CryptoCampo Project

Smart Contract Documentation

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General Considerations

A single contract will be developed that will be responsible for the NFTs and all the necessary on-chain tasks (will be detailed later).
OpenZeppelin libraries will be used (https://openzeppelin.com/).

- **ERC721:** standard for Non Fungible Token (NFT).
- **ERC721Enumerable:** Extension to be able to list tokens by owner.
- **Ownable:** Module for access control to administrator functions.
- **ReentrancyGuard:** Module to avoid reentrancy in functions.

Variables

baseURI: Stores the URI for Metadata (if needed).
buyFee: Commission percentage for token purchase. Uses 2 decimal places (1% = 100).
canBuy: Indicates whether tokens can be generated.
canClaim: Indicates whether tokens can be claimed.
feesCollector: Address (wallet) to indicate the fees collector.
fundsCollector: Address (wallet) to indicate the funds collector.
fundsToken: Address to indicate the currency of collection and payment. It has to be ERC20.
maxMintPerUser: Maximum amount of NFT per User.
MAX_SUPPLY: Maximum amount of NFT to be minted.
NFT_VALUE: Value of each NFT.
profitToPay: percentage of profit to be returned. Uses 2 decimal places (20% = 2000).
tokenBurned: Amount of NFT burned.
tokenCount: Amount of NFT minted.

Functions

Buy

Description

Allows the user to invest in the platform by generating the corresponding NFT.

Parameters

amount: Amount of NFT to mint.

Requirements

User has approved the contract to use their payment token
canBuy is true.
FundsCollector has been set.
FeesCollector has been set.
TokenCount must be less than MAX_SUPPLY.
Amount is less than maxMintPerUser.
Address balance plus amount to mint is less than maxMintPerUser.

Action

TokenCount is incremented by 1.
Mint the NFTs to the transaction sender through a loop.
The value of the NFT is transferred from the user to the Collector Wallet.
The value of the Buy Fee is transferred from user to Fees Wallet
The Buy event is emitted.

Mint

Description

Allows the owner of the contract to mint NFTs for free and send them to a specific address.

Parameters

address: address to send the NFTs.
amount: Amount of NFT to mint.

Requirements

Address is not Zero Address.
TokenCount must be less than MAX_SUPPLY.

Action

Mint the amount of the NFT through a loop.

Claim

Description

Allows to claim several tokens, recovering their value plus the corresponding profit.

Parameters

listTokenId: list of token IDs to claim.

Requirements

canClaim must be true.
That the tokens exist. (Generated and not burned).
That all tokens are owned by the claimant.

Action

All indicated tokens are burned.
The TokenBurned is incremented by the amount of NFT to be claimed.
It is transferred from the Collector Wallet to the User Wallet for the total of the funds plus the profit to be paid.
The Claim event is emitted.