



Cyberscope

Audit Report

NinjaPepe

October 2023

Network BSC

Address 0x1f15519fA627b14CD06B7eB5812B09Fc378703eb

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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
●	RFD	Redundant Function Declaration	Unresolved
●	IDI	Immutable Declaration Improvement	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved
●	L09	Dead Code Elimination	Unresolved
●	L14	Uninitialized Variables in Local Scope	Unresolved
●	L20	Succeeded Transfer Check	Unresolved

Table of Contents

Analysis	1
Diagnostics	2
Table of Contents	3
Review	4
Audit Updates	4
Source Files	4
Findings Breakdown	5
RFD - Redundant Function Declaration	6
Description	6
Recommendation	6
IDI - Immutable Declaration Improvement	7
Description	7
Recommendation	7
L04 - Conformance to Solidity Naming Conventions	8
Description	8
Recommendation	8
L09 - Dead Code Elimination	9
Description	9
Recommendation	10
L14 - Uninitialized Variables in Local Scope	11
Description	11
Recommendation	11
L20 - Succeeded Transfer Check	12
Description	12
Recommendation	12
Functions Analysis	13
Inheritance Graph	19
Flow Graph	20
Summary	21
Disclaimer	22
About Cyberscope	23

Review

Contract Name	NinjaPepe
Compiler Version	v0.8.19+commit.7dd6d404
Optimization	200 runs
Explorer	https://bscscan.com/address/0x1f15519fa627b14cda6b7eb5812b09fc378703eb
Address	0x1f15519fa627b14cda6b7eb5812b09fc378703eb
Network	BSC
Symbol	\$NINJAPEPE
Decimals	18
Total Supply	1,000,000,000,000

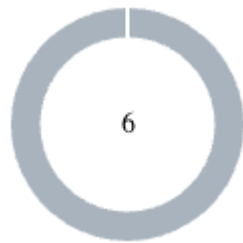
Audit Updates

Initial Audit	27 Oct 2023 https://github.com/cyberscope-io/audits/blob/main/ninjapepe/v1/audit.pdf
Corrected Phase 2	30 Oct 2023

Source Files

Filename	SHA256
NinjaPepe.sol	cb53701ecea31fd2b2b52b771a5e223509542819e18be7f717a25a2463ba654e

Findings Breakdown



Critical	0
Medium	0
Minor / Informative	6

Severity	Unresolved	Acknowledged	Resolved	Other
Critical	0	0	0	0
Medium	0	0	0	0
Minor / Informative	6	0	0	0

RFD - Redundant Function Declaration

Criticality	Minor / Informative
Location	NinjaPepe.sol#L492
Status	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 contract includes the `enableTrading` function, which is intended to set the `tradingEnabled` variable to true, with the restriction that it can only be called once. However, upon inspection, it is clear that the `tradingEnabled` variable is not utilized within the contract's codebase for any meaningful purpose. Consequently, the `enableTrading` function, as well as the `tradingEnabled` variable and `TradingEnabled` event, are redundant and serve no practical purpose.

```
function enableTrading() external onlyOwner{
    require(!tradingEnabled, "Trading already enabled.");
    tradingEnabled = true;

    emit TradingEnabled(tradingEnabled);
}
```

Recommendation

The team is advised to take these segments into consideration and rewrite them so the runtime will be more performant. That way it will improve the efficiency and performance of the source code and reduce the cost of executing it.

IDI - Immutable Declaration Improvement

Criticality	Minor / Informative
Location	NinjaPepe.sol#L463,464,468
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.

```
uniswapV2Router
uniswapV2Pair
creator
```

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	NinjaPepe.sol#L33,34,51,71
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 DOMAIN_SEPARATOR() external view returns (bytes32);  
function PERMIT_TYPEHASH() external pure returns (bytes32);  
function MINIMUM_LIQUIDITY() external pure returns (uint);  
function WETH() external pure returns (address);
```

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>.

L09 - Dead Code Elimination

Criticality	Minor / Informative
Location	NinjaPepe.sol#L394
Status	Unresolved

Description

In Solidity, dead code is code that is written in the contract, but is never executed or reached during normal contract execution. Dead code can occur for a variety of reasons, such as:

- Conditional statements that are always false.
- Functions that are never called.
- Unreachable code (e.g., code that follows a return statement).

Dead code can make a contract more difficult to understand and maintain, and can also increase the size of the contract and the cost of deploying and interacting with it.

```
function _burn(address account, uint256 amount) internal virtual {
    require(account != address(0), "ERC20: burn from the zero address");

    _beforeTokenTransfer(account, address(0), amount);

    uint256 accountBalance = _balances[account];
    ...
}
_totalSupply -= amount;

emit Transfer(account, address(0), amount);

_afterTokenTransfer(account, address(0), amount);
}
```

Recommendation

To avoid creating dead code, it's important to carefully consider the logic and flow of the contract and to remove any code that is not needed or that is never executed. This can help improve the clarity and efficiency of the contract.

L14 - Uninitialized Variables in Local Scope

Criticality	Minor / Informative
Location	NinjaPepe.sol#L448
Status	Unresolved

Description

Using an uninitialized local variable can lead to unpredictable behavior and potentially cause errors in the contract. It's important to always initialize local variables with appropriate values before using them.

```
address router
```

Recommendation

By initializing local variables before using them, the contract ensures that the functions behave as expected and avoid potential issues.

L20 - Succeeded Transfer Check

Criticality	Minor / Informative
Location	NinjaPepe.sol#L487
Status	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.

```
ERC20token.transfer(msg.sender, balance)
```

Recommendation

The contract should check if the result of the transfer methods is successful. The team is advised to check the SafeERC20 library from the [Openzeppelin library](#).

Functions Analysis

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IUniswapV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
IUniswapV2Pair	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-
	approve	External	✓	-

	transfer	External	✓	-
	transferFrom	External	✓	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	✓	-
	MINIMUM_LIQUIDITY	External		-
	factory	External		-
	token0	External		-
	token1	External		-
	getReserves	External		-
	price0CumulativeLast	External		-
	price1CumulativeLast	External		-
	kLast	External		-
	mint	External	✓	-
	burn	External	✓	-
	swap	External	✓	-
	skim	External	✓	-
	sync	External	✓	-
	initialize	External	✓	-
IUniswapV2Router01	Interface			
	factory	External		-

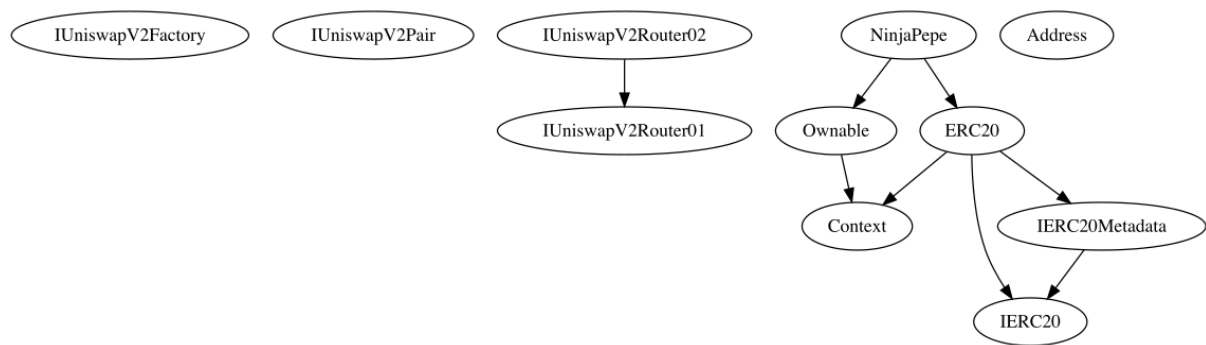
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	✓	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	✓	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUniswapV2Router02	Interface	IUniswapV2 Router01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-

	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
IERC20Metadata	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
Address	Library			
	sendValue	Internal	✓	
Context	Implementation			
	_msgSender	Internal		

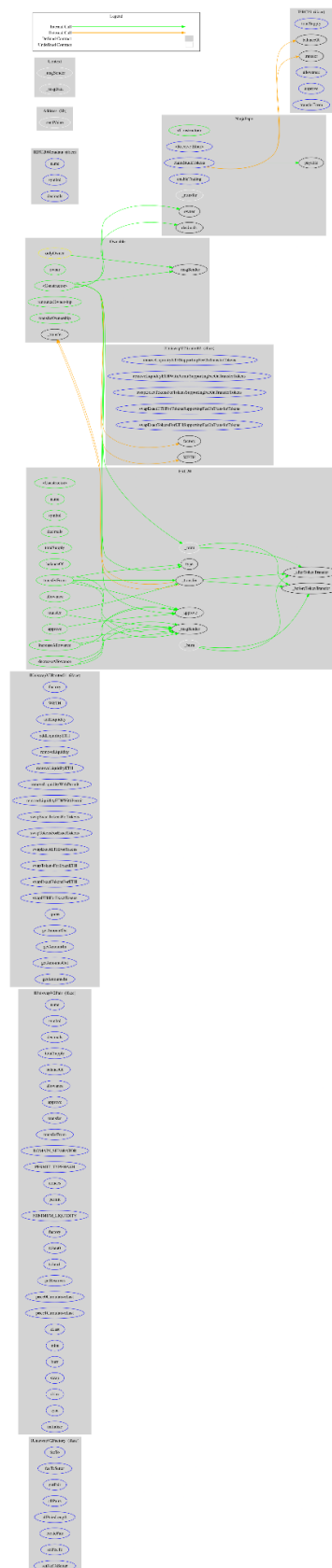
	_msgData	Internal		
Ownable	Implementation	Context		
		Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
ERC20	Implementation	Context, IERC20, IERC20Meta data		
		Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	_transfer	Internal	✓	

	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
	_afterTokenTransfer	Internal	✓	
NinjaPepe	Implementation	ERC20, Ownable		
		Public	✓	ERC20
		External	Payable	-
	claimStuckTokens	External	✓	onlyOwner
	enableTrading	External	✓	onlyOwner
	_transfer	Internal	✓	

Inheritance Graph



Flow Graph



Summary

NinjaPepe contract implements a token mechanism. This audit investigates security issues, business logic concerns, and potential improvements. NinjaPepe is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler errors 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.

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Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.



The Cyberscope team

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