Ganjes DAO

Comprehensive Design Document

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Executive Summary

Ganjes DAO is a decentralized autonomous organization designed to democratize project funding through community-driven governance. The platform enables token holders to propose, vote on, and fund innovative projects while maintaining transparency and accountability. The system introduces a unique dual-path proposal success mechanism combining funding achievement and community consensus, ensuring both efficiency and democratic participation in decision-making.

Key Features

• Decentralized project funding through token-based governance
• Dual-path proposal approval mechanism
• Automated fund distribution and refund systems
• Comprehensive security framework with multiple protection layers
• Multi-admin governance structure with role-based permissions
• Gas-optimized smart contract implementation

System Architecture

The Ganjes DAO ecosystem consists of three primary layers: 1. Frontend Layer: Web applications and CLI tools for user interaction 2. Blockchain Layer: Smart contracts implementing core DAO logic 3. Infrastructure Layer: BSC network and supporting services

Smart Contract Components

Contract	Purpose	Location
GanjesDAOOptimized.sol	Main DAO logic and governance	contracts/
SimpleToken.sol	ERC20 governance token	contracts/
ProposalManagement.sol	Proposal handling module	contracts/modules/
ReentrancyGuard	Security protection	Libraries
Pausable	Emergency controls	Libraries
AccessControl	Permission management	Libraries

Governance Model

The Ganjes DAO implements a sophisticated governance model with dual-path proposal success criteria:

Voting Mechanisms

Mechanism	Description	Threshold
Token-Based Voting	Vote weight proportional to holdings	Minimum 10 tokens
Investment Voting	Separate investment amounts	Configurable minimum
Funding Achievement	Immediate execution when goal met	≥ funding goal
Community Consensus	Traditional vote-based approval	For votes > Against votes

Economic Model

The economic model ensures sustainable operation through stake-based participation and carefully designed token mechanics.

Key Economic Parameters

Parameter	Value	Purpose
Min. Tokens for Proposal	100 tokens	Ensures proposer stake
Proposal Deposit	100 tokens	Prevents spam, refunded if failed
Min. Funding Goal	10 tokens	Minimum viable project size
Max. Funding Goal	1,000,000 tokens	Maximum single funding amount
Proposal Cooldown	1 hour	Prevents proposal spam
Max Proposals per User	10	Resource management

Security Framework

The Ganjes DAO implements a comprehensive security framework based on defense-in-depth principles, incorporating multiple protection layers and fail-safe mechanisms.

Security Implementations

Security Layer	Implementation	Protection Against
Smart Contract	ReentrancyGuard, Input validation	Reentrancy attacks, Invalid inputs
Access Control	Multi-admin, Role-based permissions	Unauthorized access, Privilege escalation
Economic	Stake-based participation, Deposits	Spam, Economic attacks
Operational	Emergency pause, Admin limits	System compromise, Admin abuse
Audit Trail	Complete event logging	Lack of transparency, Disputes

Technical Specifications

Network Configuration

Network: BSC Testnet (Development), BSC Mainnet (Future)
Chain ID: 97 (Testnet), 56 (Mainnet)
Solidity Version: 0.8.20+
Framework: Hardhat
Gas Target: < 500k gas per transaction

Deployed Contracts (BSC Testnet)

• DAO Contract: 0xd1F5595bd570d82EEB3A425E9B6bC9d770C3BAa8
• Token Contract: 0x538Cbe33fc06d67f6Cbb43EfcF6618f3a41BACAb
• Network: BSC Testnet (Chain ID: 97)
• Explorer: https://testnet.bscscan.com

Development Roadmap

Phase	Timeline	Key Deliverables
Foundation	Q3 2025	Core contracts, CLI tools, Security audit
Enhancement	Q4 2025	Web frontend, Advanced governance, Multi-network

Expansion	Q1 2026	Mainnet deployment, Cross-chain, Analytics
Innovation	Q2+ 2026	AI integration, Advanced DeFi, DAO federation

Conclusion

The Ganjes DAO represents a comprehensive approach to decentralized project funding, combining innovative governance mechanisms with robust security and user experience design. The system's unique dual-path proposal approval mechanism ensures both community consensus and funding efficiency. Key strengths include innovative governance, comprehensive security framework, user-centric design, scalable architecture, and community-driven development. The platform is positioned to become a leading solution for decentralized project funding while maintaining the highest standards of security and user experience.