



# Cyberscope

## Audit Report

# Cougar Inu

August 2022

Network    BNB Chain

Address    0x57384C4a456C6a3B398c3E57948703ee11724930

Audited by    © cyberscope

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## Contract Review

<b>Contract Name</b>	CougarInu
<b>Compiler Version</b>	v0.8.0+commit.c7dfd78e
<b>Testing Deploy</b>	<a href="https://bscscan.com/address/0x57384C4a456C6a3B398c3E57948703ee11724930">https://bscscan.com/address/0x57384C4a456C6a3B398c3E57948703ee11724930</a>
<b>Symbol</b>	COUGNU
<b>Decimals</b>	18
<b>Total Supply</b>	20,000,000
<b>Domain</b>	<a href="https://cougarinu.io">https://cougarinu.io</a>

## Source Files

<b>Filename</b>	<b>SHA256</b>
<b>contract.sol</b>	d187e617752db92cf9668653c643fc8b3a0e909427fbb235e6659a3fded37267

## Audit Updates

<b>Initial Audit</b>	29th August 2022
<b>Corrected</b>	

# Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OCTD	Transfers Contract's Tokens	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	ULTW	Transfers Liquidity to Team Wallet	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

# Contract Diagnostics

● Critical   ● Medium   ● Minor / Informative

Severity	Code	Description	Status
●	STC	Succeeded Transfer Check	Unresolved
●	CO	Code Optimization	Unresolved
●	L01	Public Function could be Declared External	Unresolved
●	L02	State Variables could be Declared Constant	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved
●	L07	Missing Events Arithmetic	Unresolved
●	L12	Using Variables before Declaration	Unresolved
●	L13	Divide before Multiply Operation	Unresolved
●	L14	Uninitialized Variables in Local Scope	Unresolved

## STC - Succeeded Transfer Check

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L658
<b>Status</b>	Unresolved

### Description

According to the ERC20 specification, the transfer methods should be checked if the result is successful. Otherwise, the contract may wrongly assume that the transfer has been established.

```
(success,) = _taxWallets.marketing.call{value: marketingBalance, gas: 35000}("");
```

### Recommendation

The contract should check if the result of the transfer methods is successful.

## CO - Code Optimization

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L174
<b>Status</b>	Unresolved

### Description

There are code segments that could be optimized. A segment may be optimized so that it becomes a smaller size, consumes less memory, executes more rapidly, or performs fewer operations.

The variable TaxWallets is redundant. There is no need to reserve memory for a structure.

```
struct TaxWallets {  
    address payable marketing;  
}
```

### Recommendation

Rewrite some code segments so the runtime will be more performant.



## L01 - Public Function could be Declared External

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L353,474,478,336,679
<b>Status</b>	Unresolved

### Description

Public functions that are never called by the contract should be declared external to save gas.

```
setNewRouter  
getMaxTX  
getMaxWallet  
approveContractContingency  
enableTrading
```

### Recommendation

Use the external attribute for functions never called from the contract.

## L02 - State Variables could be Declared Constant

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L169
<b>Status</b>	Unresolved

### Description

Constant state variables should be declared constant to save gas.

BUSD

### Recommendation

Add the constant attribute to state variables that never change.

## L04 - Conformance to Solidity Naming Conventions

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L33,507,116,430,158,161,159,113,128,160,129,162,169,130,145,197,151,177,126,127
<b>Status</b>	Unresolved

### Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow `_` at the beginning of the `mixed_case` match for private variables and unused parameters.

```
WETH
_minPeriod
_allowances
_antiBlock
maxBuyTaxes
maxRoundtripTax
maxSellTaxes
_tOwned
_symbol
...
```

### Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>.

## L07 - Missing Events Arithmetic

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L495,512,464,486,469
<b>Status</b>	Unresolved

### Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
piSwapPercent = priceImpactSwapPercent
reflectorGas = gas
_maxTxAmount = (_tTotal * percent) / divisor
swapThreshold = (_tTotal * thresholdPercent) / thresholdDivisor
_maxWalletSize = (_tTotal * percent) / divisor
```

### Recommendation

Emit an event for critical parameter changes.

## L12 - Using Variables before Declaration

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L703
<b>Status</b>	Unresolved

### Description

The contract is using a variable before the declaration. This is usually happening either if it has not been declared yet or the variable has been declared in a different scope.

check

### Recommendation

The variables should be declared before any usage of them.

## L13 - Divide before Multiply Operation

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L602
<b>Status</b>	Unresolved

### Description

Performing divisions before multiplications may cause lose of prediction.

```
toLiquify = ((contractTokenBalance * ratios.liquidity) / (ratios.total)) / 2
```

### Recommendation

The multiplications should be prior to the divisions.

## L14 - Uninitialized Variables in Local Scope

<b>Criticality</b>	minor / informative
<b>Location</b>	contract.sol#L703,702
<b>Status</b>	Unresolved

### Description

These are variables that are defined in the local scope and are not initialized.

check  
checked

### Recommendation

All the local scoped variables should be initialized.

# Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IERC20	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
IFactoryV2	Interface			
	getPair	External		-
	createPair	External	✓	-
IV2Pair	Interface			
	factory	External		-
	getReserves	External		-
	sync	External	✓	-
IRouter01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidityETH	External	Payable	-
	addLiquidity	External	✓	-
	swapExactETHForTokens	External	Payable	-
	getAmountsOut	External		-

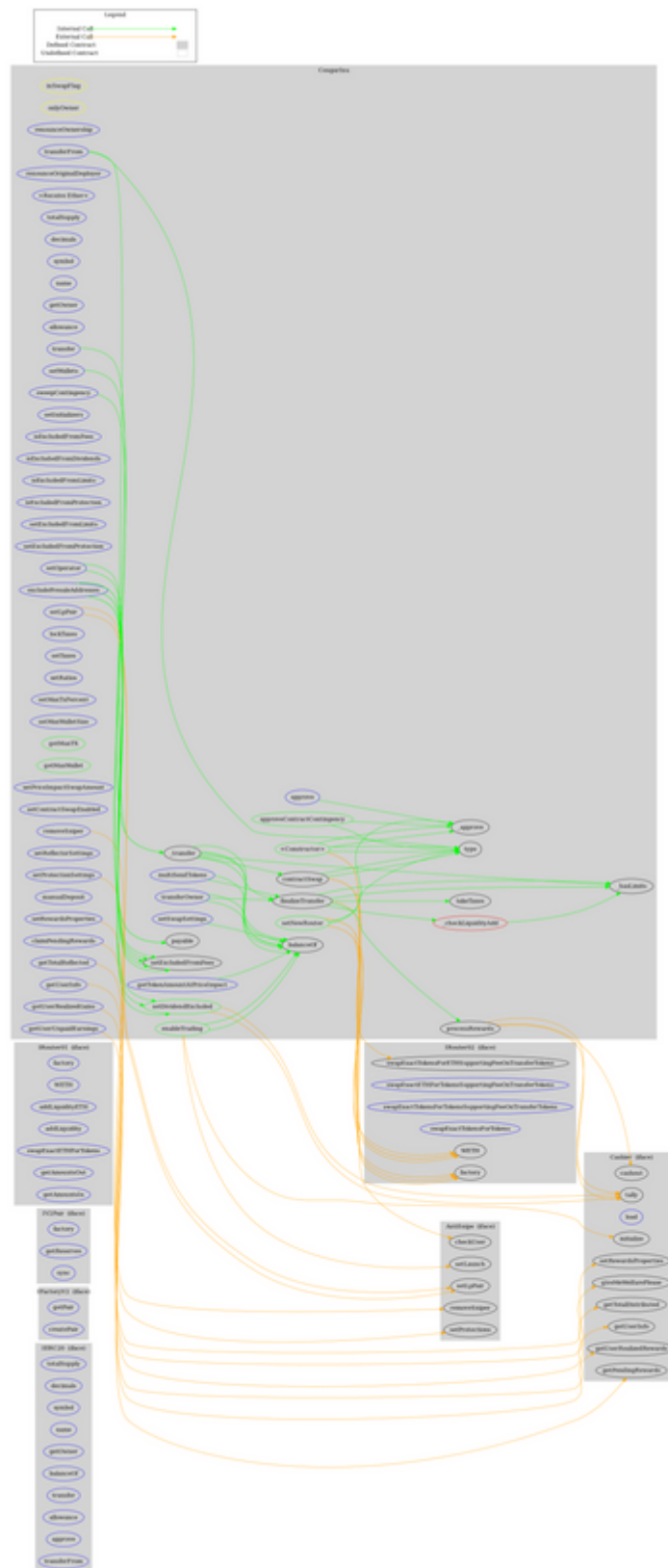


	getAmountsIn	External		-
<b>IRouter02</b>	Interface	IRouter01		
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokens	External	✓	-
<b>AntiSnipe</b>	Interface			
	checkUser	External	✓	-
	setLaunch	External	✓	-
	setLpPair	External	✓	-
	setProtections	External	✓	-
	removeSniper	External	✓	-
<b>Cashier</b>	Interface			
	setRewardsProperties	External	✓	-
	tally	External	✓	-
	load	External	Payable	-
	cashout	External	✓	-
	giveMeWelfarePlease	External	✓	-
	getTotalDistributed	External		-
	getUserInfo	External		-
	getUserRealizedRewards	External		-
	getPendingRewards	External		-
	initialize	External	✓	-
<b>CougarInu</b>	Implementation	IERC20		
	<Constructor>	Public	Payable	-
	transferOwner	External	✓	onlyOwner
	renounceOwnership	External	✓	onlyOwner
	setOperator	External	✓	-
	renounceOriginalDeployer	External	✓	-

	<Receive Ether>	External	Payable	-
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	Public		-
	allowance	External		-
	approve	External	✓	-
	_approve	Internal	✓	
	approveContractContingency	Public	✓	onlyOwner
	transfer	External	✓	-
	transferFrom	External	✓	-
	setNewRouter	Public	✓	onlyOwner
	setLpPair	External	✓	onlyOwner
	setInitializers	External	✓	onlyOwner
	isExcludedFromFees	External		-
	isExcludedFromDividends	External		-
	isExcludedFromLimits	External		-
	isExcludedFromProtection	External		-
	setExcludedFromLimits	External	✓	onlyOwner
	setDividendExcluded	Public	✓	onlyOwner
	setExcludedFromFees	Public	✓	onlyOwner
	setExcludedFromProtection	External	✓	onlyOwner
	removeSniper	External	✓	onlyOwner
	setProtectionSettings	External	✓	onlyOwner
	setWallets	External	✓	onlyOwner
	lockTaxes	External	✓	onlyOwner
	setTaxes	External	✓	onlyOwner
	setRatios	External	✓	onlyOwner
	setMaxTxPercent	External	✓	onlyOwner
	setMaxWalletSize	External	✓	onlyOwner
	getMaxTX	Public		-
	getMaxWallet	Public		-

	getTokenAmountAtPriceImpact	External		-
	setSwapSettings	External	✓	onlyOwner
	setPriceImpactSwapAmount	External	✓	onlyOwner
	setContractSwapEnabled	External	✓	onlyOwner
	setRewardsProperties	External	✓	onlyOwner
	setReflectorSettings	External	✓	onlyOwner
	excludePresaleAddresses	External	✓	onlyOwner
	_hasLimits	Internal		
	_transfer	Internal	✓	
	contractSwap	Internal	✓	inSwapFlag
	_checkLiquidityAdd	Private	✓	
	enableTrading	Public	✓	onlyOwner
	finalizeTransfer	Internal	✓	
	processRewards	Internal	✓	
	takeTaxes	Internal	✓	
	multiSendTokens	External	✓	onlyOwner
	manualDeposit	External	✓	onlyOwner
	sweepContingency	External	✓	onlyOwner
	claimPendingRewards	External	✓	-
	getTotalReflected	External		-
	getUserInfo	External		-
	getUserRealizedGains	External		-
	getUserUnpaidEarnings	External		-

# Contract Flow



## Domain Info

<b>Domain Name</b>	cougarinu.io
<b>Registry Domain ID</b>	c4e70483c72e4d79b5e8e5a7fd2e82ad-DONUTS
<b>Creation Date</b>	2022-08-27T22:16:32Z
<b>Updated Date</b>	2022-08-27T22:19:55Z
<b>Registry Expiry Date</b>	2023-08-27T22:16:32Z
<b>Registrar WHOIS Server</b>	whois.namecheap.com
<b>Registrar URL</b>	<a href="https://www.namecheap.com/">https://www.namecheap.com/</a>
<b>Registrar</b>	NameCheap, Inc.
<b>Registrar IANA ID</b>	1068

The domain was created 1 day before the creation of the audit. It will expire in 12 months.

There is no public billing information, the creator is protected by the privacy settings.

## Summary

Cougar Inu Token is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. There is also a limit of max 12% fees.

# Disclaimer

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The Cyberscope team disclaims any liability for the resulting losses.

## About Cyberscope

Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provide all the essential tools to assist users draw their own conclusions.



The Cyberscope team

<https://www.cyberscope.io>