GCD (Game Concept Document)

GeeksInstitute - LaStartupStation

Project Name: Tbourida

Name	Role
Abdellah Aoukrad	Gameplay Programmer/Game Designer/Producer
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Version Table

Version No.	Date	Author(s)	Description
1.0	2025-12-18	Yassine Ait Ahmed	Draft GCD with same sections as the game idea docs.
2.0	2025-12-23	Abdellah Aoukrad	Final GCD Version with proper GCD/GDD sections.
3.0	2026-01-08	Abdellah Aoukrad	Alpha version GCD.

Summary of the Project

Field	Description
Genre	Sports / Rhythm / Cultural Simulation
Universe	Moroccan Heritage (Tbourida/Fantasia)
Marketing Target	Cultural enthusiasts, Casual Mobile Gamers, Rhythm fans
Platform(s)	PC (Windows), Mobile (Android/iOS)
Number of Players	Single Player (leading an AI Sorba)
Game Modes	Career, Quick Charge, Shop/Customization
Camera View	Dynamic Chase Cam (Back view) and Side View (Shooting Phase)
USP(s)	Authentic technical simulation of Sorba synchronization using standard deviation math.
Main Gameplay	Maintaining formation alignment against Perlin-noise drift while timing a collective gunshot.
Key Features	Sorba Manager (AI flocking), Customizable Jelaba colors, Optimized Stadium/Crowd system.
Graphic Style	3D Stylized Low-Poly with vibrant traditional textures.
Main Tech Brick	Decoupled Manager-based architecture (Game, Session, Movement, and Shooting Engines).

Pitch

"Lead your Sorba to glory in **Tbourida**, a rhythm-simulation game where the thundering hooves of horses meet the precision of the pulse. As the Mokaddem, you must master the formation, counter the natural drift of the arena, and trigger the gunpowder blast in perfect unison to achieve the ultimate score and honor your heritage."

USP (Unique Selling Point)

"The only game that utilizes high-precision timestamping and mathematical standard deviation to simulate the authentic judging of a Moroccan Tbourida charge, delivered through a high-performance low-poly lens."

KSP (Key Selling Points)

1. **Technical Sorba AI:** Lead a team of 10+ AI riders that follow your lead with realistic damping and slight human-like delays, creating a living formation.
2. **Traditional Customization:** A dedicated system allows players to customize the color of their Jelaba and choose from different horse textures (Black, White, Brown) in the Khzana shop.
3. **Dynamic Drift Physics:** Experience the challenge of the charge through a Perlin-noise-driven drift system that requires constant active steering to maintain alignment.
4. **Optimized Performance:** Fully rebuilt environment assets (Mud Houses, Nakhla trees, Stadium) designed specifically for a stable 60 FPS on mobile devices.

3C (Character, Camera, Controls)

- **Character:** The Player controls the Mokaddem (Leader).
- **Visuals:** Stylized rider with customizable traditional clothing and a modeled Mkohla rifle.
- **Logic:** Movement is governed by a dedicated MovementEngine handling acceleration, braking decay, and state transitions (Gallop/Charge).
- **Camera:**
- **Chase Cam:** Follows the horse with speed-based FOV zoom and a "braking dip" effect for weight.
- **Shot Phase:** Transitions to a cinematic side-view to capture the collective "Baroud."
- **Controls:**
- **PC:** WASD or Arrow Keys for steering and speed control; Spacebar to trigger the collective shot.
- **Mobile:** Virtual touch inputs for steering and a dedicated button for firing.

Win/Fail Conditions

- **Win:** Successfully reach the finish line and achieve a synchronization score (based on the deviation of all riders' timestamps) that meets the level's difficulty threshold.
- **Fail:**
- **Safety/Out of Bounds:** Colliding with the stadium boundaries or the crowd.
- **Timing Violation:** Firing the Mkohla before the start line or after the finish zone.
- **Speed Failure:** Failing to maintain the required gallop intensity through the alignment zone.

The Obstacles (Gameplay Brick)

1. **Perlin Noise Drift:** The game applies a lateral force that mimics uneven terrain and wind; players must fight this "Natural Drift" to stay in the green alignment zone.
2. **AI Variance:** AI agents fire with a randomized delay (10ms to 50ms) to simulate real-world coordination. The player must fire at the peak moment to minimize the group's total deviation.
3. **Momentum Decay:** The horse has realistic weight. Abrupt braking or steering causes a loss of formation stability that takes time to recover.

OCR Loops (Micro/Mid/Macro)

- **Micro (Seconds):** Actively steering against the Perlin drift; maintaining the "Optimal" speed bar.
- **Mid (Minutes):** Completing a full "Talka" (charge) and seeing the synchronization rating (Legendary, Good, Poor).
- **Macro (Hours):** Using earned credits in the SessionManager to unlock premium traditional gear and more spirited horses.

Universe & Story

The game is set in a vibrant, stylized Morocco. Players progress through various cultural festivals (Moussems), starting in rural villages with mud houses and palm trees, and eventually competing in grand imperial stadiums. The narrative focus is on the prestige of the Mokaddem and the collective pride of the Sorba.

Graphic Art Direction

- **Style:** Stylized Low-Poly with realistic proportions.
- **Key Assets:** Rebuilt optimized stadium, traditional Moroccan mud houses, Nakhla (palm trees), and the "Khzana" (ceremonial tent).
- **Visual Effects:** High-impact muzzle flashes for the Mkohla and dust particles during the charge.
- **UI:** Migrated to Unity **UI Toolkit**, featuring a clean Gold and Crimson palette inspired by Moroccan textiles.

Sound Art Direction

- **Dynamic Audio:** Hoofbeat sounds are pitch-shifted and layered based on the MovementEngine's current velocity.
- **The Baroud:** A heavy, crisp gunshot sample that represents the synchronized fire of multiple rifles.

- **Atmosphere:** Traditional Bendir and Tbal percussion that builds in intensity, culminating in crowd "Zaghroutas" (ululations) upon a successful shot.

Menus, Interfaces, HUD

- **HUD:**
- o **Sorba Alignment Indicator:** Real-time feedback on how well the team is centered.
- o **Speedometer & Progress:** Gauges for current velocity and distance to the shooting zone.
- o **World-Space Lines:** 3D rendered Start, Optimal, and Finish lines integrated into the arena.
- **Interactive Menu:** A 3D shop environment (The Khzana) where players can visually inspect and buy different equipment.

Level Design

- **Structure:** Linear 200m tracks with three distinct functional zones: Acceleration, Alignment (where Drift is strongest), and Shooting.
- **Environments: * The Rural Moussem:** Basic terrain, simple mud houses, and lower crowd density.
- o **The Desert Arena:** High drift intensity with sand-swept visuals and Nakhla trees.
- o **The Imperial Stadium:** Fully rebuilt stadium model with high-density crowd alpha-textures and the tightest synchronization windows.