

JEFE TOKEN
Smart Contract
Audit Report



10 May 2021



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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain	
JEFE TOKEN	JEFE	Fantom	

Addresses

Contract address	0x5b2af7fd27e2ea14945c82dd254c79d3ed34685e
Contract deployer address	0xdBeA55Bad7404F00DF5cd12d30d2086151E83950

Project Website

https://twitter.com/jefetoken

Codebase

https://ftmscan.com/address/0x5b2af7fd27e2ea14945c82dd254c79d3ed34685e#code



SUMMARY

Jefe TOKEN is a top-notch Gaming Platform to bring mass adoption of Cryptocurrency to the world, as they utilize our art NFTs with unique utility in their Play 2 Earn games. They are working on integrating NFTs and a Metaverse ecosystem, being the first cross-blockchain gaming platform from Latin America.

Contract Summary

Documentation Quality

JEFE TOKEN provides a very good documentation with standard of solidity base code.

• The technical description is provided clearly and structured and also dont have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

 Standard solidity basecode and rules are already followed by JEFE TOKEN with the discovery of several low issues.

Test Coverage

Test coverage of the project is 100% (Through Codebase)

Audit Findings Summary

- SWC-100 SWC-108 | Explicitly define visibility for all state variables on lines 472.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 14.
- SWC-110 SWC-123 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 682, 682, 683, 684, 815 and 816.



CONCLUSION

We have audited the JEFE TOKEN project released in May 2021 to discover issues and identify potential security vulnerabilities in JEFE TOKEN Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides satisfactory results with low-risk issues.

The issues found in the JEFE TOKEN smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are some arithmetic operation issues, a floating pragma is set, a state variable visibility is not set, and out-of-bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value.



AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	ISSUE FOUND
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows. FOUR	
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used. PASS	
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses. PASS	



DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	
Shadowing State Variable	SWC-119	State variables should not be shadowed.	
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	
Write to Arbitrary Storage Location	SWC-124 user or contract accounts may write to sensitive storage		PASS
Incorrect Inheritance Order	SWC-125		PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas griefing attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	
Arbitrary Jump Function	SWC-127 As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.		PASS



Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS



SMART CONTRACT ANALYSIS

Started	Sunday May 09 2021 12:31:28 GMT+0000 (Coordinated Universal Time)
Finished	Monday May 10 2021 02:22:11 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	JEFE.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "%" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "%" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged



SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
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SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged



LINE 45

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
function add(uint256 a, uint256 b) internal pure returns (uint256) {
   uint256 c = a + b;
   require(c >= a, "SafeMath: addition overflow");
   return c;
}
```



LINE 57

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
56  require(b <= a, errorMessage);
57  uint256 c = a - b;
58
59  return c;
60  }
61</pre>
```



LINE 67

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
66
67  uint256 c = a * b;
68  require(c / a == b, "SafeMath: multiplication overflow");
69
70  return c;
71
```



LINE 68

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
67  uint256 c = a * b;
68  require(c / a == b, "SafeMath: multiplication overflow");
69
70  return c;
71  }
72
```



LINE 80

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
require(b > 0, errorMessage);
uint256 c = a / b;

// assert(a == b * c + a % b); // There is no case in which this doesn't hold

return c;

return c;
```



LINE 92

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
91 require(b != 0, errorMessage);
92 return a % b;
93 }
94 }
95
96
```



LINE 463

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
uint256 private constant MAX = ~uint256(0);
uint256 private _tTotal = 10000000000 * 10**6 * 10**9;
uint256 private _rTotal = (MAX - (MAX % _tTotal));
uint256 private _tFeeTotal;
string private _name = "JEFE TOKEN";
467
```



LINE 463

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
uint256 private constant MAX = ~uint256(0);
uint256 private _tTotal = 10000000000 * 10**6 * 10**9;
uint256 private _rTotal = (MAX - (MAX % _tTotal));
uint256 private _tFeeTotal;
string private _name = "JEFE TOKEN";
467
```



LINE 463

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uint256 private constant MAX = ~uint256(0);
uint256 private _tTotal = 10000000000 * 10**6 * 10**9;
uint256 private _rTotal = (MAX - (MAX % _tTotal));
uint256 private _tFeeTotal;
string private _name = "JEFE TOKEN";
467
```



LINE 463

low SEVERITY

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Source File

- JEFE.sol

```
uint256 private constant MAX = ~uint256(0);
uint256 private _tTotal = 10000000000 * 10**6 * 10**9;
uint256 private _rTotal = (MAX - (MAX % _tTotal));
uint256 private _tFeeTotal;
string private _name = "JEFE TOKEN";
467
```



LINE 464

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
uint256 private _rTotal = (MAX - (MAX % _tTotal));
uint256 private _tFeeTotal;
string private _name = "JEFE TOKEN";
string private _symbol = "JEFE";
468
```



LINE 464

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
uint256 private _rTotal = (MAX - (MAX % _tTotal));
uint256 private _tFeeTotal;
string private _name = "JEFE TOKEN";
string private _symbol = "JEFE";
468
```



LINE 474

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
bool public swapAndLiquifyEnabled = true;

uint256 public _maxTxAmount = 3000000 * 10**6 * 10**9;

uint256 private numTokensSellToAddToLiquidity = 5000000 * 10**6 * 10**9;

event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);

event SwapAndLiquifyEnabledUpdated(bool enabled);

478
```



LINE 474

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
bool public swapAndLiquifyEnabled = true;

uint256 public _maxTxAmount = 3000000 * 10**6 * 10**9;

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478
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478
```



LINE 475

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- JEFE.sol

```
474  uint256 public _maxTxAmount = 3000000 * 10**6 * 10**9;
475  uint256 private numTokensSellToAddToLiquidity = 5000000 * 10**6 * 10**9;
476  event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
477  event SwapAndLiquifyEnabledUpdated(bool enabled);
478  event SwapAndLiquify(
479
```



LINE 475

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
474  uint256 public _maxTxAmount = 3000000 * 10**6 * 10**9;
475  uint256 private numTokensSellToAddToLiquidity = 5000000 * 10**6 * 10**9;
476  event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
477  event SwapAndLiquifyEnabledUpdated(bool enabled);
478  event SwapAndLiquify(
479
```



LINE 475

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
474  uint256 public _maxTxAmount = 3000000 * 10**6 * 10**9;
475  uint256 private numTokensSellToAddToLiquidity = 5000000 * 10**6 * 10**9;
476  event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
477  event SwapAndLiquifyEnabledUpdated(bool enabled);
478  event SwapAndLiquify(
479
```



LINE 475

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
474  uint256 public _maxTxAmount = 3000000 * 10**6 * 10**9;
475  uint256 private numTokensSellToAddToLiquidity = 5000000 * 10**6 * 10**9;
476  event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
477  event SwapAndLiquifyEnabledUpdated(bool enabled);
478  event SwapAndLiquify(
479
```



LINE 633

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol



LINE 681

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
680  uint256 tSupply = _tTotal;
681  for (uint256 i = 0; i < _excluded.length; i++) {
682   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
683   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
684   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
685
```



LINE 708

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
707 return _amount.mul(_vaultFee).div(
708    10**2
709    );
710    }
711
712
```



LINE 714

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
713 return _amount.mul(_taxFee).div(
714    10**2
715   );
716  }
717
718
```



LINE 721

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- JEFE.sol

```
720 return _amount.mul(_liquidityFee).div(
721    10**2
722   );
723  }
724
725
```



SWC-103 | A FLOATING PRAGMA IS SET.

LINE 14

low SEVERITY

The current pragma Solidity directive is ""^0.8.4"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- JEFE.sol

```
13
14 pragma solidity ^0.8.4;
15
16
17 abstract contract Context {
18
```



SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 472

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwapAndLiquify" is internal. Other possible visibility settings are public and private.

Source File

- JEFE.sol

```
address public immutable uniswapV2Pair;
bool inSwapAndLiquify;
bool public swapAndLiquifyEnabled = true;
uint256 public _maxTxAmount = 3000000 * 10**6 * 10**9;
uint256 private numTokensSellToAddToLiquidity = 5000000 * 10**6 * 10**9;
476
```



LINE 682

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- JEFE.sol

```
681 for (uint256 i = 0; i < _excluded.length; i++) {
682   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
683   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
684   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
685  }
686
```



LINE 682

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- JEFE.sol

```
681 for (uint256 i = 0; i < _excluded.length; i++) {
682   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
683   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
684   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
685  }
686
```



LINE 683

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- JEFE.sol

```
682 if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
683    rSupply = rSupply.sub(_rOwned[_excluded[i]]);
684    tSupply = tSupply.sub(_tOwned[_excluded[i]]);
685    }
686    if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
687</pre>
```



LINE 684

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- JEFE.sol



LINE 815

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- JEFE.sol

```
814 address[] memory path = new address[](2);
815 path[0] = address(this);
816 path[1] = uniswapV2Router.WETH();
817
818 _approve(address(this), address(uniswapV2Router), tokenAmount);
819
```



LINE 816

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- JEFE.sol

```
815 path[0] = address(this);
816 path[1] = uniswapV2Router.WETH();
817
818 _approve(address(this), address(uniswapV2Router), tokenAmount);
819
820
```



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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 us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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