AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

Pepe Mad

DATED : 10 May 23'

AUDIT SUMMARY

Project name – PepeMad

Date: 10 May, 2023

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: Passed

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	1	0	0	0
Acknowledged	0	0	0	0	0
Resolved	0	1	0	0	0

USED TOOLS

Tools:

1- Manual Review:
a line by line code review has been performed by audit ace team.

2- BSC Test Network:
all tests were done on BSC Test network, each test has its transaction has attached to it.

3- Slither : Static Analysis

Testnet Link: all tests were done using this contract, tests are done on BSC Testnet

https://testnet.bscscan.com/address/0x214a8899cf9cc28e107a5b441f397bd11b7f7d6d

Token Information

Token Name : PepeMad

Token Symbol: Pemad

Decimals: 18

Token Supply:1,000,000,000,000

Token Address: -

Checksum:
050b39edbcb3787366f93a806244f6a89b1b9af6

Owner: -

TOKEN OVERVIEW

Fees:

Buy Fees: 0 %

Sell Fees: 0 %

Transfer Fees: 0%

Fees Privilige: none

Ownership : owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Priviliges: Enabling trades

AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
- Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
- Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
- Test coverage analysis determines whether the test cases are covering the code and how much code isexercised when we run the test cases.
- Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
- Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.

VULNERABILITY CHECKLIST

- [x] Return values of low-level calls
- [x] Private modifier
- [x] Multiple Sends
- [x] Using Suicide
- [x] Gas Limitand Loops
- [x] Address hardcoded
- [x] Exception Disorder
- [x] Using inline assembly
- [x] Divide before multiply
- [x] Missing Zero Address Validation
- [x] Compiler version not fixed
- [x] **Gasless Send**
- [x] Using block.timestamp
- [x] Re-entrancy
- [x] Tautology or contradiction
- [x] Timestamp Dependence
- [x] Revert/require functions
- [x] Use of tx.origin
- [x] Integer overflow/underflow
- [x] Dangerous strict equalities
- [x] Using SHA3
- [x] Using throw

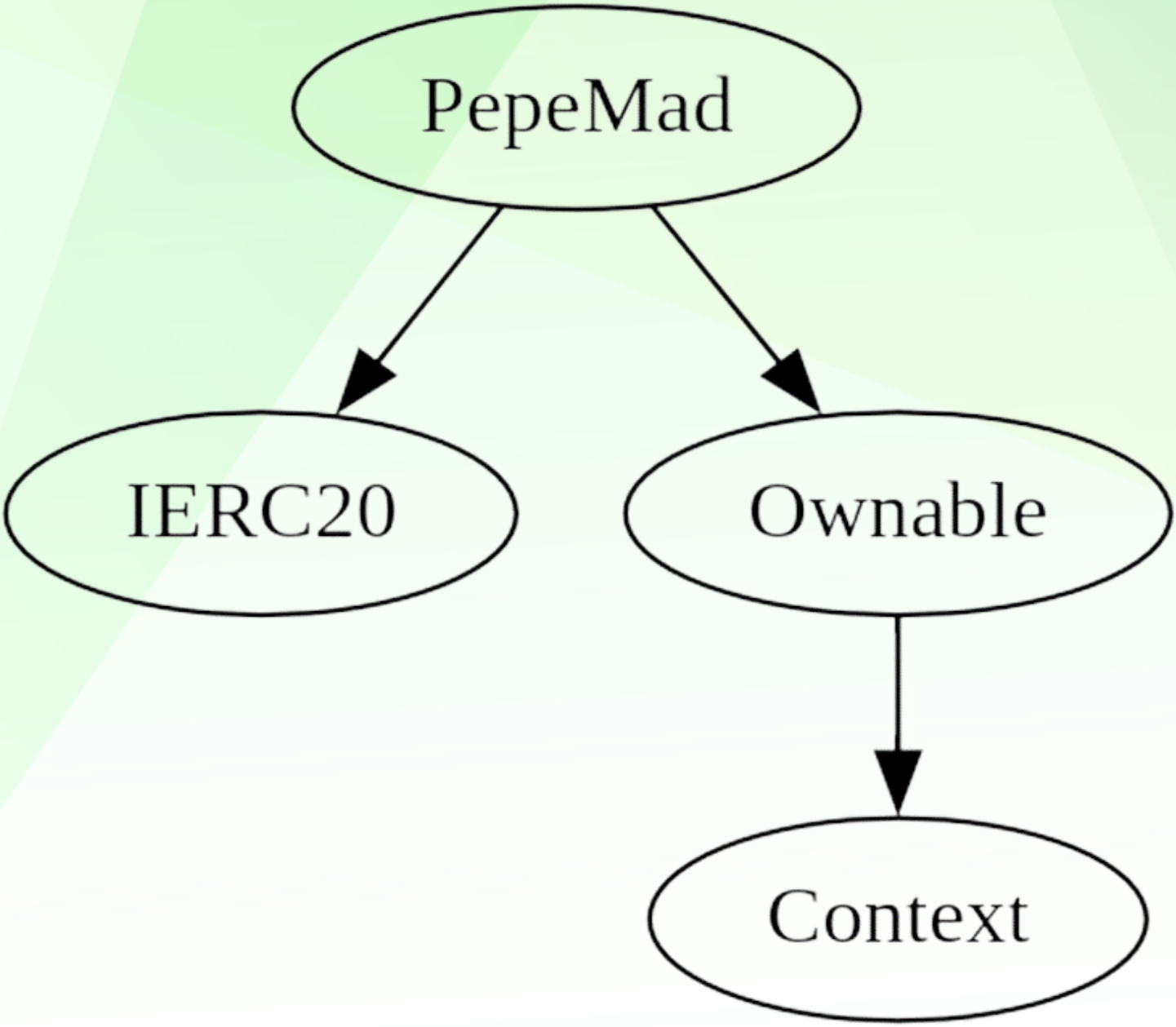
CLASSIFICATION OF RISK

Severity	Description
Critical	These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.
High-Risk	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.
Medium-Risk	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.
Low-Risk	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.
Gas Optimization /Suggestion	A vulnerability that has an informational character but is not affecting any of the code.

Findings

Severity	Found
Critical	0
High-Risk	1 (RESOLVED)
Medium-Risk	0
Low-Risk	0
Gas Optimization / Suggestions	0

INHERITANCE TREE



POINTS TO NOTE

- Owner is not able to set set buy/sell/transfer tax (0% always)
- Owner is not able to set a max buy/transfer/wallet/sell amount
- Owner is not able to blacklist an arbitrary wallet
- Owner is not able to disable trades
- Owner is not able to mint new tokens
- **Owner must enable trades for holders to be able to trade**

CONTRACT ASSESMENT

Contract	Type	Bases		
└	**Function Name**	**Visibility**	**Mutability**	**Modifiers**

PepeMad	Implementation	IERC20, Ownable		
└	<Constructor>	Public ❗	🛑	NO❗
└	<Receive Ether>	External ❗	💵	NO❗
└	totalSupply	External ❗		NO❗
└	name	Public ❗		NO❗
└	symbol	Public ❗		NO❗
└	decimals	Public ❗		NO❗
└	balanceOf	Public ❗		NO❗
└	allowance	External ❗		NO❗
└	approve	Public ❗	🛑	NO❗
└	approveMax	External ❗	🛑	NO❗
└	transfer	External ❗	🛑	NO❗
└	transferFrom	External ❗	🛑	NO❗
└	_transferFrom	Internal 🔒	🛑	
└	enableTrading	External ❗	🛑	onlyOwner
└	setAuthorizedWallets	External ❗	🛑	onlyOwner
└	rescueBNB	External ❗	🛑	onlyOwner
└	withdrawBep20Tokens	External ❗	🛑	onlyOwner
Ownable	Implementation	Context		
└	<Constructor>	Public ❗	🛑	NO❗
└	owner	Public ❗		NO❗
└	_checkOwner	Internal 🔒		
└	renounceOwnership	Public ❗	🛑	onlyOwner
└	transferOwnership	Public ❗	🛑	onlyOwner
└	_transferOwnership	Internal 🔒	🛑	
Context	Implementation			
└	_msgSender	Internal 🔒		
└	_msgData	Internal 🔒		
IERC20	Interface			
└	totalSupply	External ❗		NO❗
└	balanceOf	External ❗		NO❗
└	transfer	External ❗	🛑	NO❗
└	allowance	External ❗		NO❗
└	approve	External ❗	🛑	NO❗
└	transferFrom	External ❗	🛑	NO❗

CONTRACT ASSESMENT

Legend

Symbol	Meaning
	Function can modify state
	Function is payable

STATIC ANALYSIS

```
Context._msgData() (contracts/Token.sol#25-27) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

Pragma version^0.8.17 (contracts/Token.sol#8) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.19 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Parameter PepeMad.setAuthorizedWallets(address,bool)._wallet (contracts/Token.sol#334) is not in mixedCase
Parameter PepeMad.setAuthorizedWallets(address,bool)._status (contracts/Token.sol#335) is not in mixedCase
Parameter PepeMad.withdrawBep20Tokens(address,uint256)._tokenAddress (contracts/Token.sol#348) is not in mixedCase
Parameter PepeMad.withdrawBep20Tokens(address,uint256)._amount (contracts/Token.sol#349) is not in mixedCase
Constant PepeMad._name (contracts/Token.sol#223) is not in UPPER_CASE_WITH_UNDERSCORES
Constant PepeMad._symbol (contracts/Token.sol#224) is not in UPPER_CASE_WITH_UNDERSCORES
Constant PepeMad._decimals (contracts/Token.sol#225) is not in UPPER_CASE_WITH_UNDERSCORES
Variable PepeMad._totalSupply (contracts/Token.sol#227) is not in mixedCase
Variable PepeMad._balances (contracts/Token.sol#229) is not in mixedCase
Variable PepeMad._allowances (contracts/Token.sol#230) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

PepeMad._totalSupply (contracts/Token.sol#227) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant
```

Result => A static analysis of contract's source code has been performed using slither,

No major issues were found in the output

FUNCTIONAL TESTING

Router (PCS V2):
0xD99D1c33F9fC3444f8101754aBC46c52416550D1

All the functionalities have been tested, no issues were found

1- Adding liquidity (passed):
https://testnet.bscscan.com/tx/0x84dda5597004762f94957c5751d01397f3749d7d82afbdf10ccbbc5b9d48519d

2- Buying when excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0x3420746b8773a05091b495d9272749ca59c969b7003c1dfbf7a8462f1511e776

3- Selling when excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0x4a63054f588b320136e1d5f23ff59b6c26f7127d30a709bd3b89371c315d6fa3

4- Transferring when excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0xbe5b002ec49df49f62ecda12e7e3a5975532e0bce392c116e0b2ba96a80faa70

5- Buying when not excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0xdaf080a0641a3816bb70f8e9cb85fd4995602251216721c297e6e17fea278105

6- Selling when not excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0x21ffe55b1eb8730179455958 7d90085687034c77f9fea0066a59611086efc122

FUNCTIONAL TESTING

7- Transferring when not excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0xe9433f47deea07983c0ad790d89cb093547a54710b751acac7eaca9015d04f53

MANUAL TESTING

Centralization – Trades must be enabled

Severity: High

function: enableTrading

Status: Resolved (contract Is owned by safu dev)

Overview:

The smart contract owner must enable trades for holders. If trading remain disabled, no one would be able to buy/sell/transfer tokens.

```
function enableTrading() external onlyOwner {
    require(!tradingEnabled, "Trading already enabled.");
    tradingEnabled = true;
    swapEnabled = true;
}
```

Suggestion

To mitigate this centralization issue, we propose the following options:

1. Renounce Ownership: Consider relinquishing control of the smart contract by renouncing ownership. This would remove the ability for a single entity to manipulate the router, reducing centralization risks.
2. Multi-signature Wallet: Transfer ownership to a multi-signature wallet. This would require multiple approvals for any changes to the mainRouter, adding an additional layer of security and reducing the centralization risk.
3. Transfer ownership to a trusted and valid 3rd party in order to guarantee enabling of the trades

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