AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

ElonJitsu token

DATED : 7 July 23'

AUDIT SUMMARY

Project name – ElonJitsu token

Date: 7 July, 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	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 conducted on the BSC Test network, and each test has a corresponding transaction attached to it. These tests can be found in the "Functional Tests" section of the report.

3- Slither :
The code has undergone static analysis using Slither.

Testnet version:
The tests were performed using the contract deployed on the BSC Testnet, which can be found at the following address:
https://testnet.bscscan.com/address/0xadbde922543e6061a02ecc37ad80e90cedca2864

Token Information

Token Name : ElonJitsu Token

Token Symbol: ElonJitsu

Decimals: 18

Token Supply: 21,000,000

Token Address:
0x753296D6F7eB3a83f9797f25508405Be14b72909

Checksum:
18766d50d167ce101491f7f05da75c616e2e6405

Owner:
0xCad58De6002dC91CF157ac4Ffb56B627E07EdF6A
(at time of writing the audit)

Deployer:
0xBC74D3D0F674E12Af960377A296a81E1cC2917c4

TOKEN OVERVIEW

Fees:

Buy Fees: 0-4%

Sell Fees: 0-4%

Transfer Fees: 0-4%

Fees Privilege: Owner

Ownership: owned

Minting: none

Max Tx Amount/ Max Wallet Amount: Yes

Blacklist: No

Other Privileges: - Initial distribution of the tokens
- modifying fees

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

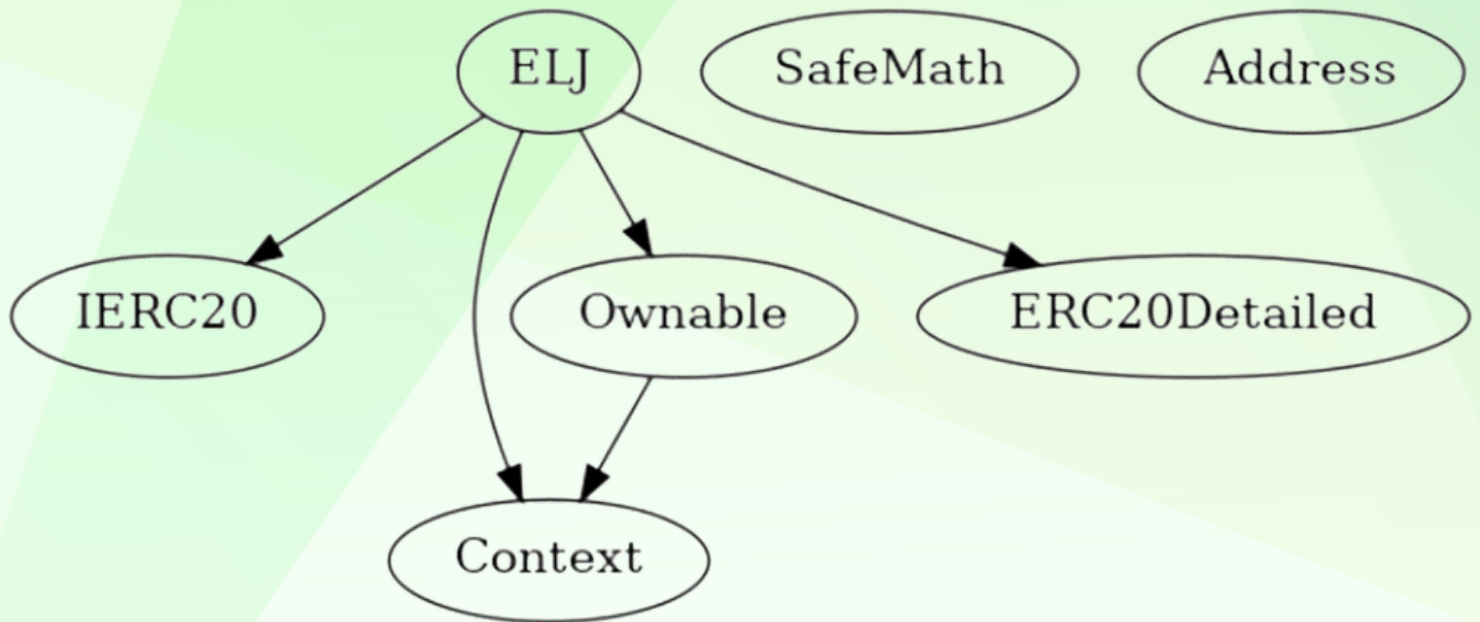| Severity	Found
◆ **Critical**	0
◆ **High-Risk**	0
◆ **Medium-Risk**	0
◆ **Low-Risk**	0
◆ **Gas Optimization / Suggestions**	0

INHERITANCE TREE

POINTS TO NOTE

- owner is able to change buy/sell/transfer tax within 0-4%
- owner is not able to set max buy/sell/transfer/wallet limits
- owner is not able to blacklist an arbitrary wallet
- owner is not able to mint new tokens
- owner is not able to disable trades

CONTRACT ASSESMENT

Contract	Type	Bases		
└	**Function Name**	**Visibility**	**Mutability**	**Modifiers**
IERC20	Interface			
└	totalSupply	External ❗	|NO ❗	
└	balanceOf	External ❗	|NO ❗	
└	transfer	External ❗	🛑 |NO ❗	
└	allowance	External ❗	|NO ❗	
└	approve	External ❗	🛑 |NO ❗	
└	transferFrom	External ❗	🛑 |NO ❗	
SafeMath	Library			
└	tryAdd	Internal 🔐		
└	trySub	Internal 🔐		
└	tryMul	Internal 🔐		
└	tryDiv	Internal 🔐		
└	tryMod	Internal 🔐		
└	add	Internal 🔐		
└	sub	Internal 🔐		
└	mul	Internal 🔐		
└	div	Internal 🔐		
└	mod	Internal 🔐		
└	sub	Internal 🔐		
└	div	Internal 🔐		
└	mod	Internal 🔐		
Context	Implementation			
└	<Constructor>	Public ❗	🛑 |NO ❗	
└	_msgSender	Internal 🔐		
Ownable	Implementation	Context		
└	<Constructor>	Public ❗	🛑 |NO ❗	
└	owner	Public ❗	|NO ❗	
└	renounceOwnership	Public ❗	🛑	onlyOwner
└	transferOwnership	Public ❗	🛑	onlyOwner
ERC20Detailed	Implementation			
└	<Constructor>	Public ❗	🛑 |NO ❗	
└	name	Public ❗	|NO ❗	
└	symbol	Public ❗	|NO ❗	
└	decimals	Public ❗	|NO ❗	

CONTRACT ASSESMENT

Address	Library			
└	isContract	Internal 🔓		
SafeERC20	Library			
└	safeTransfer	Internal 🔓	⬤	
└	safeTransferFrom	Internal 🔓	⬤	
└	safeApprove	Internal 🔓	⬤	
└	callOptionalReturn	Private 🔐	⬤	
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❗

CONTRACT ASSESMENT

└	mint	External ❗	⬛	NO❗
└	burn	External ❗	⬛	NO❗
└	swap	External ❗	⬛	NO❗
└	skim	External ❗	⬛	NO❗
└	sync	External ❗	⬛	NO❗
└	initialize	External ❗	⬛	NO❗
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❗
ELJ	Implementation	Context, Ownable, IERC20, ERC20Detailed		
└	<Constructor>	Public ❗	⬛	ERC20Detailed
└	totalSupply	Public ❗		NO❗
└	balanceOf	Public ❗		NO❗
└	transfer	Public ❗	⬛	NO❗
└	allowance	Public ❗		NO❗

CONTRACT ASSESMENT

└	approve	Public ❗	⬛	NO❗
└	transferFrom	Public ❗	⬛	NO❗
└	increaseAllowance	Public ❗	⬛	NO❗
└	decreaseAllowance	Public ❗	⬛	NO❗
└	setBuyMarketingFeePercent	External ❗	⬛	onlyOwner
└	setSellMarketingFeePercent	External ❗	⬛	onlyOwner
└	setMarketingAddress	External ❗	⬛	onlyOwner
└	setSwapAndLiquifyEnabled	Public ❗	⬛	onlyOwner
└	changeNumTokensSellToFee	External ❗	⬛	onlyOwner
└	excludeFromFee	Public ❗	⬛	onlyOwner
└	includeInFee	Public ❗	⬛	onlyOwner
└	<Receive Ether>	External ❗	🆂🅿	NO❗
└	_transfer	Internal 🔒	⬛	
└	swapAndLiquify	Private 🔐	⬛	lockTheSwap
└	swapTokensForEth	Private 🔐	⬛	
└	_approve	Internal 🔒	⬛	
└	withdrawStuckETH	External ❗	⬛	onlyOwner
└	withdrawStuckTokens	External ❗	⬛	onlyOwner

Legend

Symbol	Meaning
⬛	Function can modify state
🆂🅿	Function is payable

STATIC ANALYSIS

```
Reentrancy in ELJ._transfer(address,address,uint256) (contracts/Token.sol#585-629):
        External calls:
        - swapAndLiquify(contractTokenBalance) (contracts/Token.sol#599)
                - address(marketingaddress).transfer(address(this).balance) (contracts/Token.sol#634)
        State variables written after the call(s):
        - _balances[sender] = _balances[sender].sub(amount,ERC20: transfer amount exceeds balance) (contracts/Token.sol#619)
        - _balances[recipient] = _balances[recipient].add(TotalSent) (contracts/Token.sol#620)
        - _balances[address(this)] = _balances[address(this)].add(taxAmount) (contracts/Token.sol#621)
        - _balances[sender] = _balances[sender].sub(amount,ERC20: transfer amount exceeds balance) (contracts/Token.sol#625)
        - _balances[recipient] = _balances[recipient].add(amount) (contracts/Token.sol#626)
        - marketingFee = buyMarketingFee (contracts/Token.sol#615)
        - marketingFee = sellMarketingFee (contracts/Token.sol#616)
        Event emitted after the call(s):
        - Transfer(sender,recipient,TotalSent) (contracts/Token.sol#622)
        - Transfer(sender,address(this),taxAmount) (contracts/Token.sol#623)
        - Transfer(sender,recipient,amount) (contracts/Token.sol#627)
Reentrancy in ELJ.swapAndLiquify(uint256) (contracts/Token.sol#631-637):
        External calls:
        - address(marketingaddress).transfer(address(this).balance) (contracts/Token.sol#634)
        Event emitted after the call(s):
        - SwapAndLiquify(contractTokenBalance,address(this).balance) (contracts/Token.sol#636)
Reentrancy in ELJ.transferFrom(address,address,uint256) (contracts/Token.sol#521-529):
        External calls:
        - _transfer(sender,recipient,amount) (contracts/Token.sol#522)
                - address(marketingaddress).transfer(address(this).balance) (contracts/Token.sol#634)
        State variables written after the call(s):
        - _approve(sender,_msgSender(),_allowances[sender][_msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol#523-527
)
                - _allowances[towner][spender] = amount (contracts/Token.sol#661)
        Event emitted after the call(s):
        - Approval(towner,spender,amount) (contracts/Token.sol#662)
                - _approve(sender,_msgSender(),_allowances[sender][_msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol
#523-527)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-4

Variable IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#287) is too s
imilar to IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#288)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

ELJ.constructor() (contracts/Token.sol#479-497) uses literals with too many digits:
        - _totalSupply = 21000000 * (10 ** 18) (contracts/Token.sol#481)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits

ELJ._owner (contracts/Token.sol#477) should be immutable
ELJ._totalSupply (contracts/Token.sol#455) 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

1- Adding liquidity (passed):

https://testnet.bscscan.com/tx/0x36a3b60d2c805cd5e8f1a76eaababf2b6d5a0bf7fe61b1a15837a0b1e65bbede

2- Buying when excluded from fees (0% tax) (passed):

https://testnet.bscscan.com/tx/0x6cc9d7d71712bd4097753fdaddc934e6be5b5bba6d57b9e5f6441141d831f8e5

3- Selling when excluded from fees (0% tax) (passed):

https://testnet.bscscan.com/tx/0x057d27bfa3d871388949c8d1a95a9007e95920529bb72963c59dafbdc3ac329d

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

https://testnet.bscscan.com/tx/0xef8608152aff31e5db2a7a14688cd43c8fc8d4abfa7d3bc16962747012087855

5- Buying when not excluded from fees (0-4% tax) (passed):

https://testnet.bscscan.com/tx/0x857ccd72f86efc7bb289922622e3ce81be5723e37be50cf9c62453ed96d201ed

6- Selling when not excluded from fees (0-4% tax) (passed):

https://testnet.bscscan.com/tx/0x3da5006224232e861958c01aebf8fee4d63e873c4007637cc9fb1c0f0adf7565

FUNCTIONAL TESTING

7- Transferring when not excluded from fees (0% tax) **(passed):**

https://testnet.bscscan.com/tx/0x3ac75e5995cc13ca1bca0a39cb0498
906e1c8eba95165b4edb2759c81cc3d340

8- Internal swap **(passed):**

- ETH fee sent to marketing wallet

https://testnet.bscscan.com/address/0x1258edcd5ca47844fd731c62cc
82c63b90c44dd8#internaltx

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