

# PMA Token Contract

## Introduction

The PMA token contract is an ERC20 contract. It is the native token of the PumaPay system.

## Contract version

pragma solidity 0.8.0

## Contract constructor

In this contract the constructor() method is used to initialize the PMA token.

### Method Name:

- constructor

### Method Usage:

- The constructor method initializes the PMA token contract and sets the registry address.
- This constructor assigns the default admin role, pauser role and minter role to the deployer.
- Minter role allows the user to mint the PMA tokens.
- Pauser role allows the user to pause the PMA token transfers.

### Method Signature:

- constructor(address registryAddress, string memory name, string memory symbol)

### Method Parameters:

1. **registryAddress:**
  - indicates the address of the registry contract which keeps the record of all the contract addresses in the ecosystem.
2. **name:**
  - Indicates the name of the PMA token contract.
3. **Symbol:**
  - Indicates the Symbol of the PMA token contract.

# Contract Methods

## mint()

Method name:

- mint

Method detail:

- This method allows anyone with the minter role to mint the specified amount of PMA tokens to specific users.
- This method creates the new PMA tokens.

Method signature:

- `function mint(address to, uint256 amount) public virtual;`

Method parameters:

- 1. to:**  
Indicates the address of the user to whom PMA tokens will be minted.
- 2. amount:**  
Indicates the amount of PMA tokens to mint to users.

Returned data:

- This method returns nothing.

## burn()

Method name:

- burn

Method detail:

- The burn method allows PMA token holders to burn their tokens.
- The burn method destroys the PMA token from the user's account.

Method signature:

- function burn(address from, uint256 amount) public virtual;

Method parameters:

- **from:**
  - Indicates the PMA token holder address whose tokens to be burned.
- **amount:**
  - Indicates the amount of PMA tokens to burn from a user's account.

Returned data:

- This method returns nothing.

## pause()

Method name:

- pause

Method detail:

- The pause method allows users with the PAUSER role to pause the PMA token transfer.

Method signature:

- function pause() public virtual;

Method parameters:

- This method does not have any parameters.

Returned data:

- This method returns nothing.

## unpause()

Method name:

- unpause

Method detail:

- The unpause method allows users with the PAUSER role to unpause the PMA token transfer.

Method signature:

- function unpause() public virtual;

Method parameters:

- This method does not have any parameters.

Returned data:

- This method returns nothing.

