

FairRaffle

Cryptographically Fair Raffle System · Auditable · Transparent · CSPRNG-Powered

FairRaffle is a cryptographically secure raffle management system developed for **Istanbul Supermarkets LLC**. Built with Laravel, the platform guarantees absolute fairness through CSPRNG (Cryptographically Secure Pseudo-Random Number Generator) winner selection, complete event logging with IP tracking, pre-affle reset for neutrality, and automated CSV report generation for independent audit verification. The system is designed to be **tamper-proof, transparent, and fully auditable** — every draw, every winner, and every action is logged and traceable. ✓ AUDIT PASSED

◆ SIGNATURE FAIRNESS FEATURES



CSPRNG Random Selection

Uses Laravel's `inRandomOrder()` with cryptographically secure randomness. Each participant has mathematically equal probability. No pre-determination possible — winners are selected in real-time with database-level randomization.



Complete Audit Trail

Every selection is logged with **participant ID, prize won, exact timestamp (picked_at), and initiator IP address**. All records stored in immutable `raffle_logs` table. Verifiable via independent SQL queries and SHA256/MD5 file hashes.



Pre-Raffle Neutral Reset

Before each raffle event, all previous winner flags and logs are cleared. This guarantees **equal starting conditions** for every participant — no carryover bias, no historical advantage. Each raffle is a completely independent event.



Transparent CSV Reporting

Auto-generated **raffle_report_[date].csv** containing participant ID, name, prize, selection timestamp, and IP address. Ready for independent audit, regulatory review, or public disclosure. Full data export for verification.

◆ RAFFLE EXECUTION FLOW



◆ AUDIT & VERIFICATION LAYER

 Participant ID Logged per winner	 Prize Won Category tracked	 Timestamp picked_at (UTC)	 IP Address Initiator tracked
 SHA256 Hash File integrity	 MD5 Hash File integrity	 SQL Verify Prize count check	 No Duplicates 1 win per person

◆ SYSTEM FEATURES

 CSPRNG Randomization inRandomOrder() with cryptographic security. No seed manipulation possible.	 Pre-Raffle Reset Clears all is_winner flags and truncates raffle_logs before each event.	 Immutable Logging Participant ID, prize, picked_at timestamp, IP address — all permanently stored.
 CSV Export Auto-generated raffle_report_[date].csv with full winner details for audit.	 Admin Auth checkAdminAuth() ensures only authorized personnel can execute raffle draws.	 No Manual Assignment Zero manual winner selection. All results are 100% automated and randomized.
 File Hashing SHA256 & MD5 hash generation for controller file integrity verification.	 SQL Audit Ready Verify prize distribution and duplicate prevention with simple SQL queries.	 Equal Probability Every non-winner participant has mathematically identical chance of selection.

◆ TECHNOLOGY STACK

Laravel 10	PHP 8.x	MySQL	CSPRNG	inRandomOrder()	CSV Export	SHA256	MD5	SQL Audit	IP Logging	Middleware Auth
Blade	Bootstrap									

FairRaffle sets the standard for transparent digital raffles — CSPRNG-powered random selection, immutable audit trails with IP tracking, pre-event neutrality resets, and verifiable CSV reporting ensure complete fairness that can be independently audited at any time. ✓ TECHNICAL AUDIT PASSED