AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

Floki Chairman

DATED : 13 MAR 23'

AUDIT SUMMARY

Project name – Floki Chairman

Date: 13 March, 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	0	2	0	0
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0

USED TOOLS

Tools:

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

2- BSC Testnet network:
all tests were done on Bsc Testnet 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/token/0x40C14cBa93b2658aC67E9Ce812f04858abDFC72d#code

Token Information

Token Name : FLOKI CHAIRMAN

Token Symbol: CHAIRMAN

Decimals: 9

Token Supply: 100,000,000,000

Token Address:
0x41AF43168AB7ff21F3b1b53E1cf17eb5b067fB9f

Checksum:
f6cd3819dfe750f683aaa67ce06b2676af8b0447

Owner:
0x047400e53694F803e25A35945e0E97EDA051b0a6

TOKEN OVERVIEW

Fees:

Buy Fees: 8%

Sell Fees: 8%

Transfer Fees: 8%

Fees Privilige: None

Ownership : Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Priviliges: including and excluding from fees and rewards

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

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

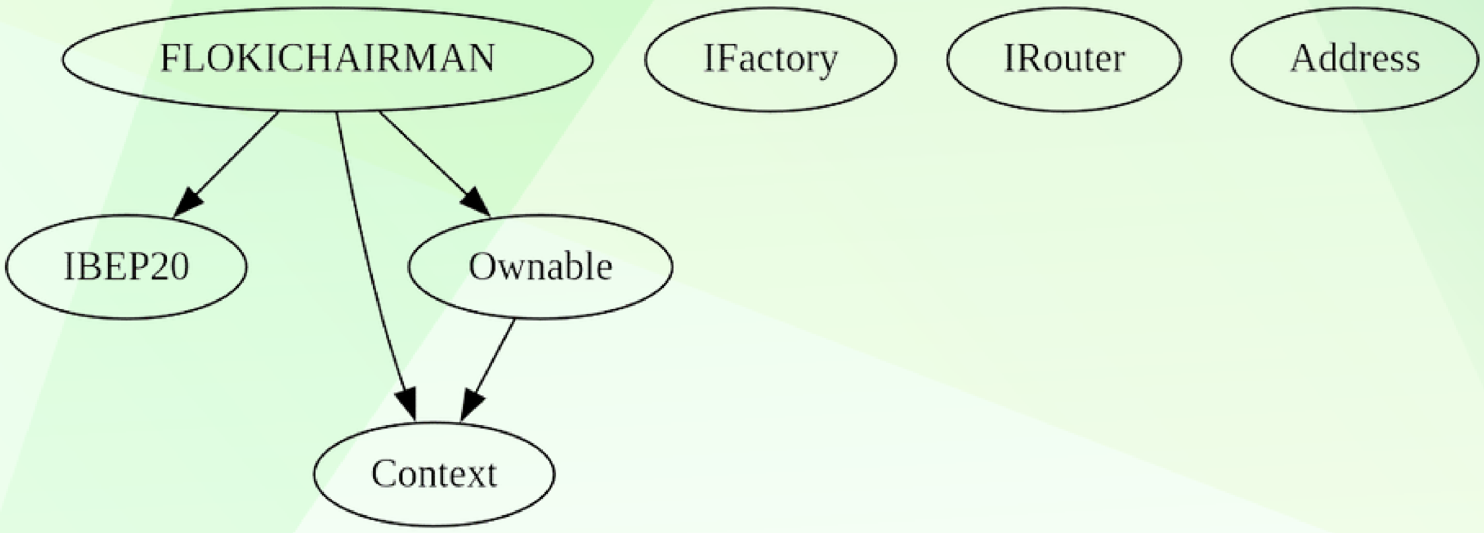
CLASSIFICATION OF RISK

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	0
🟧 Medium-Risk	2
🟨 Low-Risk	0
🟦 Gas Optimization / Suggestions	0

INHERITANCE TREE



POINTS TO NOTE

- Owner is not able to change fees (8% fee buy sell and transfers)
- Owner is not able to set max buy/sell/transfer/hold 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 trading, otherwise holders will not be able to trade

TOKEN DISTRIBUTION

It should be noted that the owner currently holds 100% of the total supply. However, information about the distribution of these tokens is not available, and it is recommended that investors exercise caution when considering this aspect.

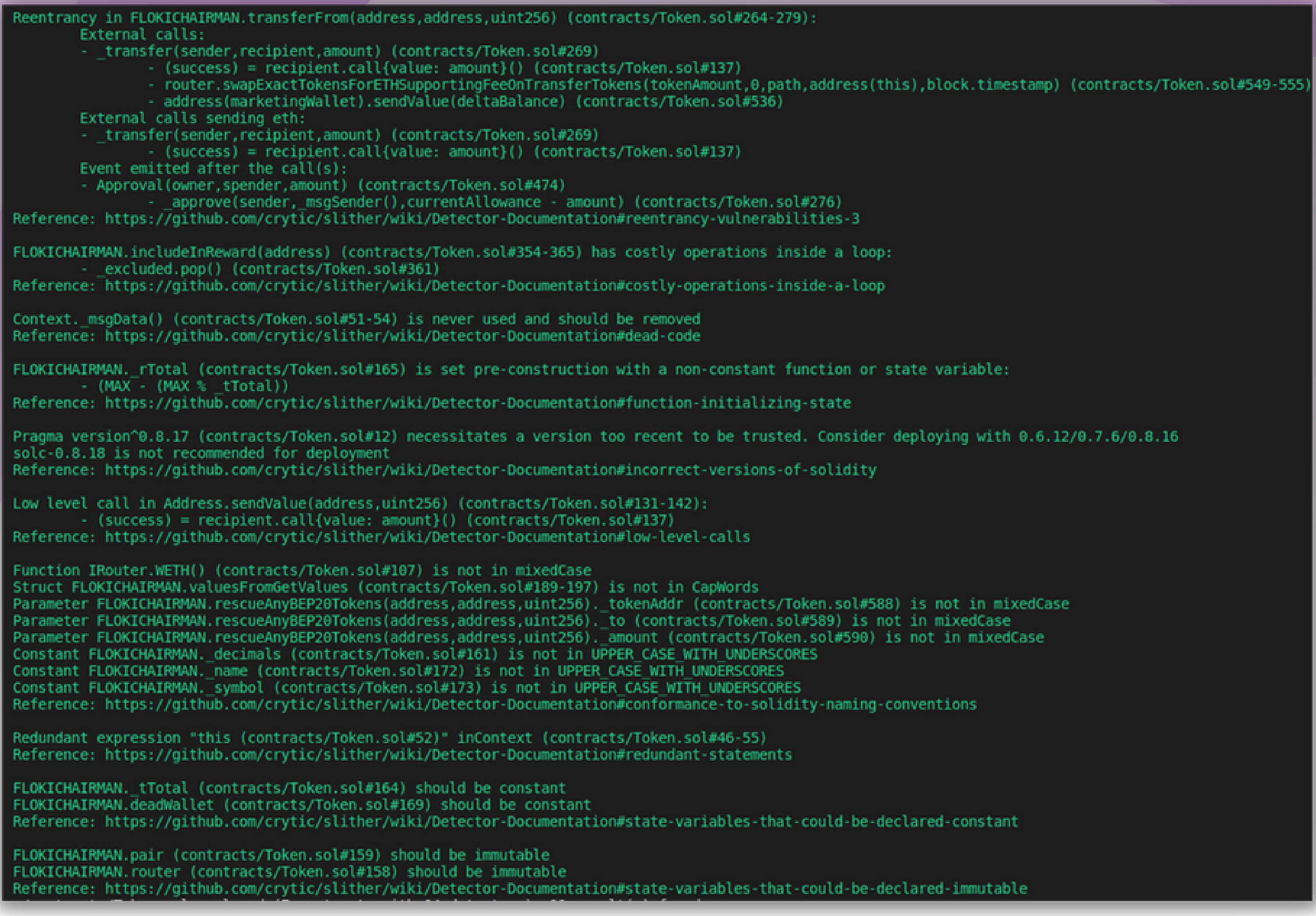
CONTRACT ASSESMENT

```
| Contract |       Type        |      Bases       |                  |                 |
|:----------:|:-------------------:|:----------------:|:----------------:|:---------------:|
|    └    | **Function Name** | **Visibility** | **Mutability** | **Modifiers** |
||||||
| **IBEP20** | Interface |  |||
| └ | totalSupply | External ❗ |   |NO❗ |
| └ | balanceOf | External ❗ |   |NO❗ |
| └ | transfer | External ❗ | 🛑  |NO❗ |
| └ | allowance | External ❗ |   |NO❗ |
| └ | approve | External ❗ | 🛑  |NO❗ |
| └ | transferFrom | External ❗ | 🛑  |NO❗ |
||||||
| **Context** | Implementation |  |||
| └ | _msgSender | Internal 🔒 |   | |
| └ | _msgData | Internal 🔒 |   | |
||||||
| **Ownable** | Implementation | Context |||
| └ | <Constructor> | Public ❗ | 🛑  |NO❗ |
| └ | owner | Public ❗ |   |NO❗ |
| └ | renounceOwnership | Public ❗ | 🛑  | onlyOwner |
| └ | transferOwnership | Public ❗ | 🛑  | onlyOwner |
| └ | _setOwner | Private 🔐 | 🛑  | |
||||||
| **IFactory** | Interface |  |||
| └ | createPair | External ❗ | 🛑  |NO❗ |
||||||
| **IRouter** | Interface |  |||
| └ | factory | External ❗ |   |NO❗ |
| └ | WETH | External ❗ |   |NO❗ |
| └ | addLiquidityETH | External ❗ | 💵 |NO❗ |
| └ | swapExactTokensForETHSupportingFeeOnTransferTokens | External ❗ | 🛑  |NO❗ |
||||||
| **Address** | Library |  |||
| └ | sendValue | Internal 🔒 | 🛑  | |
||||||
| **FLOKICHAIRMAN** | Implementation | Context, IBEP20, Ownable |||
| └ | <Constructor> | Public ❗ | 🛑  |NO❗ |
| └ | name | Public ❗ |   |NO❗ |
| └ | symbol | Public ❗ |   |NO❗ |
| └ | decimals | Public ❗ |   |NO❗ |
| └ | totalSupply | Public ❗ |   |NO❗ |
| └ | balanceOf | Public ❗ |   |NO❗ |
```

CONTRACT ASSESMENT

```
| └ | allowance | Public ❗ |   |NO❗ |
| └ | approve | Public ❗ | 🛑  |NO❗ |
| └ | transferFrom | Public ❗ | 🛑  |NO❗ |
| └ | increaseAllowance | Public ❗ | 🛑  |NO❗ |
| └ | decreaseAllowance | Public ❗ | 🛑  |NO❗ |
| └ | transfer | Public ❗ | 🛑  |NO❗ |
| └ | isExcludedFromReward | Public ❗ |   |NO❗ |
| └ | reflectionFromToken | Public ❗ |   |NO❗ |
| └ | tokenFromReflection | Public ❗ |   |NO❗ |
| └ | excludeFromReward | Public ❗ | 🛑  | onlyOwner |
| └ | includeInReward | External ❗ | 🛑  | onlyOwner |
| └ | excludeFromFee | Public ❗ | 🛑  | onlyOwner |
| └ | includeInFee | Public ❗ | 🛑  | onlyOwner |
| └ | isExcludedFromFee | Public ❗ |   |NO❗ |
| └ | _reflectRfi | Private 🔐 | 🛑  | |
| └ | _takeMarketing | Private 🔐 | 🛑  | |
| └ | _getValues | Private 🔐 |   | |
| └ | _getTValues | Private 🔐 |   | |
| └ | _getRValues | Private 🔐 |   | |
| └ | _getRate | Private 🔐 |   | |
| └ | _getCurrentSupply | Private 🔐 |   | |
| └ | _approve | Private 🔐 | 🛑  | |
| └ | _transfer | Private 🔐 | 🛑  | |
| └ | _tokenTransfer | Private 🔐 | 🛑  | |
| └ | swapAndLiquify | Private 🔐 | 🛑  | lockTheSwap |
| └ | swapTokensForBNB | Private 🔐 | 🛑  | |
| └ | bulkExcludeFee | External ❗ | 🛑  | onlyOwner |
| └ | updateMarketingWallet | External ❗ | 🛑  | onlyOwner |
| └ | updateSwapTokensAtAmount | External ❗ | 🛑  | onlyOwner |
| └ | rescueBNB | External ❗ | 🛑  | onlyOwner |
| └ | rescueAnyBEP20Tokens | Public ❗ | 🛑  | onlyOwner |
| └ | <Receive Ether> | External ❗ | 💵 |NO❗ |
|  Symbol  |  Meaning  |
|:--------:|-----------|
|    🛑    | Function can modify state |
|    💵    | Function is payable |
```

STATIC ANALYSIS



```
Reentrancy in FLOKICHAIRMAN.transferFrom(address,address,uint256) (contracts/Token.sol#264-279):
        External calls:
        - _transfer(sender,recipient,amount) (contracts/Token.sol#269)
                - (success) = recipient.call{value: amount}() (contracts/Token.sol#137)
                - router.swapExactTokensForETHSupportingFeeOnTransferTokens(tokenAmount,0,path,address(this),block.timestamp) (contracts/Token.sol#549-555)
                - address(marketingWallet).sendValue(deltaBalance) (contracts/Token.sol#536)
        External calls sending eth:
        - _transfer(sender,recipient,amount) (contracts/Token.sol#269)
                - (success) = recipient.call{value: amount}() (contracts/Token.sol#137)
        Event emitted after the call(s):
        - Approval(owner,spender,amount) (contracts/Token.sol#474)
                - _approve(sender,_msgSender(),currentAllowance - amount) (contracts/Token.sol#276)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-3

FLOKICHAIRMAN.includeInReward(address) (contracts/Token.sol#354-365) has costly operations inside a loop:
        - _excluded.pop() (contracts/Token.sol#361)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#costly-operations-inside-a-loop

Context._msgData() (contracts/Token.sol#51-54) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

FLOKICHAIRMAN._rTotal (contracts/Token.sol#165) is set pre-construction with a non-constant function or state variable:
        - (MAX - (MAX % _tTotal))
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#function-initializing-state

Pragma version^0.8.17 (contracts/Token.sol#12) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.18 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Low level call in Address.sendValue(address,uint256) (contracts/Token.sol#131-142):
        - (success) = recipient.call{value: amount}() (contracts/Token.sol#137)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function IRouter.WETH() (contracts/Token.sol#107) is not in mixedCase
Struct FLOKICHAIRMAN.valuesFromGetValues (contracts/Token.sol#189-197) is not in CapWords
Parameter FLOKICHAIRMAN.rescueAnyBEP20Tokens(address,address,uint256)._tokenAddr (contracts/Token.sol#588) is not in mixedCase
Parameter FLOKICHAIRMAN.rescueAnyBEP20Tokens(address,address,uint256)._to (contracts/Token.sol#589) is not in mixedCase
Parameter FLOKICHAIRMAN.rescueAnyBEP20Tokens(address,address,uint256)._amount (contracts/Token.sol#590) is not in mixedCase
Constant FLOKICHAIRMAN._decimals (contracts/Token.sol#161) is not in UPPER_CASE_WITH_UNDERSCORES
Constant FLOKICHAIRMAN._name (contracts/Token.sol#172) is not in UPPER_CASE_WITH_UNDERSCORES
Constant FLOKICHAIRMAN._symbol (contracts/Token.sol#173) is not in UPPER_CASE_WITH_UNDERSCORES
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Redundant expression "this (contracts/Token.sol#52)" inContext (contracts/Token.sol#46-55)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#redundant-statements

FLOKICHAIRMAN._tTotal (contracts/Token.sol#164) should be constant
FLOKICHAIRMAN.deadWallet (contracts/Token.sol#169) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant

FLOKICHAIRMAN.pair (contracts/Token.sol#159) should be immutable
FLOKICHAIRMAN.router (contracts/Token.sol#158) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
```

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

No issues found

FUNCTIONAL TESTING

Router (PCS V2):
0xD99D1c33F9fC3444f8101754aBC46c52416550D1

1- Adding Liquidity (Passed):
liquidity added on Pancakeswap V2:

https://testnet.bscscan.com/tx/0x3442b73a1335a75d410a030c91771140fcd51ad7d78c9e43dd7b1e268f78f5bb

2- Buying when excluded (0%)(Passed):

https://testnet.bscscan.com/tx/0x9ae3910957189b907722e27aae2fc7abebb81bd56f8052fb4091f3ecbb3eacdd

3- Selling when excluded (0%)(Passed):

https://testnet.bscscan.com/tx/0x7f3a0f583ccd2a21ff018b3ee4a43343fe332e72b11f7d9b89b185f6dbff73a9

4- Transferring when excluded (0% tax) (passed):

https://testnet.bscscan.com/tx/0x4b9e2ce325dd17149ed3e32c13a9bb9280975f304f8e9edeb39e23e7bd0b42ca

5- Buying when not excluded (8% tax) (passed):

https://testnet.bscscan.com/tx/0xb4f2cd1f165c23d1aa525dcee44cb6500a19876c586762ed9a510bff603a2d3a

FUNCTIONAL TESTING

6- Selling when not excluded (8% tax) (passed):

https://testnet.bscscan.com/tx/0xfa986944f301fd29d3f34996009739c201b3a7fa8c141d483c88ade28b66c33b

7- Transferring when not excluded(8% tax) (passed):

https://testnet.bscscan.com/tx/0xb3169db4388f40dbb23682307b9d65a34c7d0e6aa6b6ef23fbce01c869a63aa6

8- Internal swap (passed):

marketing wallet received ETH
https://testnet.bscscan.com/address/0x37c55fdc707cbbd0dfca25a14d06f9840e6ef085#internaltx

9- Reflections (passed):
we monitors wallet balances for testing this features, wallets received reflection after trades, they stop getting reflections after getting excluded from rewards

MANUAL TESTING

Issue: swap threshold can revert some sells

Type: logical

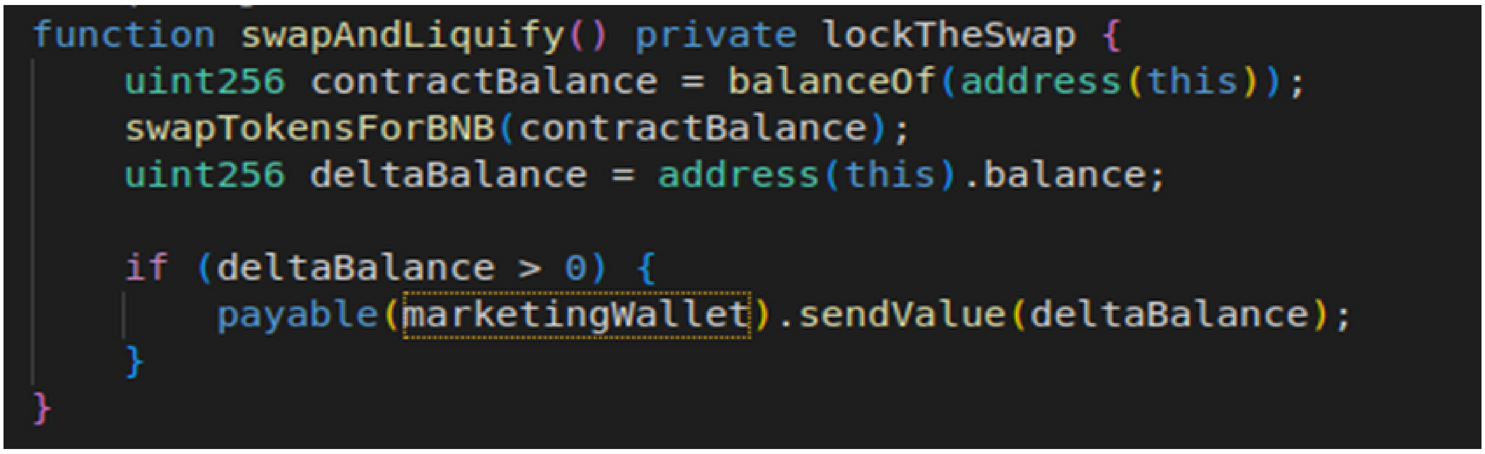
Function: updateSwapTokensAtAmount

Line: 535-538

Severity: Medium

Overview:

If swap threshold and contract balance are both zero, **swapAndLiquify** function will fail the transaction.



```
function swapAndLiquify() private lockTheSwap {
    uint256 contractBalance = balanceOf(address(this));
    swapTokensForBNB(contractBalance);
    uint256 deltaBalance = address(this).balance;

    if (deltaBalance > 0) {
        payable(marketingWallet).sendValue(deltaBalance);
    }
}
```

Recommendation:

• make sure that swap threshold is always higher than 0

MANUAL TESTING

IIssue: Trades must be enabled by owner

Type: Centralization

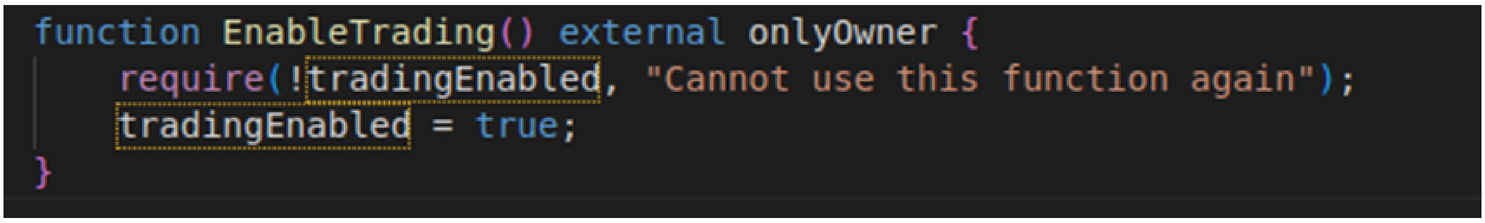
Function: **EnableTrading**

Line: 475-478

Severity: **Medium - Informational**

Overview:

Owner must enable trading otherwise holders of the token will not be able to trade (sell/transfer) their tokens. However once trading is enabled, owner is not able to disable it again



```
function EnableTrading() external onlyOwner {
    require(!tradingEnabled, "Cannot use this function again");
    tradingEnabled = true;
}
```

Social Media Overview

Here are the Social Media Accounts of

Floki Chairman

https://t.me/flokichairmangroup

https://twitter.com/FlokiChairman

https://www.flokichairman.com

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