Product Requirements Document (PRD)

**Project:** Battle Bidding Competition Platform  
**Version:** 1.2 (with ASCII Event Flow)  
**Date:** 2025-08-22

**1. Overview**

The Battle Bidding Platform is a web/mobile application where players can compete in skill-based battles by placing monetary bids. Winners receive the pooled stakes, minus a platform fee. Results are verified through a **trusted panel of streamers/referees** who vote on the outcome.

**2. Goals & Objectives**

* Enable **secure player-vs-player (PvP) or team competitions** with real stakes.
* Provide a **transparent result verification process** via streamer voting.
* Ensure **fair accounting** through a centralized system that handles escrow, payouts, and fee deductions.
* Build **trust & compliance** with transparent logs, audits, and KYC/AML features.

**3. Key Features**

**3.1 Event Management (Admin)**

* Admins can **create and announce events**.
* Define:
  + Game/competition type
  + Entry stake
  + Event date/time
  + Assigned streamers (referees) for result verification

**3.2 User Flow**

1. **Login/Register** (with KYC tiers if required).
2. **View Event Announcements** (upcoming and ongoing).
3. **Join/Match Bidding**:
   * Select event
   * Confirm stake amount
   * Transfer stake → Accounting System
4. **Event Start**: gameplay/competition begins.
5. **Event End**: referees vote on result.
6. **Final Result** announced based on majority vote.
7. **Settlement**: Accounting System transfers winnings (minus fees).

**3.3 Match Bidding & Escrow**

* Stakes are locked in **Accounting System** once user joins.
* Funds are non-withdrawable until match result is finalized.
* Auto-refund if event cancelled/no-show.

**3.4 Result Verification (Streamer Voting)**

* At event end, **assigned streamers vote on the result**.
* Majority vote decides the **final result**.
* Tie/malicious voting → escalates to **admin override**.
* All votes are recorded for **audit and transparency**.

**3.5 Settlement & Accounting System**

* **Accounting System** is the core money hub:
  + Holds escrowed stakes
  + Deducts platform fees
  + Pays winners automatically
  + Refunds where applicable
  + Keeps immutable transaction logs

**3.6 Fees**

* Configurable platform fee (%) deducted from prize pool.
* Example: $10 + $10 stakes → $20 pool → 7% fee → winner receives $18.60.
* Fee structure can vary by stake size or membership tier.

**3.7 Security & Fairness**

* Voting by **trusted streamers** with reputation scores.
* Anti-collusion detection (streamers cannot vote in events where conflict of interest exists).
* Players limited by KYC tiers for higher stakes.
* Immutable audit logs for all votes and transactions.

**4. User Roles**

**4.1 Users (Players)**

* Join events, place stakes, compete.
* View history of matches and payouts.

**4.2 Admins**

* Set up events, assign referees, manage disputes.
* Override results in exceptional cases.

**4.3 Streamers (Referees)**

* Observe gameplay.
* Vote on match outcomes.
* Gain reputation through fair voting history.

**5. Event Lifecycle (Mermaid)**

flowchart TD

A[Admin Setup Event] --> B[Event Announce]

B --> C[Players Bid & Transfer Stake]

C --> D[Accounting System Escrows Funds]

D --> E[Event Start]

E --> F[Event End]

F --> G[Streamer Voting]

G --> H[Final Result]

H --> I[Accounting System Settlement]

I --> J[Winners Receive Payout - Fees]

**6. Event Flow (ASCII Diagrams)**

**6.1 Happy Path (Sequence)**

**A screen shot of a computer

AI-generated content may be incorrect.**

**6.2 Match State Machine**

A screenshot of a computer program

AI-generated content may be incorrect.

**6.3 Voting & Result Flow**

A screenshot of a computer

AI-generated content may be incorrect.

**6.4 Money Movement**

A computer screen shot of a computer code

AI-generated content may be incorrect.

**7. System Architecture (High Level)**

* **Frontend (Web & Mobile App):**  
  Login, event discovery, bidding, live status, result display.
* **Backend Services:**
  + **Authentication & KYC**
  + **Event Service** (setup, announce, lifecycle)
  + **Voting Service** (streamer voting, majority logic, admin override)
  + **Accounting System** (wallets, escrow, payouts, transaction ledger)
  + **Notification Service** (push/email)
* **Database:**
  + Users, Wallets, Events, Votes, Transactions, Audit Logs.
* **Security:**
  + Escrow funds in PCI-compliant service
  + KYC/AML providers for identity checks
  + Role-based access control (Admin/Streamer/User)

**8. Key Tables (Minimal Schema)**

* users(id, name, email, role[user|admin|streamer], kyc\_tier, created\_at)
* wallets(id, user\_id, balance, currency)
* events(id, name, stake\_amount, status, created\_at)
* event\_participants(event\_id, user\_id, stake, status[active|cancelled|won|lost])
* votes(id, event\_id, streamer\_id, result, created\_at)
* transactions(id, wallet\_id, type[hold|capture|payout|fee|refund], amount, created\_at)
* audit\_logs(id, action, actor, target, meta, created\_at)

**9. Compliance & Risk**

* **Skill-based classification** to avoid gambling restrictions.
* **KYC tiers**:
  + Tier 0: email only, low stake cap
  + Tier 1: phone verified, medium cap
  + Tier 2: ID verified, high stakes
* **Geo-blocking** for restricted jurisdictions.
* **Responsible play features** (deposit caps, cooling-off).

**10. Success Metrics**

* **of users joining events**
* Total stake volume processed
* Average dispute resolution time
* Accuracy & fairness of streamer votes (no >5% overturned)
* Retention & repeat participation

**11. Finalized Decisions**

* How many streamers per event?  
  ✅Minimum of 3 streamers must be assigned to each event (odd number recommended to avoid ties).
* Should streamers be paid per vote (incentive system)?  
  ✅ Yes. Streamers will receive a fixed incentive per valid vote. Voting records will be tracked to ensure fairness.
* Should players have a replay/evidence upload option for disputes?  
  ✅ Yes. Dispute resolution will use streamer records (video/screenshots) as official evidence. Players cannot directly upload, but admins may request streamer files for review.
* Should votes be public (transparency) or anonymous (reduce pressure)?  
  ✅ Votes will be anonymous. Each vote will be linked to a hashed streamer ID, preventing pressure or retaliation.
  + Streamers with consistent unfair voting will have accounts flagged, unpaid, or disabled after review.
  + Aggregate results (e.g., 2–1, 3–2) will be shown publicly to maintain trust.

**12. Payment Flow Breakdown**

**12.1 Stake Pool Distribution (Example: $10 + $10)**

* **Total Pool:** $20
* **Platform Fee (7%):** $1.40
* **Net Pool:** $18.60
* **Winner Payout:** $18.60 → credited to winner’s wallet

**12.2 Streamer Incentives**

* Each streamer receives a **fixed per-vote fee** (e.g., $0.20 per valid vote).
* Paid from **platform fee revenue**, not from the player prize pool.
* If streamers are inactive, unfair, or flagged → **vote unpaid**.

**Example Calculation (5 Streamers Voting):**

* Streamer Incentive: $0.20 × 5 = $1.00
* Platform Fee = $1.40
* Net Platform Revenue = $0.40 (after paying streamers)

**12.3 Payment Timeline**

* **Players’ stakes:** Locked at event join, held in escrow.
* **Streamers:** Paid after results confirmed (within 24h).
* **Winner(s):** Payout instantly upon final result.
* **Platform:** Collects net revenue after covering streamer incentives.

**12.4 Payment Security**

* All payments run through **Accounting System** ledger.
* Immutable logs:
  + Player deposits
  + Streamer incentive payouts
  + Winner payouts
  + Platform revenue