



Smart Contract Audit

FOR
AINUDOGE

DATED : 16 FEB 23'



AUDIT SUMMARY

Project name – AINUDOGÉ

Date: 16 February, 2023

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

Audit Status: **Passed**(Contract developed by Pinksale Safu Dev)

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	0	0	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 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/0x2F7bf5c7Da114D44d6dc1E1C1a8fDa4FCB672BCA#code>



Token Information

Token Name : AINUDOGGE

Token Symbol: AINU

Decimals: 9

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

Token Address:

0x7dD82eAaF89E4a893Bd884757E5BC3dB22b76C4B

Checksum:

421c76d77563afa1914846b010bd164f395bd34c2102
e5e99e0cb9cf173c1d87

Owner:

0xcf0537c1c304dac7b5cdaab79824c659d3e4d533



TOKEN OVERVIEW

Fees:

Buy Fees: up to 12.5%

Sell Fees: up to 12.5%

Transfer Fees: 0%

Fees Privilege: Owner

Ownership : Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Privileges: None



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

0

◆ Low-Risk

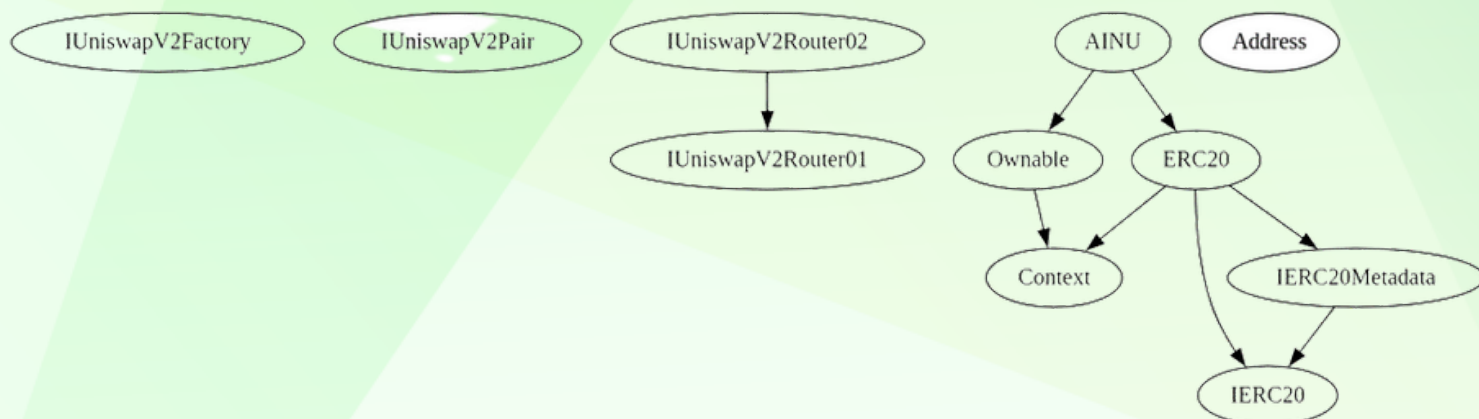
0

◆ Gas Optimization / Suggestions

0



INHERITANCE TREE





POINTS TO NOTE

- **Owner is not able to set buy/sell fees higher than 12.5%**
 - **Owner is not able to blacklist an arbitrary wallet**
 - **Owner is not able to set max buy/sell/transfer amounts**
 - **Owner is not able to disable trades**
 - **Owner is not able to mint new tokens**
-



CONTRACT ASSESMENT

Contract	Type	Bases			
└──┐	**Function Name**	**Visibility**	**Mutability**	**Modifiers**	
IUniswapV2Factory	Interface				
└ feeTo	External	!	NO	!	
└ feeToSetter	External	!	NO	!	
└ getPair	External	!	NO	!	
└ allPairs	External	!	NO	!	
└ allPairsLength	External	!	NO	!	
└ createPair	External	!	⊗	NO	!
└ setFeeTo	External	!	⊗	NO	!
└ setFeeToSetter	External	!	⊗	NO	!
IUniswapV2Pair	Interface				
└ name	External	!	NO	!	
└ symbol	External	!	NO	!	
└ decimals	External	!	NO	!	
└ totalSupply	External	!	NO	!	
└ balanceOf	External	!	NO	!	
└ allowance	External	!	NO	!	
└ approve	External	!	⊗	NO	!
└ transfer	External	!	⊗	NO	!
└ transferFrom	External	!	⊗	NO	!
└ DOMAIN_SEPARATOR	External	!	NO	!	
└ PERMIT_TYPEHASH	External	!	NO	!	
└ nonces	External	!	NO	!	
└ permit	External	!	⊗	NO	!
└ MINIMUM_LIQUIDITY	External	!	NO	!	
└ factory	External	!	NO	!	
└ token0	External	!	NO	!	
└ token1	External	!	NO	!	
└ getReserves	External	!	NO	!	
└ price0CumulativeLast	External	!	NO	!	
└ price1CumulativeLast	External	!	NO	!	
└ kLast	External	!	NO	!	
└ mint	External	!	⊗	NO	!
└ burn	External	!	⊗	NO	!
└ swap	External	!	⊗	NO	!
└ skim	External	!	⊗	NO	!
└ sync	External	!	⊗	NO	!
└ initialize	External	!	⊗	NO	!



CONTRACT ASSESMENT

```
||||| |
| **IUniswapV2Router01** | Interface | |||
|  | factory | External ! | |NO!|
|  | WETH | External ! | |NO!|
|  | addLiquidity | External ! | |NO!|
|  | addLiquidityETH | External ! | |NO!|
|  | removeLiquidity | External ! | |NO!|
|  | removeLiquidityETH | External ! | |NO!|
|  | removeLiquidityWithPermit | External ! | |NO!|
|  | removeLiquidityETHWithPermit | External ! | |NO!|
|  | swapExactTokensForTokens | External ! | |NO!|
|  | swapTokensForExactTokens | External ! | |NO!|
|  | swapExactETHForTokens | External ! | |NO!|
|  | swapTokensForExactETH | External ! | |NO!|
|  | swapExactTokensForETH | External ! | |NO!|
|  | swapETHForExactTokens | External ! | |NO!|
|  | quote | External ! | |NO!|
|  | getAmountOut | External ! | |NO!|
|  | getAmountIn | External ! | |NO!|
|  | getAmountsOut | External ! | |NO!|
|  | getAmountsIn | External ! | |NO!|
|||||
| **IUniswapV2Router02** | Interface | IUniswapV2Router01 |||
|  | removeLiquidityETHSupportingFeeOnTransferTokens | External ! | |NO!|
|  | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External ! | |NO!|
|  | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ! | |NO!|
|  | swapExactETHForTokensSupportingFeeOnTransferTokens | External ! | |NO!|
|  | swapExactTokensForETHSupportingFeeOnTransferTokens | External ! | |NO!|
|||||
| **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!|
|||||
```

CONTRACT ASSESMENT

```

| **Address** | Library | ||| |
|  | isContract | Internal | | |
|  | sendValue | Internal | | |
|  | functionCall | Internal | | |
|  | functionCall | Internal | | |
|  | functionCallWithValue | Internal | | |
|  | functionCallWithValue | Internal | | |
|  | functionStaticCall | Internal | | |
|  | functionStaticCall | Internal | | |
|  | functionDelegateCall | Internal | | |
|  | functionDelegateCall | Internal | | |
|  | verifyCallResultFromTarget | Internal | | |
|  | verifyCallResult | Internal | | |
|  | _revert | Private | | |
| | | |
| **Context** | Implementation | |||
|  | _msgSender | Internal | | |
|  | _msgData | Internal | | |
| | | |
| **Ownable** | Implementation | Context | |||
|  | <Constructor> | Public | | | NO |
|  | owner | Public | | | NO |
|  | renounceOwnership | Public | | | onlyOwner |
|  | transferOwnership | Public | | | onlyOwner |
| | | |
| **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 | | |

```

CONTRACT ASSESMENT

```

|  | _approve | Internal | 🔒 | 🛑 | |
|  | _beforeTokenTransfer | Internal | 🔒 | 🛑 | |
|  | _afterTokenTransfer | Internal | 🔒 | 🛑 | |
|  |  |  |  |  |  |
| **AINU** | Implementation | ERC20, Ownable | | |
|  | <Constructor> | Public | ! | 🛑 | ERC20 |
|  | <Receive Ether> | External | ! | 💰 | NO! |
|  | claimStuckTokens | External | ! | 🛑 | onlyOwner |
|  | excludeFromFees | External | ! | 🛑 | onlyOwner |
|  | isExcludedFromFees | Public | ! | | NO! |
|  | changeMarketingWallet | External | ! | 🛑 | onlyOwner |
|  | changeGrowthWallet | External | ! | 🛑 | onlyOwner |
|  | changeEcosystemWallet | External | ! | 🛑 | onlyOwner |
|  | updateBuyFees | External | ! | 🛑 | onlyOwner |
|  | updateSellFees | External | ! | 🛑 | onlyOwner |
|  | enableTrading | External | ! | 🛑 | onlyOwner |
|  | _transfer | Internal | 🔒 | 🛑 | |
|  | setSwapEnabled | External | ! | 🛑 | onlyOwner |
|  | setSwapTokensAtAmount | External | ! | 🛑 | onlyOwner |
|  | swapAndLiquify | Private | 🔒 | 🛑 | |
|  | swapAndSendTokens | Private | 🔒 | 🛑 | |

```

| Symbol | Meaning |

| :-----: | ----- |

| 🛑 | Function can modify state |

| 💰 | Function is payable |



STATIC ANALYSIS

```
Address.functionDelegateCall(address,bytes) (contracts/Token.sol#597-607) is never used and should be removed
Address.functionDelegateCall(address,bytes,string) (contracts/Token.sol#615-628) is never used and should be removed
Address.functionStaticCall(address,bytes) (contracts/Token.sol#558-568) is never used and should be removed
Address.functionStaticCall(address,bytes,string) (contracts/Token.sol#576-589) is never used and should be removed
Address.isContract(address) (contracts/Token.sol#417-423) is never used and should be removed
Address.verifyCallResult(bool,bytes,string) (contracts/Token.sol#660-670) is never used and should be removed
Address.verifyCallResultFromTarget(address,bool,bytes,string) (contracts/Token.sol#636-652) is never used and should be removed
Context.msgData() (contracts/Token.sol#695-698) is never used and should be removed
ERC20.burn(address,uint256) (contracts/Token.sol#885-900) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

Pragma version0.8.17 (contracts/Token.sol#23) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.17 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#441-452):
- (success) = recipient.call{value: amount}() (contracts/Token.sol#447)
Low level call in Address.functionCallWithValue(address,bytes,uint256,string) (contracts/Token.sol#530-550):
- (success,returndata) = target.call{value: value}(data) (contracts/Token.sol#540-542)
Low level call in Address.functionStaticCall(address,bytes,string) (contracts/Token.sol#576-589):
- (success,returndata) = target.staticcall(data) (contracts/Token.sol#581)
Low level call in Address.functionDelegateCall(address,bytes,string) (contracts/Token.sol#615-628):
- (success,returndata) = target.delegatecall(data) (contracts/Token.sol#620)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function IUniswapV2Pair.DOMAIN_SEPARATOR() (contracts/Token.sol#85) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (contracts/Token.sol#87) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (contracts/Token.sol#118) is not in mixedCase
Function IUniswapV2Router01.WETH() (contracts/Token.sol#158) is not in mixedCase
Parameter AINU.changeMarketingWallet(address).marketingWallet (contracts/Token.sol#1063) is not in mixedCase
Parameter AINU.changeGrowthWallet(address).growthWallet (contracts/Token.sol#1076) is not in mixedCase
Parameter AINU.changeEcosystemWallet(address).ecosystemWallet (contracts/Token.sol#1089) is not in mixedCase
Parameter AINU.updateBuyFees(uint256,uint256,uint256,uint256).liquidityFeeOnBuy (contracts/Token.sol#1103) is not in mixedCase
Parameter AINU.updateBuyFees(uint256,uint256,uint256,uint256).marketingFeeOnBuy (contracts/Token.sol#1104) is not in mixedCase
Parameter AINU.updateBuyFees(uint256,uint256,uint256,uint256).growthFeeOnBuy (contracts/Token.sol#1105) is not in mixedCase
Parameter AINU.updateBuyFees(uint256,uint256,uint256,uint256).ecoFeeOnBuy (contracts/Token.sol#1106) is not in mixedCase
Parameter AINU.updateSellFees(uint256,uint256,uint256,uint256).liquidityFeeOnSell (contracts/Token.sol#1123) is not in mixedCase
Parameter AINU.updateSellFees(uint256,uint256,uint256,uint256).marketingFeeOnSell (contracts/Token.sol#1124) is not in mixedCase
Parameter AINU.updateSellFees(uint256,uint256,uint256,uint256).growthFeeOnSell (contracts/Token.sol#1125) is not in mixedCase
Parameter AINU.updateSellFees(uint256,uint256,uint256,uint256).ecoFeeOnSell (contracts/Token.sol#1126) is not in mixedCase
Parameter AINU.setSwapEnabled(bool).enabled (contracts/Token.sol#1233) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Redundant expression "this (contracts/Token.sol#696)" inContext (contracts/Token.sol#690-699)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#redundant-statements

Variable IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#163) is too similar to IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#164)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

AINU.uniswapV2Pair (contracts/Token.sol#931) should be immutable
AINU.uniswapV2Router (contracts/Token.sol#930) 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 major issues were found in the output



FUNCTIONAL TESTING

Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

1- Adding Liquidity (Passed):

liquidity added on Pancakeswap V2:

<https://testnet.bscscan.com/tx/0x1ec637aaa6ba03c094a9fd1e699353c53513a2386a26721d7819d3d8b054deee>

2- Buying (liquidity + marketing + growth + eco fee 12.5% max) (Passed):

<https://testnet.bscscan.com/tx/0x9f4b66d9d3278fa37e60792dd5bb5fde35fafa34e2dca578e59746d608535485>

3- Selling (liquidity + marketing + growth + eco fee 12.5% max) (Passed):

<https://testnet.bscscan.com/tx/0x5cee6a4cb34cebee4bcb892fd331e5c546084bd4a08790e0a71e3d1d2e22f680>

4-Transferring (0% Tax)(Passed):

<https://testnet.bscscan.com/tx/0x5b554d5344c0eac9045af4c0371c86e8b7c94737af38613e038ecd58c69cdf7c>



FUNCTIONAL TESTING

5-Auto Liquidity(Passed):

[https://testnet.bscscan.com/token/0x6751824b462e18fea5aafc2375dd4d7b448326e?
a=0x00dead](https://testnet.bscscan.com/token/0x6751824b462e18fea5aafc2375dd4d7b448326e?a=0x00dead)

6-Internal Swap(Passed):

growth wallet:

<https://testnet.bscscan.com/address/0x7068c898eb5ad86c3b5a2a4408eee7900264ade6#internaltx>

marketing wallet:

<https://testnet.bscscan.com/address/0x00ec55a11e61826622fd8c9fda51d3a61b0cb21c#internaltx>

eco wallet:

<https://testnet.bscscan.com/address/0x3a9802f498f2d797f4c536aa7ee7f4c3680cfaee#internaltx>



MANUAL TESTING

NO ISSUES FOUND

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