

## Contract Details

Component	Description
Name	TicketMarketPlace
License	MIT
Solidity version	^0.8.28
Inherits	Ownable, ERC721URIStorage, Pausable
Import	ERC721URIStorage, Ownable, IERC20, Pausable

## State variables

Name	Type	Description
tcoin	IERC20	ERC20 token used for payments (TCOIN)
nextEventId	uint	Counter for generating unique event IDs
nextTicketId	uint	Counter for generating unique ticket IDs
platformFeePercent	uint	Platform fee percentage (default 5%)
royaltyPercent	uint	Royalty fee for secondary sales (default 10%)
treasuryWallet	address	The address where platform fees are sent to.
events	mapping(uint => Event)	Mapping of event IDs to Event struct
tickets	mapping(uint => Ticket)	Mapping of ticket ID to Ticket struct
secondarySaleTicketPrices	mapping(uint => uint)	Mapping of ticket IDs to their resale prices

## Events

Name	Parameters	Description
EventCreated	(uint eventId, string name, uint totalTickets)	Emitted when a new event is created
TicketPurchased	(uint ticketId, uint eventId, address buyer)	Emitted when a ticket is purchased
TicketListed	(uint ticketId, uint price)	Emitted when a ticket is listed for resale
TicketTransferred	(uint ticketId, uint eventId, address buyer)	Emitted when a ticket is transferred to another address

## Modifier

Name	Parameters	Description
onlyTicketOwner	(uint ticketId)	Restricts access to the owner of a ticket

## Functions

Name	Parameters	Description
constructor	(address _owner, address _treasuryWallet, IERC _tcoin)	Initialize the contract with the address of the owner, treasuryWallet and the token contract for TCOIN
createEvent	( string memory name, string memory date, string memory time, string memory location, string memory description, uint[] memory ticketPrice, uint[] memory seatNumber,	Allows an organizer to create a new event with tickets

Name	Parameters	Description
constructor	(address _owner, address _treasuryWallet, IERC _tcoin)	Initialize the contract with the address of the owner, treasuryWallet and the token contract for TCOIN
	uint totalTickets )	
buyTicket	(uint eventId, uint ticketId)	Allows a user to buy a ticket for an event
transferTicket	(uint ticketId, address to)	Allows a ticket owner to transfer their ticket to another address
verifyTicket	(uint ticketId)	Verifies if a ticket exists and is owned by someone
buyResaleTicket	(uint ticketId)	Allows a user to buy a ticket listed for sale
listTicketForSale	(uint ticketId, uint price)	Allows a ticket owner to list their ticket for resale
(For event organizer controls only)		
setTicketPrice	(uint eventId, uint ticketId, uint ticketPrice)	Allows the event organizer to set the ticket price.
(For admin only)		
pauseMarketPlace	()	Pauses the marketplace, prevent most functions from being called
resumeMarketPlace	()	Resumes the marketplace, allowing functions to be called again
setRoyaltyPercentage	(uint percentage)	Sets the royalty percentage for secondary sales
setPlatformFeePercentage	(uint percentage)	Sets the platform fee percentage
setAdmin	(address admin)	Transfers ownership of the contract to the new admin
setTreasuryWallet	(address wallet)	Sets the treasury wallet address

## Structs

Name	Description
Event	Stores event details (name, date, time, location, description, etc..)
Ticket	Stores ticket details (ticket ID, event ID, seat number, ticket price)