Cyberscope

Audit Report

Olivia Inu

June 2023

Network	BSC
Address	0x784192af521562f818627b883d46f0333e139abf
Audited by	© cyberscope

Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

Diagnostics

● Critical ● Medium ● Minor / Informative

Severity	Code	Description	Status
●	IDI	Immutable Declaration Improvement	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved

Table of Contents

Review

Contract Name	OLIVIA
Compiler Version	v0.8.19+commit.7dd6d404
Optimization	200 runs
Explorer	https://bscscan.com/address/0x784192af521562f818627b883d46f0333e139abf
Address	0x784192af521562f818627b883d46f0333e139abf
Network	BSC
Symbol	OLIVIA
Decimals	18
Total Supply	420,690,000,000,000

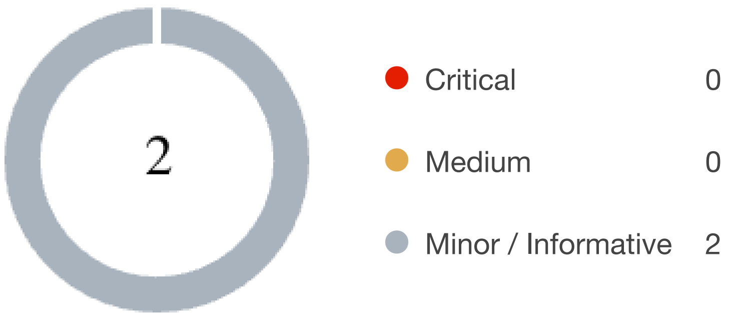
Audit Updates

Initial Audit	03 Jun 2023
Corrected Phase 2	04 Jun 2023

Source Files

Filename	SHA256
OLIVIA.sol	9bb38dd4c076de20637d88baa9e226b6b29142a896070362cf612064d502208d

Findings Breakdown



Severity	Unresolved	Acknowledged	Resolved	Other
● Critical	0	0	0	0
● Medium	0	0	0	0
● Minor / Informative	2	0	0	0

IDI - Immutable Declaration Improvement

Criticality	Minor / Informative
Location	OLIVIA.sol#L203,220
Status	Unresolved

Description

The contract declares state variables that their value is initialized once in the constructor and are not modified afterwards. The `immutable` is a special declaration for this kind of state variables that saves gas when it is defined.

```
swapRouter
lpPair
```

Recommendation

By declaring a variable as immutable, the Solidity compiler is able to make certain optimizations. This can reduce the amount of storage and computation required by the contract, and make it more gas-efficient.

L04 - Conformance to Solidity Naming Conventions

Criticality	Minor / Informative
Location	OLIVIA.sol#L69,165,166,167,168,169,170,172,176,177,178,179,180,193,194,195,267,272,333
Status	Unresolved

Description

The Solidity style guide is a set of guidelines for writing clean and consistent Solidity code. Adhering to a style guide can help improve the readability and maintainability of the Solidity code, making it easier for others to understand and work with.

The followings are a few key points from the Solidity style guide:

1. Use camelCase for function and variable names, with the first letter in lowercase (e.g., myVariable, updateCounter).
2. Use PascalCase for contract, struct, and enum names, with the first letter in uppercase (e.g., MyContract, UserStruct, ErrorEnum).
3. Use uppercase for constant variables and enums (e.g., MAX_VALUE, ERROR_CODE).
4. Use indentation to improve readability and structure.
5. Use spaces between operators and after commas.
6. Use comments to explain the purpose and behavior of the code.
7. Keep lines short (around 120 characters) to improve readability.

```
function WETH() external pure returns (address);
uint256 constant public _totalSupply = 420_690_000_000_000 * 10**18
uint256 constant public swapThreshold = _totalSupply / 5_000
uint256 constant private buyfee = 0
uint256 constant private sellfee = 90
uint256 constant private transferfee = 100
uint256 constant public fee_denominator = 1_000
address constant public marketingAddress =
payable(0x792B2967B912f051847e685DFE8e3f2C5FA1e15a)
string constant private _name = "Olivia Inu"
string constant private _symbol = "OLIVIA"
string constant public copyright = "analytixaudit.com"
string constant public version = "SAFU"
uint8 constant private _decimals = 18
event _enableTrading();

...
```

Recommendation

By following the Solidity naming convention guidelines, the codebase increased the readability, maintainability, and makes it easier to work with.

Find more information on the Solidity documentation
https://docs.soliditylang.org/en/v0.8.17/style-guide.html#naming-convention.

Functions Analysis

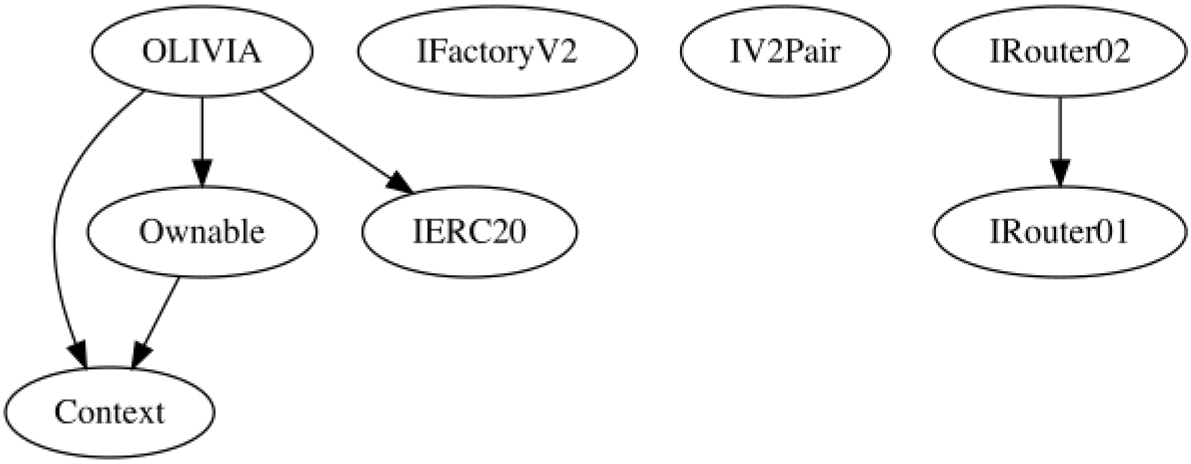
Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
		Public	✓	-
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
		Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_setOwner	Private	✓	
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		-
IRouter02	Interface	IRouter01		
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokens	External	✓	-
IERC20	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-

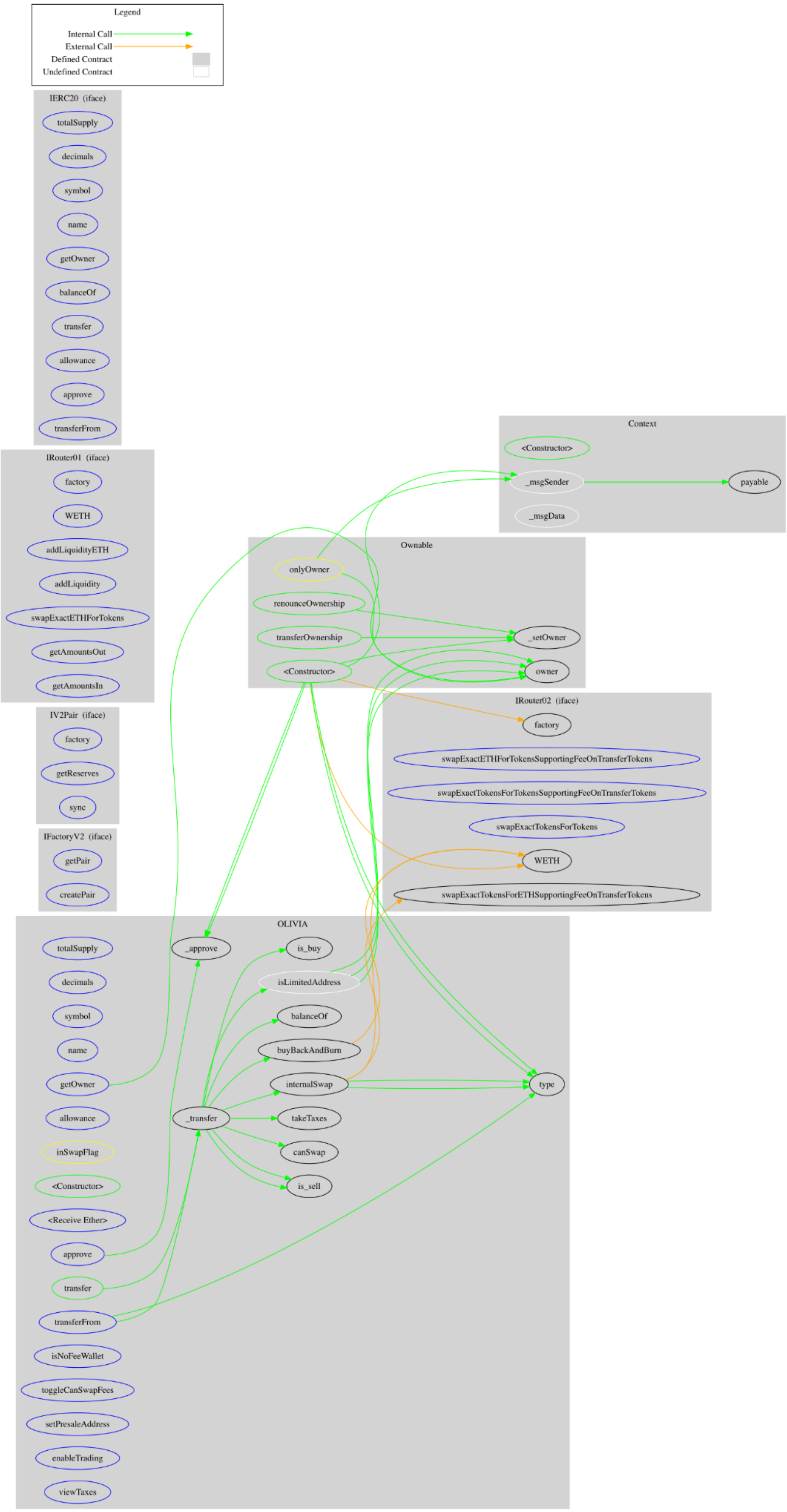
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
OLIVIA	Implementation	Context, Ownable, IERC20		
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	allowance	External		-
	balanceOf	Public		-
		Public	✓	-
		External	Payable	-
	transfer	Public	✓	-
	approve	External	✓	-
	_approve	Internal	✓	
	transferFrom	External	✓	-
	isNoFeeWallet	External		-
	isLimitedAddress	Internal		
	is_buy	Internal		

	is_sell	Internal		
	canSwap	Internal		
	toggleCanSwapFees	External	✓	onlyOwner
	_transfer	Internal	✓	
	takeTaxes	Internal	✓	
	buyBackAndBurn	Internal	✓	inSwapFlag
	internalSwap	Internal	✓	inSwapFlag
	setPresaleAddress	External	✓	onlyOwner
	enableTrading	External	✓	onlyOwner
	viewTaxes	External		-

Inheritance Graph



Flow Graph


Legend
Internal Call
External Call
Defined Contract
Undefined Contract
IERC20 (iface)
totalSupply
decimals
symbol
name
getOwner
balanceOf
transfer
allowance
approve
transferFrom
IRouter01 (iface)
factory
WETH
addLiquidityETH
addLiquidity
swapExactETHForTokens
getAmountsOut
getAmountsIn
IV2Pair (iface)
factory
getReserves
sync
IFactoryV2 (iface)
getPair
createPair
Context
<Constructor>
_msgSender
payable
_msgData
Ownable
onlyOwner
renounceOwnership
transferOwnership
<Constructor>
_setOwner
owner
IRouter02 (iface)
factory
swapExactETHForTokensSupportingFeeOnTransferTokens
swapExactTokensForTokensSupportingFeeOnTransferTokens
swapExactTokensForTokens
WETH
swapExactTokensForETHSupportingFeeOnTransferTokens
OLIVIA
totalSupply
decimals
symbol
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<Constructor>
<Receive Ether>
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transfer
transferFrom
isNoFeeWallet
toggleCanSwapFees
setPresaleAddress
enableTrading
viewTaxes
_approve
_transfer
is_buy
isLimitedAddress
balanceOf
buyBackAndBurn
internalSwap
takeTaxes
canSwap
is_sell
type

Summary

Olivia Inu contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. Olivia Inu is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. The fees are fixed to 9% for sales and 10% for transfers.

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The Cyberscope team

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