



0x3b41aC371d58a559A0A43876F4f6DFe237587140







### Table of Contents

Table of Contents	1
Disclaimer	2
Overview	3
Creation/Audit Date	3
Verified Socials	3
Contract Functions Analysis	4
Contract Safety and Weakness	9
Detected Vulnerability Description	13
Contract Flow Graph	16
Contract Interaction Graph	17
Inheritance Graph	18
Contract Desciptions	19
Audit Scope	27



#### Global Disclaimer

This document serves as a disclaimer for the crypto smart contract audit conducted by Skeleton Ecosystem. The purpose of the audit was to review the codebase of the smart contracts for potential vulnerabilities and issues. It is important to note the following:

Limited Scope: The audit is based on the code and information available up to the audit completion date. It does not cover external factors, system interactions, or changes made after the audit. The audit itself can not guarantee 100% safaty and can not detect common scam methods like farming and developer sell-out.

No Guarantee of Security: While we have taken reasonable steps to identify vulnerabilities, it is impossible to guarantee the complete absence of security risks or issues. The audit report provides an assessment of the contract's security as of the audit date.

Continued Development: Smart contracts and blockchain technology are evolving fields. Updates, forks, or changes to the contract postaudit may introduce new risks that were not present during the audit.

Third-party Code: If the smart contract relies on third-party libraries or code, those components were not thoroughly audited unless explicitly stated. Security of these dependencies is the <u>responsibility of their respective developers</u>.

Non-Exhaustive Testing: The audit involved automated analysis, manual review, and testing under controlled conditions. It is possible that certain vulnerabilities or issues may not have been identified.

Risk Evaluation: The audit report includes a risk assessment for identified vulnerabilities. It is recommended that the development team carefully reviews and addresses these risks to mitigate potential exploits.

Not Financial Advice: This audit report is not intended as financial or investment advice. Decisions regarding the use, deployment, or investment in the smart contract should be made based on a comprehensive assessment of the associated risks.

By accessing and using this audit report, you acknowledge and agree to the limitations outlined above. Skeleton Ecosystem and its auditors shall not be held liable for any direct or indirect damages resulting from the use of the audit report or the smart contract itself.

Please consult with legal, technical, and financial professionals before making any decisions related to the smart contract.



## Overview

Contract Name	Netron Protocol
Ticker/Simbol	NETRON
Blockchain	Binance Smart Chain BEP20
Contract Address	0x3b41aC371d58a559A0A43876F4f6DFe237587140
Creator Address	0x1ccFA07D71762E6aD3462dec63E7c6E4E19972Ca
Current Owner Address	0x1ccFA07D71762E6aD3462dec63E7c6E4E19972Ca
Contract Explorer	https://bscscan.com/token/0x3b41ac371d58a559a0a43 876f4f6dfe237587140
Compiler Version	v0.8.18+commit.87f61d96
License	Unlicense
Optimisation	No with 200 Runs
Total Supply	100,000,000 NETRON
Decimals	9

# Creation/Audit

Contract Deployed	15 Nov 2023
Audit Created	21 Nov 2023
Audit Update	V 1.0

# Verified Socials

Website	https://netronprotocol.org/
Telegram	https://t.me/Netron_Protocol
Twitter (X)	https://twitter.com/netronprotocol/

# Contract Function Analysis

Pass Attention Item A Risky Item





Contract Verified	<b>&gt;</b>	The contract source code is uploaded to blockchain explorer and is open source, so everybody can read it.
Contract Ownership		0x1ccFA07D71762E6aD3462dec63E7c6E4E19972Ca
Buy Tax	9 %	Shows the taxes for purchase transactions. Above 10% may be considered a high tax rate. More than 50% tax rate means may not be tradable. Fee can be set!
Sell Tax	9 %	Shows the taxes for sell transactions. Above 10% may be considered a high tax rate. More than 50% tax rate means may not be tradable. Fee can be set!
Honeypot Analyse	<b>✓</b>	Holder is able to buy and sell. If honeypot: The contract blocks sell transfer from holder wallet. Multiple events may cause honeypot. Trading disabled, extremely high tax
Liqudity Status	<b>✓</b>	LP Lock Status on 21.11.2023: 100.00% Pinklock for 191 days
Trading Disable Functions	<b>&gt;</b>	No Trading suspendable function found.  If a suspendable code is included, the token maybe neither be bought or sold (honeypot risk). If contract is renounced this function can't be used
Set Fees		Fee Setting function found.
function	A	The contract owner may contain the authority to modify the transaction tax. If the transaction tax is increased to more than 49%, the tokens may not be able to be traded (honeypot risk).
Proxy Contract	<b>✓</b>	Not a proxy contract!
Mint Function	<b>✓</b>	No Mint Function detected  Mint function is transparent or non-existent. Hidden mint functions may increase the amount of tokens in circulation and effect the price of the token. Owner can mint new tokens and sell.





Balance Modifier Function	<b>&gt;</b>	No Balance Modifier function found.  If there is a function for this, the contract owner can have the authority to modify the balance of tokens at other addresses. For example revoke the bought tokens from the
		holders wallet. Common form of scam: You buy the token, but it's disappearing from your wallet.
Blacklist	<b>✓</b>	No Blacklist Setting function found.
Function		If there is a blacklist, some addresses may not be able to trade normally. Example: you buy the token and right after your Wallet getting blacklisted. Like so you will be unable to sell. Honeypot Risk.
Whitelist Function	A	Whitelist Setting function found.
		If there is a function for this Developer can set zero fee or no max wallet size for adresses (for example team wallets can trade without fee. Can cause farming)
Hidden		No Hidden or multi owner with authorisation
Owner Analysis	<b>✓</b>	For contract with a hidden owner, developer can still manipulate the contract even if the ownership has been abandoned.
Retrieve Ownership Function	1	Functions found which can retrieve ownership of the contract.
		If this function exists, it is possible for the project owner to regain ownership even after relinquishing it. Also known as fake renounce.
Self	<b>✓</b>	No Self Destruct function found.
Destruct Function		If this function exists and is triggered, the contract will be destroyed, all functions will be unavailable, and all related assets will be erased.
Specific	<b>✓</b>	No Specific Tax Changing Functions found.
Tax Changing Function		If it exists, the contract owner may set a very outrageous tax rate for assigned address to block it from trading. Can assign all wallets at once!
Trading Cooldown Function	<b>&gt;</b>	No Trading Cooldown Function found. If there is a trading cooldown function, the user will not be able to sell the token within a certain time or block after buying. Like a temporary honeypot.
Max	A	Max Transaction and Holding Modify function found.
Transaction and Holding Modify Function		If there is a function for this, the maximum trading amount or maximum position can be modified. Can cause honeypot
Transaction	<b>&gt;</b>	No Transaction Limiter Function Found.
Limiting Function		The number of overall token transactions may be limited (honeypot risk)



### Details of Risk - Attention Items



#### Set Fee

The contract owner may contain the authority to modify the transaction tax. If the transaction tax is increased to more than 49%, the tokens may not be able to be traded

```
ftrace|Nunchig
function setBuyTaxes(uint256 newLiquidityTax1, uint256 newMarketingTax1, uint256 newTeamTax1) external onlyOwner() {

buyLiquidityFee = newWarketingTax1;

buyMarketingFee = newMarketingTax1;

buyTeamFee = newTeamTax1;

totalTaxIfBuying = buyLiquidityFee.add(_buyMarketingFee).add(_buyTeamFee);

ftrace|funcSig
function setSellTaxes(uint256 newLiquidityTax1, uint256 newMarketingTax1, uint256 newTeamTax1) external onlyOwner() {

sellLiquidityFee = newLiquidityTax1;

sellMarketingFee = newLiquidityTax1;

sellMarketingFee = newTeamTax1;

totalTaxIfSelling = _sellLiquidityFee.add(_sellMarketingFee).add(_sellTeamFee);

totalTaxIfSelling = _sellLiquidityFee.add(_sellMarketingFee).add(_sellTeamFee);

}
```

#### A

#### Max Transaction and Holding Modify Function

If there is a function for this, the maximum trading amount or maximum position can be modified.

```
ftrace | func5ig

ftrace | func5ig
```





### Retrieve ownership of the contract

Ownership transferring to virtual owner with time lock, after ends deployer may regain ownership

If this function exists, it is possible for the project owner to regain ownership even after relinquishing it. Also known as fake renounce.

```
UnitTest stub | dependencies | uml | funcSiqs | draw.io contract Ownable is Context {
  address private owner;
    address private previousOwner;
    uint256 private lockTime;
    event OwnershipTransferred(address indexed previousOwner, address indexed newOwner);
        address msgSender = _msgSender();
         _owner = msgSender;
         emit OwnershipTransferred(address(θ), msgSender);
    ftrace|funcSig
function owner() public view returns (address) {
        return _owner;
    modifier onlyOwner() {
        require(_owner == _msgSender(), "Ownable: caller is not the owner");
    function waiveOwnership() public virtual onlyOwner {
        emit OwnershipTransferred(_owner, address(0));
    function transferOwnership(address newOwner!) public virtual onlyOwner {
        require(newOwner† != address(θ), "Ownable: new owner is the zero address");
         emit OwnershipTransferred(_owner, newOwner1);
        owner = newOwner1;
    ftrace|funcSiq
function getUnlockTime() public view returns (uint256) {
        return lockTime;
    function getTime() public view returns (uint256) {
         return block.timestamp:
    ftrace|funcSig
function lock(uint256 time!) public virtual onlyOwner {
         _previousOwner = _owner;
         _owner = address(0);
         _lockTime = block.timestamp + timef;
         emit OwnershipTransferred(_owner, address(0));
     function unlock() public virtual {
        require(_previousOwner == msg.sender, "You don't have permission to unlock");
require(block.timestamp > lockTime , "Contract is locked until 7 days");
emit OwnershipTransferred(_owner, _previousOwner);
         _owner = _previousOwner;
```



# ▲ Whitelist Function

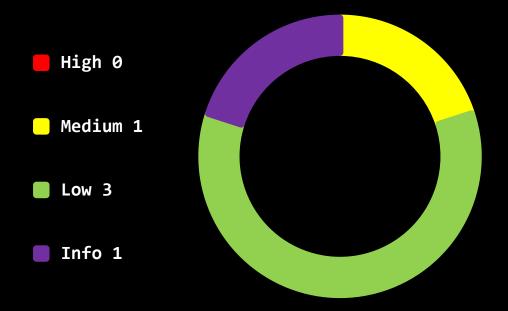
If there is a function for this, Developer can set zero fee or no max wallet size for adresses (for example team wallets can trade without fee. Can cause farming)

```
function setIsExcludedFromFee(address account), bool newValue() public onlyOwner {
568
              isExcludedFromFee[account1] = newValue1;
```



### Contract Security

### Total Findings: 5



- **High Severity Issues:** High possibility to cause problems, need to be resolved.
- Medium Severity Issue: Will likely cause problems, recommended to resolve.
- Low Severity Issues: Won't cause problems, but for improvement purposes could be adjusted.
- Informational Severity Issues: Not harmful in any way,
  information for the developer team.



# Contract Security List of Found Issues

- High severity Issues: (0)
- Medium severity issues: (1)
  - Incorrect Acces Control
- Low severity issues: (3)
  - Missing Events
  - Long Number Literals
  - Floating Pragma
- Informational severity issues: (1)
  - Public Functions Should be Declared External



#### Contract Weakness Classisication

THE SMART CONTRACT WEAKNESS CLASSIFICATION REGISTRY (SWC REGISTRY) IS AN IMPLEMENTATION OF THE WEAKNESS CLASSIFICATION SCHEME PROPOSED IN EIP-1470. IT IS LOOSELY ALIGNED TO THE TERMINOLOGIES AND STRUCTURE USED IN THE COMMON WEAKNESS ENUMERATION (CWE) WHILE OVERLAYING A WIDE RANGE OF WEAKNESS VARIANTS THAT ARE SPECIFIC TO SMART CONTRACTS.

ID	Description	AI	Manual	Result
SWC-100	Function Default Visibility	Passed	Passed	Passed
SWC-101	Integer Overflow and Underflow	Passed	Passed	Passed
SWC-102	Outdated Compiler Version	Passed	Passed	Passed
SWC-103	Floating Pragma	Low	Passed	Passed
SWC-104	Unchecked Call Return Value	Passed	Passed	Passed
SWC-105	Unprotected Ether Withdrawal	Passed	Passed	Passed
SWC-106	Unprotected SELFDESTRUCT Instruction	Passed	Passed	Passed
SWC-107	Reentrancy	Passed	Passed	Passed
SWC-108	State Variable Default Visibility	Passed	Passed	Passed
SWC-109	Uninitialized Storage Pointer	Passed	Passed	Passed
SWC-110	Assert Violation	Passed	Passed	Passed
SWC-111	Use of Deprecated Solidity Functions	Passed	Passed	Passed
SWC-112	Delegatecall to Untrusted Callee	Passed	Passed	Passed
SWC-113	DoS with Failed Call	Passed	Passed	Passed
SWC-114	Transaction Order Dependence	Passed	Passed	Passed
SWC-115	Authorization through tx.origin	Passed	Passed	Passed
SWC-116	Block values as a proxy for time	Passed	Passed	Passed
SWC-117	Signature Malleability	Passed	Passed	Passed
SWC-118	Incorrect Constructor Name	Passed	Passed	Passed
SWC-119	Shadowing State Variables	Passed	Passed	Passed
SWC-120	Weak Sources of Randomness from Chain Attributes	Passed	Passed	Passed



SWC-121	Missing Protection against Signature Replay Attacks	Passed	Passed	Passed
SWC-122	Lack of Proper Signature Verification	Passed	Passed	Passed
SWC-123	Requirement Violation	Passed	Passed	Passed
SWC-124	Write to Arbitrary Storage Location	Passed	Passed	Passed
SWC-125	Incorrect Inheritance Order	Passed	Passed	Passed
SWC-126	Insufficient Gas Griefing	Passed	Passed	Passed
SWC-127	Arbitrary Jump with Function Type Variable	Passed	Passed	Passed
SWC-128	DoS With Block Gas Limit	Passed	Passed	Passed
SWC-129	Typographical Error	Passed	Passed	Passed
SWC-130	Right-To-Left-Override control character (U+202E)	Passed	Passed	Passed
SWC-131	Presence of unused variables	Passed	Passed	Passed
SWC-132	Unexpected Ether balance	Passed	Passed	Passed
SWC-133	Hash Collisions With Multiple Variable Length Arguments	Passed	Passed	Passed
SWC-134	Message call with hardcoded gas amount	Passed	Passed	Passed
SWC-135	Code With No Effects	Passed	Passed	Passed
SWC-136	Unencrypted Private Data On-Chain	Passed	Passed	Passed



Detected High and Medium Severity Vulnerability Description.

⚠ Incorrect Acces Control (3 Item)

Item: 1 Loc	ocation: Line 5	46-551	Severity:	Medium
-------------	-----------------	--------	-----------	--------

Function	Access control plays an important role in segregation of privileges in smart contracts and other applications. If this is misconfigured or not properly validated on sensitive functions, it may lead to loss of funds, tokens and in some cases compromise of the smart contract.
	The contract NetronProtocol is importing an access control library @openzeppelin/contracts/access/Ownable.sol but the function approve is missing the modifier onlyOwner.
Remedation	It is recommended to go through the contract and observe the functions that are lacking an access control modifier. If they contain sensitive administrative actions, it is advised to add a suitable modifier to the same

```
function approve(address spendert, uint256 amountt) public override returns (bool) {
              _approve(_msgSender(), spender1, amount1);
548
              return true;
549
550
```





Item: 2	Location:	Line 662-667	Severity:	Medium
---------	-----------	--------------	-----------	--------

```
Function
           The contract NetronProtocol is importing an access
           control library
           @openzeppelin/contracts/access/Ownable.sol but the
           function transfer is missing the modifier onlyOwner.
          It is recommended to go through the contract and observe
Remedation
          the functions that are lacking an access control
          modifier. If they contain sensitive administrative
           actions, it is advised to add a suitable modifier to the
           same
```

```
πrace | tuncsig
function transfer(address recipient), uint256 amount() public override returns (bool) {
    _transfer(_msgSender(), recipient(, amount());
    return true;
```





Item: 3 Location: Line 667-673 Severity: Medium	Item: 3	Location:	Line 667-673	Severity:	Medium
---	---------	-----------	--------------	-----------	--------

Function	The contract NetronProtocol is importing an access control library @openzeppelin/contracts/access/Ownable.sol but the function transferFrom is missing the modifier onlyOwner.
Remedation	It is recommended to go through the contract and observe the functions that are lacking an access control modifier. If they contain sensitive administrative actions, it is advised to add a suitable modifier to the same

```
ftrace|funcSig

function transferFrom(address sender), address recipient, uint256 amount) public override returns (bool) {

_transfer(sender), recipient, amount);

_approve(sender), _msgSender(), _allowances[sender][_msgSender()].sub(amount), "ERC20: transfer amount exceeds allowance"));

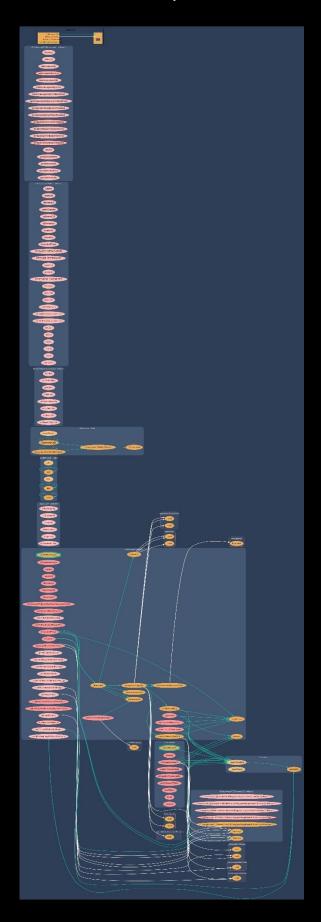
return true;

}

672
}
```



# Contract Flow Graph



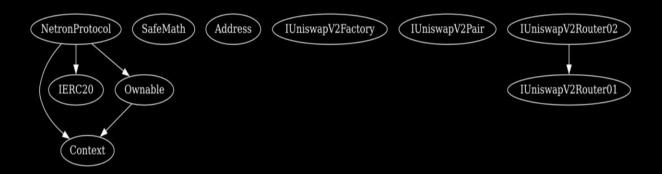


## Contract Interaction Graph





# Inheritance Graph





## Contract Functions

Contract	Туре	Bases		
L	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
L	_msgSender	Internal 🖺		
L	_msgData	Internal 🖺		
IERC20	Interface			
L	totalSupply	External 🌡		NO
L	balanceOf	External 🏻		NO[
L	transfer	External 🏻		NO
L	allowance	External 🏻		NO
L	approve	External 🏻		NO
L	transferFrom	External 🏻		МО[
SafeMath	Library			
L	add	Internal 🖺		
L	sub	Internal 🖺		
L	sub	Internal 🖺		
L	mul	Internal 🖺		
L	div	Internal 🖺		
L	div	Internal 🖺		
L	mod	Internal 🖺		
L	mod	Internal 🖺		





Address	Library		
L	isContract	Internal 🖺	
L	sendValue	Internal 🖺	
L	functionCall	Internal 🖺	
L	functionCall	Internal 🖺	
L	functionCallWit hValue	Internal 🖺	
L	functionCallWit hValue	Internal 🖺	
L	_functionCallWit hValue	Private 🖺	
Ownable	Implementation	Context	
L		Public 🌡	NO
L	owner	Public 🌡	NO
L	waiveOwnership	Public 🌡	onlyOwner
L	transferOwners hip	Public 🌡	onlyOwner
L	getUnlockTime	Public 🌡	NO
L	getTime	Public 🌡	NO
L	lock	Public 🌡	onlyOwner
L	unlock	Public 🌡	NO[
IUniswapV2Fac tory	Interface		
L	feeTo	External [	NO
L	feeToSetter	External 🌡	NO[





L	.5 :	F	NOT
	getPair	External [	NO[
L	allPairs	External 🏻	NO
L	allPairsLength	External 🌡	NO[
L	createPair	External 🌡	NO[
L	setFeeTo	External 🌡	NO[
L	setFeeToSetter	External 🌡	NO[
IUniswapV2Pai r	Interface		
L	name	External 🌡	NO[
L	symbol	External 🌡	NO
L	decimals	External 🌡	NOĮ
L	totalSupply	External 🌡	NO
L	balanceOf	External 🌡	NO
L	allowance	External 🌡	NO
L	approve	External 🌡	NO
L	transfer	External 🌡	NO
L	transferFrom	External 🌡	NOÏ
L	DOMAIN_SEPA RATOR	External 🌡	NO[
L	PERMIT_TYPEH ASH	External 🌡	ио]
L	nonces	External 🌡	NO
L	permit	External 🌡	NO
L	MINIMUM_LIQ UIDITY	External 🌡	NO[





L	factory	External 🌡		NO
L	token0	External 🏻		NO
L	token1	External 🌡		№[
L	getReserves	External [		NO[
L	price0Cumulativ eLast	External 🌡		NOÏ
L	price1Cumulativ eLast	External 🌡		NOÏ
L	kLast	External 🌡		NO
L	burn	External 🏻		NO
L	swap	External 🌡		NO
L	skim	External 🌡		NO
L	sync	External 🌡		NO
L	initialize	External 🌡		NO
IUniswapV2Ro uter01	Interface			
L	factory	External 🌡		NO[
L	WETH	External 🌡		NO
L	addLiquidity	External 🌡		NO
L	addLiquidityETH	External 🌡	<b>G</b> D	NO
L	removeLiquidity	External 🌡		NO
L	removeLiquidity ETH	External 🌡		NOÏ
L	removeLiquidity WithPermit	External 🌡		NO[





L	removeLiquidity ETHWithPermit	External 🌡		NO[
L	swapExactToke nsForTokens	External 🌡		NO[
L	swapTokensFor ExactTokens	External 🌡		NO[
L	swapExactETHF orTokens	External 🌡	<b>CD</b>	NO[
L	swapTokensFor ExactETH	External 🌡		NO[
L	swapExactToke nsForETH	External 🌡		Пои
L	swapETHForExa ctTokens	External 🌡	Ф	Пои
L	quote	External 🏻		NO
L	getAmountOut	External 🏻		NO[
L	getAmountIn	External 🌡		NO[
L	getAmountsOut	External 🌡		NO[
L	getAmountsIn	External 🏻		№[
IUniswapV2Ro uter02	Interface	IUniswapV2Rou ter01		
L	removeLiquidity ETHSupportingF eeOnTransferTo kens	External 🌡		NOĮ
L	removeLiquidity ETHWithPermit SupportingFee OnTransferToke ns	External 🌡		NOÏ
L	swap Exact Toke ns For Tokens Su	External 🏻		NO[





	pportingFeeOn			
	TransferTokens			
L	swapExactETHF orTokensSuppo rtingFeeOnTran sferTokens	External 🌡	<u>u</u> b	NO[
L	swapExactToke nsForETHSuppo rtingFeeOnTran sferTokens	External 🏻		NOÏ
NetronProtoco I	Implementation	Context, IERC20, Ownable		
L		Public 🌡		NO
L	name	Public 🌡		NOÏ
L	symbol	Public 🌡		NOÏ
L	decimals	Public 🌡		МОЇ
L	totalSupply	Public 🌡		МОЇ
L	balanceOf	Public 🌡		NOÏ
L	allowance	Public 🌡		NOÏ
L	increaseAllowan ce	Public 🌡		NO
L	decreaseAllowa nce	Public 🌡		NO[
L	minimumToken sBeforeSwapAm ount	Public 🌡		NO[
L	approve	Public 🌡		NO
L	_approve	Private 🖺		
L	setMarketPairSt atus	Public 🌡		onlyOwner





L	setIsTxLimitExe mpt	External 🌡	onlyOwner
L	setIsExcludedFr omFee	Public 🌡	onlyOwner
L	setBuyTaxes	External 🏻	onlyOwner
L	setSellTaxes	External 🏻	onlyOwner
L	setDistributionS ettings	External 🌡	onlyOwner
L	setMaxTxAmou nt	External 🌡	onlyOwner
١	enable Disable W allet Limit	External 🌡	onlyOwner
L	setlsWalletLimit Exempt	External 🌡	onlyOwner
L	setWalletLimit	External 🌡	onlyOwner
L	setNumTokensB eforeSwap	External 🌡	onlyOwner
L	setMarketingW alletAddress	External 🌡	onlyOwner
L	setTeamWalletA ddress	External 🌡	onlyOwner
L	setSwapAndLiq uifyEnabled	Public 🌡	onlyOwner
L	setSwapAndLiq uifyByLimitOnly	Public 🌡	onlyOwner
L	getCirculatingS upply	Public 🌡	Пои
١	transferToAddre ssETH	Private 🖺	



L	change Router V ersion	Public 🌡		onlyOwner
L		External 🌡	<u>d</u> D	NO
L	transfer	Public 🌡		NO
L	transfer From	Public 🌡		NO[
L	_transfer	Private 🖺		
L	_basicTransfer	Internal 🖺		
L	swapAndLiquify	Private 🖺		lockTheSwap
L	swapTokensFor Eth	Private 🖺		
L	addLiquidity	Private 🖺		
L	takeFee	Internal 🖺		

**Function Function** can modify is payable state



#### Audit Scope

#### Audit Method.

Our smart contract audit is an extensive methodical examination and analysis of the smart contract's code that is used to interact with the blockchain. Goal: discover errors, issues and security vulnaribilities in the code. Findings getting reported and improvements getting suggested.

#### Automatic and Manual Review

We are using automated tools to scan functions and weeknesses of the contract. Transfers, integer over-undeflow checks such as all CWE events.

#### Tools we use:

Visual Studio Code **CWE** SWC Solidity Scan SVD

In manual code review our auditor looking at source code and performing line by line examination. This method helps to clarify developer's coding decisions and business logic.

#### **Skeleton Ecosystem**

https://skeletonecosystem.com

https://github.com/SkeletonEcosystem/Audits

