Smart Contract Security Audit V1

TedAI Smart Contract Audit

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Background

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Project Information

- **Platform**: Ethereum
- **Name**: TedAI
- **Language** : Solidity
- **Contract Address**: 0x3FB6539c15d5CdCeb46E6D3A4d1FA6D9d8D96bB8
- **Code Source**: https://sepolia.etherscan.io/address/0x3FB6539c15d5CdCeb46E6D3A4d1FA6D9d8D96bB8#code
- **Website**: https://tedai.io
- **X**: https://x.com/TedAi_io
- **Facebook**: https://www.facebook.com/tedaiecosystem/
- **Instagram**: https://www.instagram.com/tedai.io/
- **Telegram**: https://t.me/tedai_io
- **GitHub**: https://github.com/TedAIProject
- **Whitepaper**: https://tedai.io/whitepaper/

Executive Summary

According to our assessment, the customer`s solidity smart contract is **Well-Secured**.

Well Secured	✓
Secured	
Poor Secured	
Insecure	

Automated checks are with remix IDE. All issues were performed by the team, which included the analysis of code functionality, manual audit found during automated analysis were manually reviewed and applicable vulnerabilities are presented in the audit overview section. The general overview is presented in the Project Information section and all issues found are located in the audit overview section.

Team found 0 critical, 0 high, 0 medium, 3 low, 0 very low-level issues and 1 note in all solidity files of the contract

The files:

TedAI.sol

Audit Score:

99% secure

File and Function Level Report

File in Scope:

Contract Name	SHA 256 hash	Contract Address
TedAI.sol	0544b966cfa59f105d55ca39394a70cd7e6edf56	0x3FB6539c15d5CdCeb46E6D3A4d1FA6D9d8D96bB8

- Contract: TedAI
- Inherit: ERC20, ERC20Burnable, ERC20Pausable, Ownable, ERC20Permit, ReentrancyGuard
- Observation: All passed including security check
- Test Report: passed
- Score: passed
- Conclusion: passed

Function	Test Result	Type / Return Type	Score
calculateCirculatingSupply	✓	Read / public	**Passed**
calculateReward	✓	Read / public	**Passed**
balanceOf	✓	Read / public	**Passed**
allowance	✓	Read / public	**Passed**
communityRewardsAllocation	✓	Read / public	**Passed**
decimals	✓	Read / public	**Passed**
currentRewardPeriod	✓	Read / public	**Passed**
developmentAllocation	✓	Read / public	**Passed**
DOMAIN_SEPARATOR	✓	Read / public	**Passed**
totalSupply	✓	Read / public	**Passed**
eip712Domain	✓	Read / public	**Passed**
INITIAL_SUPPLY	✓	Read / public	**Passed**
name	✓	Read / public	**Passed**

owner	✓	Read / public	**Passed**
lastRewardClaimTime	✓	Read / public	**Passed**
liquidityPoolAllocation	✓	Read / public	**Passed**
marketingAllocation	✓	Read / public	**Passed**
symbol	✓	Read / public	**Passed**
nonces	✓	Read / public	**Passed**
redistributionAmounts	✓	Read / public	**Passed**
pair	✓	Read / public	**Passed**
paused	✓	Read / public	**Passed**
rewardPeriods	✓	Read / public	**Passed**
rewardPool	✓	Read / public	**Passed**
rewardPoolActivationTime	✓	Read / public	**Passed**
saleAllocation	✓	Read / public	**Passed**
TedAIDEVAddress	✓	Read / public	**Passed**
TedAILPAddress	✓	Read / public	**Passed**
TedAIMarketingAddress	✓	Read / public	**Passed**
TedAIRewardsAddress	✓	Read / public	**Passed**
TedAISaleAddress	✓	Read / public	**Passed**
totalBurned	✓	Read / public	**Passed**
totalRedistributionAmount	✓	Read / public	**Passed**
unclaimedRewards	✓	Read / public	**Passed**
allocateUnclaimedRewards	✓	Write / public	**Passed**
approveAllSpending	✓	Write / public	**Passed**
approve	✓	Write / public	**Passed**
burn	✓	Write / public	**Passed**
burnFrom	✓	Write / public	**Passed**
decreaseAllowance	✓	Write / public	**Passed**
increaseAllowance	✓	Write / public	**Passed**

transferOwnership	✓	Write / public	**Passed**
renounceOwnership	✓	Write / public	**Passed**
claimRewards	✓	Write / public	**Passed**
fundContract	✓	Write / public	**Passed**
permit	✓	Write / public	**Passed**
transferFrom	✓	Write / public	**Passed**
transfer	✓	Write / public	**Passed**
setAllocationAddresses	✓	Write / public	**Passed**
setPairAddress	✓	Write / public	**Passed**
transferAllAllocations	✓	Write / public	**Passed**

Issues Checking Status

SWC Attack Analysis

The Smart Contract Weakness Classification Registry (SWC Registry) is an implementation of the weakness classification scheme proposed in EIP-1470. It is loosely aligned to the terminologies and structure used in the Common Weakness Enumeration (CWE) for more info check https://swcregistry.io/

No.	Issue Description	Checking Status
136	Unencrypted Private Data On-Chain	**Passed**
135	Code With No Effects	**Passed**
134	Message call with hardcoded gas amount	**Passed**
133	Hash Collisions With Multiple Variable Length Arguments	**Passed**
132	Unexpected Ether balance	**Passed**
131	Presence of unused variables	**Passed**
130	Right-To-Left-Override control character (U+202E)	**Passed**
129	Typographical Error	**Passed**
128	DoS with block gas limit.	**Passed**
127	Arbitrary Jump with Function Type Variable	**Passed**
126	Insufficient Gas Griefing	**Passed**
125	Incorrect Inheritance Order	**Passed**
124	Write to Arbitrary Storage Location	**Passed**
123	Requirement Violation	**Passed**
122	Lack of Proper Signature Verification	**Passed**
121	Missing Protection against Signature Replay Attacks	**Passed**
120	Weak Sources of Randomness from Chain Attributes	**Passed**
119	Shadowing State Variables	**Passed**

118	Incorrect Constructor Name	**Passed**
117	Signature Malleability	**Passed**
116	Block values as a proxy for time	**Not Passed**
115	Authorization through tx.origin	**Passed**
114	Transaction Order Dependence	**Passed**
113	DoS with Failed Call	**Passed**
112	Delegatecall to Untrusted Callee	**Passed**
111	Use of Deprecated Solidity Functions	**Passed**
110	Assert Violation	**Passed**
109	Uninitialized Storage Pointer	**Passed**
108	State Variable Default Visibility	**Passed**
107	Reentrancy	**Passed**
106	Unprotected SELFDESTRUCT Instruction	**Passed**
105	Unprotected Ether Withdrawal	**Passed**
104	Unchecked Call Return Value	**Passed**
103	Floating Pragma	**Not Passed**
102	Outdated Compiler Version	**Passed**
101	Integer Overflow and Underflow	**Passed**
100	Function Default Visibility	**Passed**

Severity Definitions

Risk Level	Description
Critical	Critical vulnerabilities are usually straightforward to exploit and can lead to tokens loss etc.
High	High-level vulnerabilities are difficult to exploit; however, they also have significant impact on smart contract execution, e.g. public access to crucial functions
Medium	Medium-level vulnerabilities are important to fix; however, they can't lead to tokens lose
Low	Low-level vulnerabilities are mostly related to outdated, unused etc. code snippets, that can't have significant impact on execution
Note	Lowest-level vulnerabilities, code style violations and info statements can't affect smart contract execution and can be ignored.

Audit Findings

Critical:

No Critical severity vulnerabilities were found.

High:

No High severity vulnerabilities were found.

Medium:

No Medium severity vulnerabilities were found.

Low:

#Pragam version not fixed

Description

It is a good practice to lock the solidity version for a live deployment (use 0.8.25 instead of ^0.8.20). contracts should be deployed with the same compiler version and flags that they have been tested the most with. Locking the pragma helps ensure that contracts do not accidentally get deployed using, for example, the latest compiler which may have higher risks of undiscovered bugs. Contracts may also be deployed by others and the pragma indicates the compiler version intended by the original authors. And avoid Solidity compiler Bugs check here

https://sepolia.etherscan.io/solcbuginfo

Remediation

Remove the ^ sign to lock the pragma version.

Status: Acknowledged.

#Missing zero address validation

When the owner wants add pair address, he has to check for the zero address to make. Otherwise, the function will not work fine.

```
function setPairAddress(address _pair) external onlyOwner {
        pair = _pair;
    }
```

Remediation

Use the require statement to check for zero addresses.

Status: Acknowledged.

Use of block.timestamp for comparisons

The value of block.timestamp can be manipulated by the miner. And conditions with strict equality is difficult to achieve - block.timestamp.

```
function claimRewards() external nonReentrant {
        require(block.timestamp >= rewardPoolActivationTime + 30
days, "Rewards not yet available");

        uint256 periodElapsed = (block.timestamp -
rewardPoolActivationTime) / 30 days;
        require(periodElapsed == currentRewardPeriod, "Either not
yet time to claim or the claim period has passed");

        uint256 reward = calculateReward(msg.sender);
        require(reward > 0, "No rewards available");
        require(rewardPool >= reward, "Insufficient reward pool");

        rewardPool -= reward;
        _transfer(address(this), msg.sender, reward);
        emit TokensRedistributed(msg.sender, reward);
    }
```

Recommendation

Avoid use of block.timestamp.

Status

Acknowledged.

Very Low:

No Very Low severity vulnerabilities were found.

Notes:

#Unnecessary import of ERC20 library

Description

The main contract inherits: ERC20, ERC20Burnable, ERC20Pausable, Ownable, ERC20Permit, ReentrancyGuard which is already import ERC20 library, so no need to import it again in the main contract.

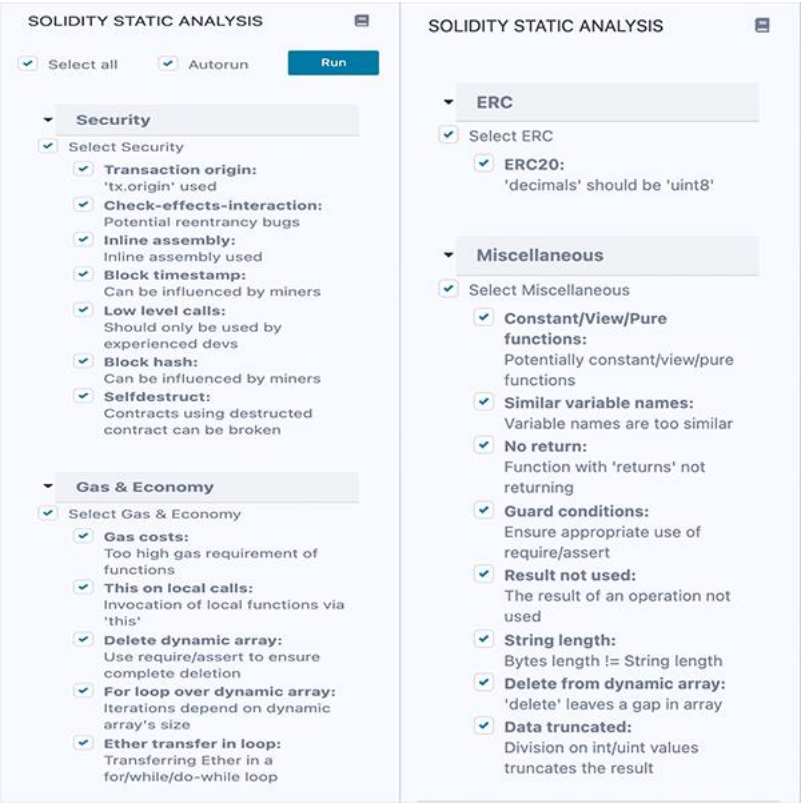
Remediation

Remove unnecessary library from the main contract save some gas fees.

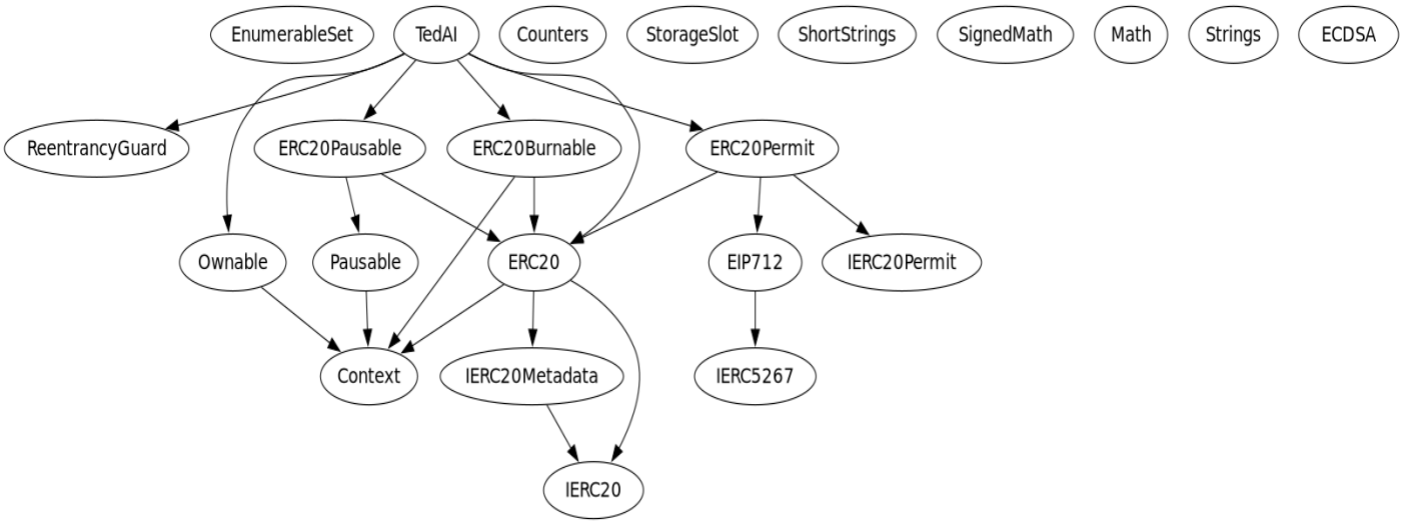
Status: Acknowledged.

Automatic Testing

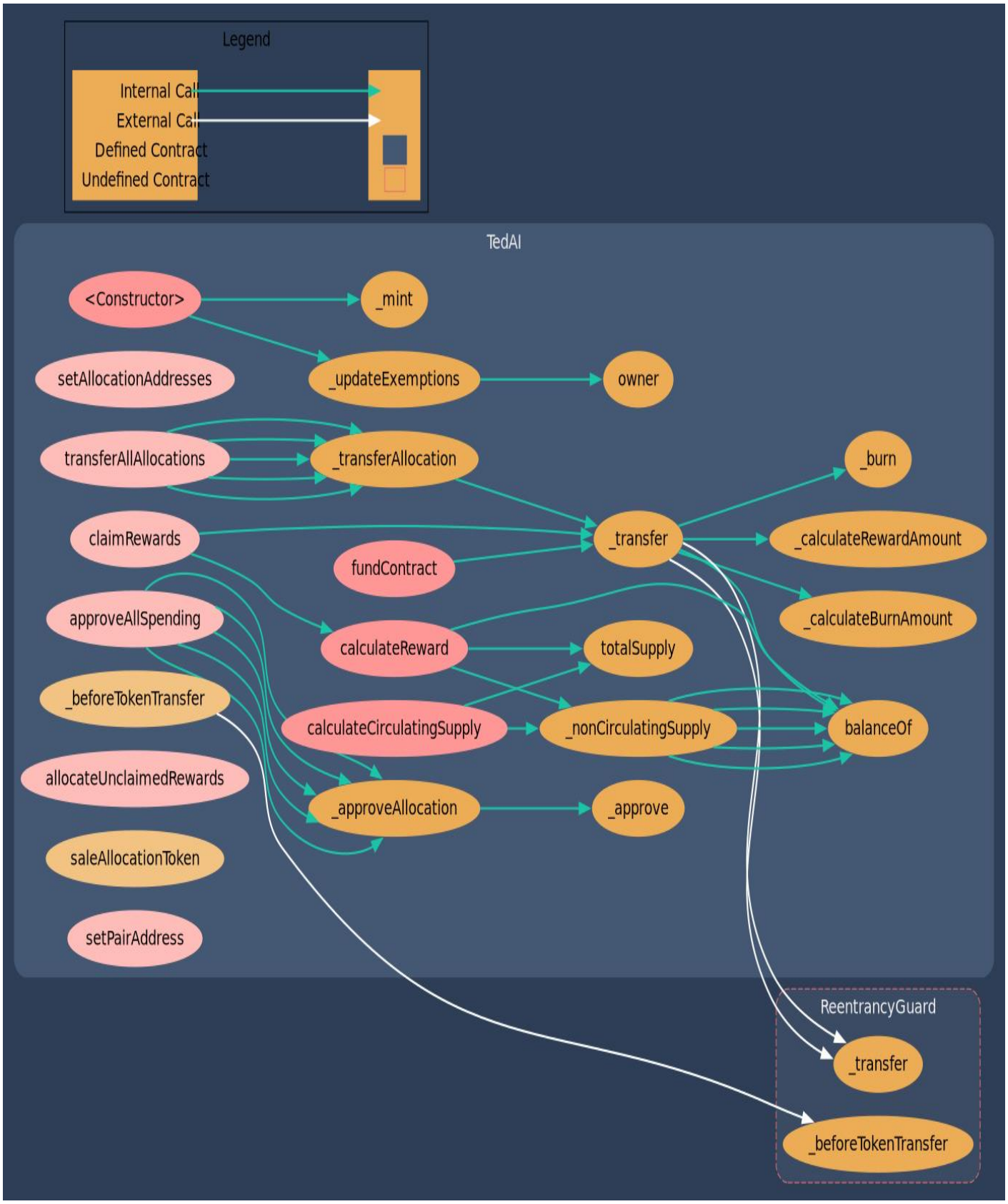
1- SOLIDITY STATIC ANALYSIS



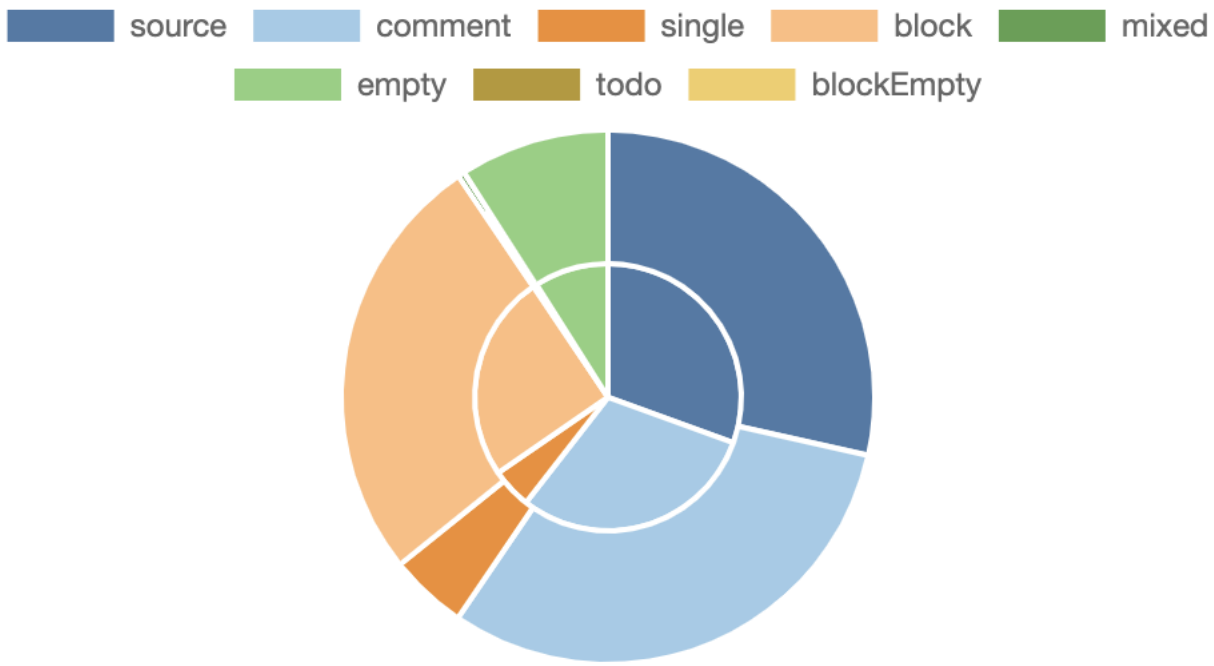
2- Inheritance graph



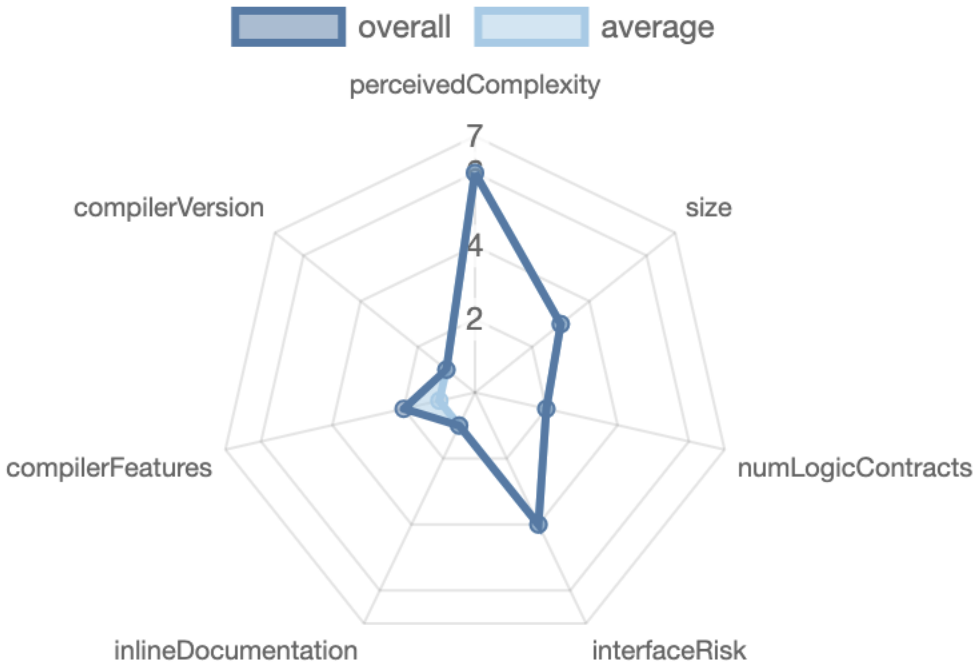
3- Call graph


Legend
Internal Call
External Call
Defined Contract
Undefined Contract
TedAI
<Constructor>
_mint
setAllocationAddresses
_updateExemptions
owner
transferAllAllocations
_transferAllocation
_burn
claimRewards
_transfer
_calculateRewardAmount
fundContract
_calculateBurnAmount
approveAllSpending
calculateReward
totalSupply
_beforeTokenTransfer
calculateCirculatingSupply
_nonCirculatingSupply
balanceOf
allocateUnclaimedRewards
_approveAllocation
_approve
saleAllocationToken
setPairAddress
ReentrancyGuard
_transfer
_beforeTokenTransfer

Source lines



Risk level



Source units in scope

Source Units in Scope

Source Units Analyzed: `1`
Source Units in Scope: `1` **(100%)**

Type	File	Logic Contracts	Interfaces	Lines	nLines	nSLOC	Comment Lines	Complex. Score	Capabilities
📝📚🔍🎨	TedAI.sol	18	4	2847	2673	1181	1295	859	🖥️🧮🧹🔆Σ
📝📚🔍🎨	**Totals**	**18**	**4**	**2847**	**2673**	**1181**	**1295**	**859**	🖥️🧮🧹🔆Σ

Legend: [➖]

- **Lines**: total lines of the source unit
- **nLines**: normalized lines of the source unit (e.g. normalizes functions spanning multiple lines)
- **nSLOC**: normalized source lines of code (only source-code lines; no comments, no blank lines)
- **Comment Lines**: lines containing single or block comments
- **Complexity Score**: a custom complexity score derived from code statements that are known to introduce code complexity (branches, loops, calls, external interfaces, ...)

Capabilities

Components

📝Contracts	📚Libraries	🔍Interfaces	🎨Abstract
2	8	4	8

Exposed Functions

This section lists functions that are explicitly declared public or payable. Please note that getter methods for public stateVars are not included.

🌐Public	💰Payable
43	0

External	Internal	Private	Pure	View
20	157	12	48	53

StateVariables

Total	🌐Public
50	21

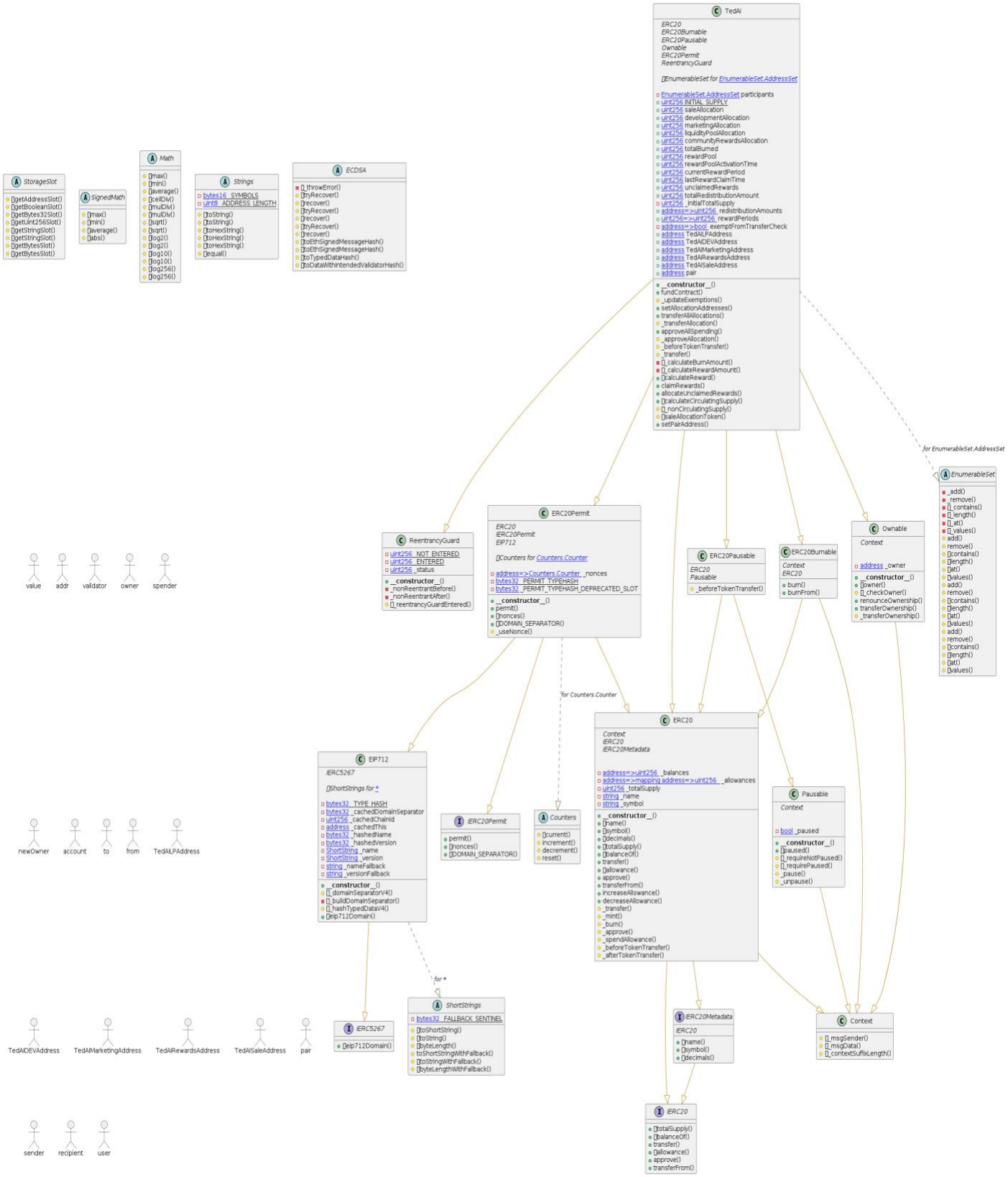
Capabilities

Solidity Versions observed	🧪 Experimental Features	💰 Can Receive Funds	🖥️ Uses Assembly	💣 Has Destroyable Contracts

`^0.8.0`
`^0.8.8`
`^0.8.20`
		—	`yes`
			(20 asm blocks)
				—

📩 Transfers ETH	⚡ Low-Level Calls	👥 DelegateCall	🧮 Uses Hash Functions	🧹 ECRecover	🌀 New/Create/Create2
—	—	—	`yes`	`yes`	—

Unified Modeling Language (UML)



Functions signature

```
| Function Name | Sighash    | Function Signature |
| ------------- | ---------- | ------------------ |
| eip712Domain | 84b0196e | eip712Domain() |
| eip712Domain | 84b0196e | eip712Domain() |
| permit | d505accf |
permit(address,address,uint256,uint256,uint8,bytes32,bytes32) |
| nonces | 7ecebe00 | nonces(address) |
| DOMAIN_SEPARATOR | 3644e515 | DOMAIN_SEPARATOR() |
| owner | 8da5cb5b | owner() |
| renounceOwnership | 715018a6 | renounceOwnership() |
| transferOwnership | f2fde38b | transferOwnership(address) |
| paused | 5c975abb | paused() |
| totalSupply | 18160ddd | totalSupply() |
| balanceOf | 70a08231 | balanceOf(address) |
| transfer | a9059cbb | transfer(address,uint256) |
| allowance | dd62ed3e | allowance(address,address) |
| approve | 095ea7b3 | approve(address,uint256) |
| transferFrom | 23b872dd | transferFrom(address,address,uint256) |
| name | 06fdde03 | name() |
| symbol | 95d89b41 | symbol() |
| decimals | 313ce567 | decimals() |
| name | 06fdde03 | name() |
| symbol | 95d89b41 | symbol() |
| decimals | 313ce567 | decimals() |
| totalSupply | 18160ddd | totalSupply() |
| balanceOf | 70a08231 | balanceOf(address) |
| transfer | a9059cbb | transfer(address,uint256) |
| allowance | dd62ed3e | allowance(address,address) |
| approve | 095ea7b3 | approve(address,uint256) |
| transferFrom | 23b872dd | transferFrom(address,address,uint256) |
| increaseAllowance | 39509351 | increaseAllowance(address,uint256) |
| decreaseAllowance | a457c2d7 | decreaseAllowance(address,uint256) |
| permit | d505accf |
permit(address,address,uint256,uint256,uint8,bytes32,bytes32) |
| nonces | 7ecebe00 | nonces(address) |
| DOMAIN_SEPARATOR | 3644e515 | DOMAIN_SEPARATOR() |
| burn | 42966c68 | burn(uint256) |
| burnFrom | 79cc6790 | burnFrom(address,uint256) |
| fundContract | bd097e21 | fundContract() |
| setAllocationAddresses | 0424e0fb |
setAllocationAddresses(address,address,address,address,address) |
| transferAllAllocations | 37f42ff0 | transferAllAllocations() |
| approveAllSpending | 5dc81bca | approveAllSpending() |
| calculateReward | d82e3962 | calculateReward(address) |
| claimRewards | 372500ab | claimRewards() |
| allocateUnclaimedRewards | db096f0e | allocateUnclaimedRewards() |
| calculateCirculatingSupply | a4a0ac0d | calculateCirculatingSupply() |
| setPairAddress | a22d4832 | setPairAddress(address) |
```

Automatic general report

```
Files Description Table

|  File Name  |  SHA-1 Hash  |
|-------------|--------------|
| /Users/macbook/Desktop/smart contracts/TedAI.sol |
0544b966cfa59f105d55ca39394a70cd7e6edf56 |

 Contracts Description Table

|  Contract  |         Type        |       Bases      |
|                  |
|:----------:|:-------------------:|:----------------:|:----------------
:|:----------------:|
|     └      |  **Function Name**  |  **Visibility**  |  **Mutability**
|  **Modifiers**  |
||||||
| **EnumerableSet** | Library |  |||
| └ | _add | Private 🔐 | 🛑  | |
| └ | _remove | Private 🔐 | 🛑  | |
| └ | _contains | Private 🔐 |   | |
| └ | _length | Private 🔐 |   | |
| └ | _at | Private 🔐 |   | |
| └ | _values | Private 🔐 |   | |
| └ | add | Internal 🔒 | 🛑  | |
| └ | remove | Internal 🔒 | 🛑  | |
| └ | contains | Internal 🔒 |   | |
| └ | length | Internal 🔒 |   | |
| └ | at | Internal 🔒 |   | |
| └ | values | Internal 🔒 |   | |
| └ | add | Internal 🔒 | 🛑  | |
| └ | remove | Internal 🔒 | 🛑  | |
| └ | contains | Internal 🔒 |   | |
| └ | length | Internal 🔒 |   | |
| └ | at | Internal 🔒 |   | |
| └ | values | Internal 🔒 |   | |
| └ | add | Internal 🔒 | 🛑  | |
| └ | remove | Internal 🔒 | 🛑  | |
| └ | contains | Internal 🔒 |   | |
| └ | length | Internal 🔒 |   | |
| └ | at | Internal 🔒 |   | |
| └ | values | Internal 🔒 |   | |
||||||
| **ReentrancyGuard** | Implementation |  |||
| └ | <Constructor> | Public ❗ | 🛑  |NO❗ |
| └ | _nonReentrantBefore | Private 🔐 | 🛑  | |
| └ | _nonReentrantAfter | Private 🔐 | 🛑  | |
| └ | _reentrancyGuardEntered | Internal 🔒 |   | |
||||||
```

Counters	Library			
└	current	Internal 🔒		
└	increment	Internal 🔒	🛑	
└	decrement	Internal 🔒	🛑	
└	reset	Internal 🔒	🛑	
IERC5267	Interface			
└	eip712Domain	External ❗		NO❗
StorageSlot	Library			
└	getAddressSlot	Internal 🔒		
└	getBooleanSlot	Internal 🔒		
└	getBytes32Slot	Internal 🔒		
└	getUint256Slot	Internal 🔒		
└	getStringSlot	Internal 🔒		
└	getStringSlot	Internal 🔒		
└	getBytesSlot	Internal 🔒		
└	getBytesSlot	Internal 🔒		
ShortStrings	Library			
└	toShortString	Internal 🔒		
└	toString	Internal 🔒		
└	byteLength	Internal 🔒		
└	toShortStringWithFallback	Internal 🔒	🛑	
└	toStringWithFallback	Internal 🔒		
└	byteLengthWithFallback	Internal 🔒		
SignedMath	Library			
└	max	Internal 🔒		
└	min	Internal 🔒		
└	average	Internal 🔒		
└	abs	Internal 🔒		
Math	Library			
└	max	Internal 🔒		
└	min	Internal 🔒		
└	average	Internal 🔒		
└	ceilDiv	Internal 🔒		
└	mulDiv	Internal 🔒		
└	mulDiv	Internal 🔒		
└	sqrt	Internal 🔒		
└	sqrt	Internal 🔒		
└	log2	Internal 🔒		
└	log2	Internal 🔒		
└	log10	Internal 🔒		
└	log10	Internal 🔒		
└	log256	Internal 🔒		
└	log256	Internal 🔒		
Strings	Library			
└	toString	Internal 🔒		

└	toString	Internal 🔒		
└	toHexString	Internal 🔒		
└	toHexString	Internal 🔒		
└	toHexString	Internal 🔒		
└	equal	Internal 🔒		
ECDSA	Library			
└	_throwError	Private 🔐		
└	tryRecover	Internal 🔒		
└	recover	Internal 🔒		
└	tryRecover	Internal 🔒		
└	recover	Internal 🔒		
└	tryRecover	Internal 🔒		
└	recover	Internal 🔒		
└	toEthSignedMessageHash	Internal 🔒		
└	toEthSignedMessageHash	Internal 🔒		
└	toTypedDataHash	Internal 🔒		
└	toDataWithIntendedValidatorHash	Internal 🔒		
EIP712	Implementation	IERC5267		
└	<Constructor>	Public ❗	🛑	NO❗
└	_domainSeparatorV4	Internal 🔒		
└	_buildDomainSeparator	Private 🔐		
└	_hashTypedDataV4	Internal 🔒		
└	eip712Domain	Public ❗		NO❗
IERC20Permit	Interface			
└	permit	External ❗	🛑	NO❗
└	nonces	External ❗		NO❗
└	DOMAIN_SEPARATOR	External ❗		NO❗
Context	Implementation			
└	_msgSender	Internal 🔒		
└	_msgData	Internal 🔒		
└	_contextSuffixLength	Internal 🔒		
Ownable	Implementation	Context		
└	<Constructor>	Public ❗	🛑	NO❗
└	owner	Public ❗		NO❗
└	_checkOwner	Internal 🔒		
└	renounceOwnership	Public ❗	🛑	onlyOwner
└	transferOwnership	Public ❗	🛑	onlyOwner
└	_transferOwnership	Internal 🔒	🛑	
Pausable	Implementation	Context		
└	<Constructor>	Public ❗	🛑	NO❗
└	paused	Public ❗		NO❗
└	_requireNotPaused	Internal 🔒		
└	_requirePaused	Internal 🔒		
└	_pause	Internal 🔒	🛑	whenNotPaused
└	_unpause	Internal 🔒	🛑	whenPaused

```
|||||||
| **IERC20** | Interface |  |||
| └ | totalSupply | External ❗ |   |NO❗ |
| └ | balanceOf | External ❗ |   |NO❗ |
| └ | transfer | External ❗ | 🛑  |NO❗ |
| └ | allowance | External ❗ |   |NO❗ |
| └ | approve | External ❗ | 🛑  |NO❗ |
| └ | transferFrom | External ❗ | 🛑  |NO❗ |
|||||||
| **IERC20Metadata** | Interface | IERC20 |||
| └ | name | External ❗ |   |NO❗ |
| └ | symbol | External ❗ |   |NO❗ |
| └ | decimals | External ❗ |   |NO❗ |
|||||||
| **ERC20** | Implementation | Context, IERC20, IERC20Metadata |||
| └ | <Constructor> | Public ❗ | 🛑  |NO❗ |
| └ | name | Public ❗ |   |NO❗ |
| └ | symbol | Public ❗ |   |NO❗ |
| └ | decimals | Public ❗ |   |NO❗ |
| └ | totalSupply | Public ❗ |   |NO❗ |
| └ | balanceOf | Public ❗ |   |NO❗ |
| └ | transfer | Public ❗ | 🛑  |NO❗ |
| └ | allowance | Public ❗ |   |NO❗ |
| └ | approve | Public ❗ | 🛑  |NO❗ |
| └ | transferFrom | Public ❗ | 🛑  |NO❗ |
| └ | increaseAllowance | Public ❗ | 🛑  |NO❗ |
| └ | decreaseAllowance | Public ❗ | 🛑  |NO❗ |
| └ | _transfer | Internal 🔒 | 🛑  | |
| └ | _mint | Internal 🔒 | 🛑  | |
| └ | _burn | Internal 🔒 | 🛑  | |
| └ | _approve | Internal 🔒 | 🛑  | |
| └ | _spendAllowance | Internal 🔒 | 🛑  | |
| └ | _beforeTokenTransfer | Internal 🔒 | 🛑  | |
| └ | _afterTokenTransfer | Internal 🔒 | 🛑  | |
|||||||
| **ERC20Permit** | Implementation | ERC20, IERC20Permit, EIP712 |||
| └ | <Constructor> | Public ❗ | 🛑  | EIP712 |
| └ | permit | Public ❗ | 🛑  |NO❗ |
| └ | nonces | Public ❗ |   |NO❗ |
| └ | DOMAIN_SEPARATOR | External ❗ |   |NO❗ |
| └ | _useNonce | Internal 🔒 | 🛑  | |
|||||||
| **ERC20Pausable** | Implementation | ERC20, Pausable |||
| └ | _beforeTokenTransfer | Internal 🔒 | 🛑  | |
|||||||
| **ERC20Burnable** | Implementation | Context, ERC20 |||
| └ | burn | Public ❗ | 🛑  |NO❗ |
| └ | burnFrom | Public ❗ | 🛑  |NO❗ |
|||||||
| **TedAI** | Implementation | ERC20, ERC20Burnable, ERC20Pausable,
Ownable, ERC20Permit, ReentrancyGuard |||
```

└	<Constructor>	Public ❗	🛑	ERC20 ERC20Permit	
└	fundContract	Public ❗	🛑	onlyOwner	
└	_updateExemptions	Internal 🔒	🛑		
└	setAllocationAddresses	External ❗	🛑	onlyOwner	
└	transferAllAllocations	External ❗	🛑	onlyOwner	
└	_transferAllocation	Internal 🔒	🛑		
└	approveAllSpending	External ❗	🛑	onlyOwner	
└	_approveAllocation	Internal 🔒	🛑		
└	_beforeTokenTransfer	Internal 🔒	🛑		
└	_transfer	Internal 🔒	🛑		
└	_calculateBurnAmount	Private 🔐			
└	_calculateRewardAmount	Private 🔐			
└	calculateReward	Public ❗		NO❗	
└	claimRewards	External ❗	🛑	nonReentrant	
└	allocateUnclaimedRewards	External ❗	🛑	NO❗	
└	calculateCirculatingSupply	Public ❗		NO❗	
└	_nonCirculatingSupply	Internal 🔒			
└	saleAllocationToken	Internal 🔒			
└	setPairAddress	External ❗	🛑	onlyOwner	

Legend

Symbol	Meaning
🛑	Function can modify state
💶	Function is payable

Conclusion

The contracts are written systematically. Team found no critical issues. So, it is good to go for production.

Since possible test cases can be unlimited and developer level documentation (code flow diagram with function level description) not provided, for such an extensive smart contract protocol, we provide no such guarantee of future outcomes. We have used all the latest static tools and manual observations to cover maximum possible test cases to scan Everything.

Security state of the reviewed contract is “Well Secured”.

✓ No volatile code.
✓ No high severity issues were found.

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as of the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against the team on the basis of what it says or doesn't say, or how team produced it, and it is important for you to conduct your own independent investigations before making any decisions. team go into more detail on this in the below disclaimer below – please make sure to read it in full.

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