Game HUD**:
    - Timer/Score displayed at the top center.
    - Restart/Pause buttons on the top corners.

Game Audio Design

Background Music

- Lighthearted and bouncy tunes during gameplay.

Sound Effects (SFX)

- Log collision: Cracking egg sound.
- Bonus dodge: Ding or chime.

Schedule & Tasks

Development Timeline

Task	Assigned To	Start Date	End Date	Status
Implement gyroscope controls	Developer	[Start Date]	[End Date]	In Progress
Add falling log mechanics	Developer	[Start Date]	[End Date]	Planned
Design UI and HUD	Artist	[Start Date]	[End Date]	Not Started
Optimize game for Android	Developer	[Start Date]	[End Date]	Planned

REFERENCES

Concept Reference

- **"Flappy Bird" (Mobile Game)**: For its addictive and simple one-touch mechanics that engage players in challenging scenarios.
- **"Balance It" (Mobile Game)**: Offers physics-based balancing mechanics that require precision and timing, similar to maintaining the egg's balance.

- **"Temple Run" (Mobile Game)**: Known for its endless running mechanics, creating a sense of urgency and momentum.

Art Style Reference

- **"Angry Birds" (Mobile Game)**: Combines vibrant colors and quirky character designs to create a playful and inviting aesthetic.
- **"Rayman Legends" (Video Game)**: Known for its visually captivating 2D art style and fluid animations, which could inspire the egg's movement and environmental design.
- **"Doodle Jump" (Mobile Game)**: Features minimalist yet engaging visuals with a focus on clarity and simplicity.

Character Reference

- **"Eggbert" (Educational Game Character)**: Represents an iconic egg character that could inspire the playful and relatable personality of the egg in Eggscape.
- **"Sonic the Hedgehog" (Video Game)**: The fast-paced and momentum-driven character design aligns with the running mechanics of your game.

Environment Reference

- **"Limbo" (Video Game)**: For its minimalist yet atmospheric backgrounds, which can inspire the game's dynamic and engaging level design.
- **"Badland" (Mobile Game)**: Known for its visually distinct parallax backgrounds and smooth platforming environments.
- **"Cut the Rope" (Mobile Game)**: Features interactive, dynamic environments that influence gameplay and could inspire creative hazards like falling logs.

Game UI Reference

- **"Crossy Road" (Mobile Game)**: Known for its clean, user-friendly interface, designed to minimize distractions during fast-paced gameplay.
- **"Subway Surfers" (Mobile Game)**: Offers an intuitive score-tracking system and seamless menu transitions for mobile gaming.

- **"Stack" (Mobile Game)**: Features minimalist HUD elements, allowing players to focus on the core gameplay.

Level Design Reference

- **"Geometry Dash" (Mobile Game)**: Known for its rhythmic level progression and increasingly challenging obstacles, offering a similar intensity and flow.
- **"Hill Climb Racing" (Mobile Game)**: Features progressive difficulty with simple mechanics, making it a strong reference for obstacle placement and scaling.
- **"Mario Bros." (Classic Video Game)**: Provides foundational 2D platforming design concepts, including hazard placement and responsive controls.

Audio and Feedback Reference

- **"Fruit Ninja" (Mobile Game)**: Known for its satisfying sound effects that provide immediate feedback for player actions.
- **"Super Monkey Ball" (Video Game)**: Features cheerful background music and sound effects that complement its physics-based gameplay.

Future Updates

1. Add power-ups (e.g., temporary shield, slow-motion).
2. Introduce new obstacle types (e.g., rolling boulders, spike traps).
3. Expand platform compatibility to iOS.