AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

AINUDOGE

DATED : 16 FEB 23'

AUDIT SUMMARY

Project name – AINUDOGE

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 : AINUDOGE

Token Symbol: AINU

Decimals: 9

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

Token Address: Not deployed on chain

Checksum:
421c76d77563afa1914846b010bd164f395bd34c2102 e5e99e0cb9cf173c1d87

Owner: Not deployed

Deployer:
Not deployed

TOKEN OVERVIEW

Fees:

Buy Fees: up to 12.5%

Sell Fees: up to 12.5%

Transfer Fees: 0%

Fees Privilige: Owner

Ownership : Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Priviliges: 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 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
- ✅ **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

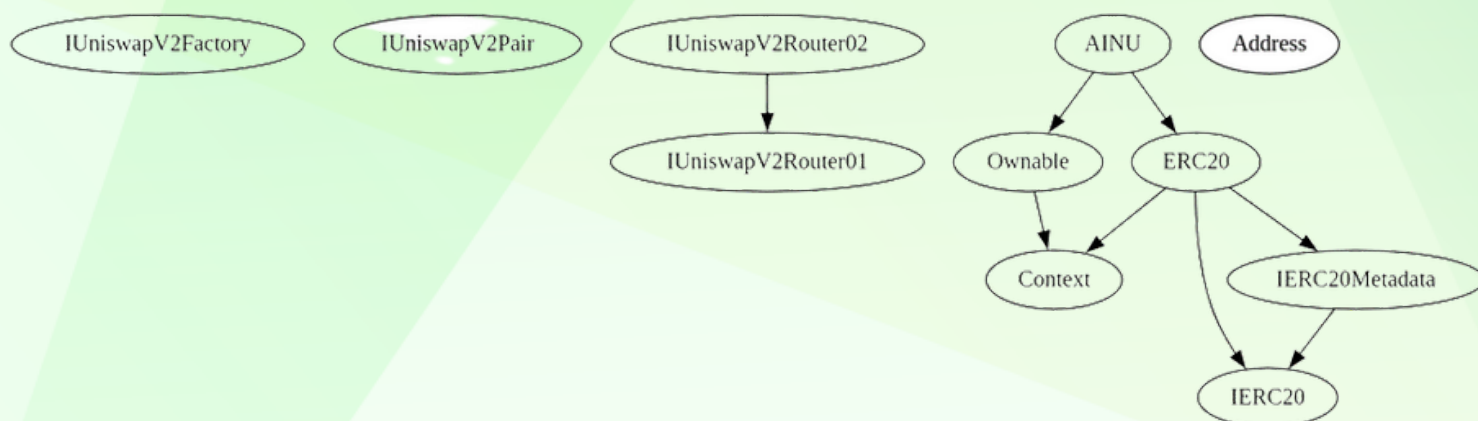| Severity	Found
◆ Critical	0
◆ High-Risk	0
◆ Medium-Risk	0
◆ Low-Risk	0
◆ Gas Optimization / Suggestions	0

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
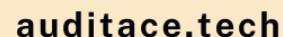
Contract	Type	Bases		
└	**Function Name**	**Visibility**	**Mutability**	**Modifiers**
IUniswapV2Factory	Interface			
└	feeTo	External ❗️		NO❗️
└	feeToSetter	External ❗️		NO❗️
└	getPair	External ❗️		NO❗️
└	allPairs	External ❗️		NO❗️
└	allPairsLength	External ❗️		NO❗️
└	createPair	External ❗️	🛑	NO❗️
└	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 IUniswapV
2Router01.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/0x1ec637aaa6ba03c094a9fd1e699
353c53513a2386a26721d7819d3d8b054deee

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

https://testnet.bscscan.com/tx/0x9f4b66d9d3278fa37e60792dd5
bb5fde35fafa34e2dca578e59746d608535485

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

https://testnet.bscscan.com/tx/0x5cee6a4cb34cebee4bcb892fd3
31e5c546084bd4a08790e0a71e3d1d2e22f680

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

https://testnet.bscscan.com/tx/0x5b554d5344c0eac9045af4c037
1c86e8b7c94737af38613e038ecd58c69cdf7c

FUNCTIONAL TESTING

5-Auto Liquidity(Passed):

https://testnet.bscscan.com/token/0x6751824b462e18fea5aafcf2375dd4d7b448326e?a=0x000000000000000000000000000000000000dead

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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