Documentation for Crypto Lottery NFT Contract

The 'cryptolotterynft' contract is an ERC-20 compatible smart contract that implements the 'Crypto Lottery NFT' token with symbol 'LOTTO'. This contract uses OpenZeppelin's SafeMath library for mathematical operations and provides basic ERC-20 token functionalities.

Overview:

- Token Name: Crypto Lottery NFT

- Token Symbol: LOTTO

- Decimals: 18

- Initial Total Supply: 30,000,000 LOTTO tokens

Key Components:

- Libraries

- Contract Inheritance

Detailed description of each section, function, and events is provided below.

Libraries

- SafeMath Library: Provides safe arithmetic operations with overflow checks.

Contract Inheritance

- Ownable Contract: Ensures only the owner can perform specific functions.

- IERC20 Interface: Ensures ERC-20 compliance.

State Variables

- name: Name of the token.

- symbol: Symbol of the token.

- decimals: Number of decimal places, set to 18.

- _totalSupply: Total token supply.

- _balances: Maps each account to its balance.

- _allowances: Maps account and spender to their allowance.

Constructor

Initializes the `_totalSupply` and assigns it to the deploying account.

Functions

1. totalSupply - Returns total supply of tokens.

2. balanceOf - Returns token balance of a specific account.

3. transfer - Transfers tokens to a recipient.

4. allowance - Returns remaining allowance.

5. approve - Approves a spender to transfer tokens.

6. transferFrom - Transfers tokens via allowance.

7. increaseAllowance - Increases spender allowance.

8. decreaseAllowance - Decreases spender allowance.

9. burn - Allows owner to burn tokens, reducing supply.

10. transferOwnership - Transfers ownership.

11. renounceOwnership - Renounces ownership.

Internal Functions

1. _transfer - Handles internal token transfers.

2. _approve - Handles internal approval of allowances.

Events

- Transfer: Emitted when tokens are moved.

- Approval: Emitted when allowance is set.

Usage Notes

- SafeMath ensures safe operations, preventing overflow.

- Ownership is critical for control functions like burn.

- The contract adheres to ERC-20 standards, compatible with ERC-20 wallets.