



# CFG NINJA AUDITS

Security Assessment

**Snoopy Inu Token**

May 28, 2023

Audit Status: Fail

Audit Edition: Advance














POWERED BY  
**BLADE POOL**

# Risk Analysis

















## Classifications of Manual Risk Results

Classification	Description
 Critical	Danger or Potential Problems.
 Major	Be Careful or Fail test.
 Minor	Pass, Not-Detected or Safe Item.
 Informational	Function Detected

## Manual Code Review Risk Results

Contract Priviledge	Description
 Buy Tax	0
 Sale Tax	3
 Cannot Sale	Pass
 Cannot Sale	Pass
 Max Tax	0
 Modify Tax	Not Detected
 Fee Check	Pass
 Is Honeypot?	Detected
 Trading Cooldown	Not Detected
 Can Pause Trade?	Pass
 Pause Transfer?	Not Detected



Contract Priviledge	Description
 Max Tx?	Pass
 Is Anti Whale?	Not Detected
 Is Anti Bot?	Not Detected
 Is Blacklist?	Not Detected
 Blacklist Check	Pass
 is Whitelist?	Detected
 Can Mint?	Pass
 Is Proxy?	Not Detected
 Can Take Ownership?	Detected
 Hidden Owner?	Detected
 Owner	0x33a449f597ab4caaa1efb9a24396a76a00ddb703
 Self Destruct?	Not Detected
 Other?	Detected
 Other?	Detected
 Holders	1
 Auditor Confidence	Low

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.



# Project Overview

## Token Summary

Parameter	Result
Address	0x76FCB2B5828DB34Eb974D6338892cbaabB110A37
Name	Snoopy Inu
Token Tracker	Snoopy Inu (Snoopy)
Decimals	18
Supply	420,690,000,000,000
Platform	Binance Smart Chain
compiler	v0.8.19+commit.7dd6d404
Contract Name	Token
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	<a href="https://bscscan.com/token/0x76FCB2B5828DB34Eb974D6338892cbaabB110A37#code">https://bscscan.com/token/0x76FCB2B5828DB34Eb974D6338892cbaabB110A37#code</a>
Payment Tx	0x635380d660decad0ca8c630c6647a48d14c5f964d905f67a362220c809600eff



## Main Contract Assessed Contract Name

Name	Contract	Live
Snoopy Inu	0x76FCB2B5828DB34Eb974D6338892cbaabB110A37	Yes

## TestNet Contract Assessed Contract Name

Name	Contract	Live
Snoopy Inu	0xf062432bd035918d93355561dbdc8102f2c1f9a0	Yes

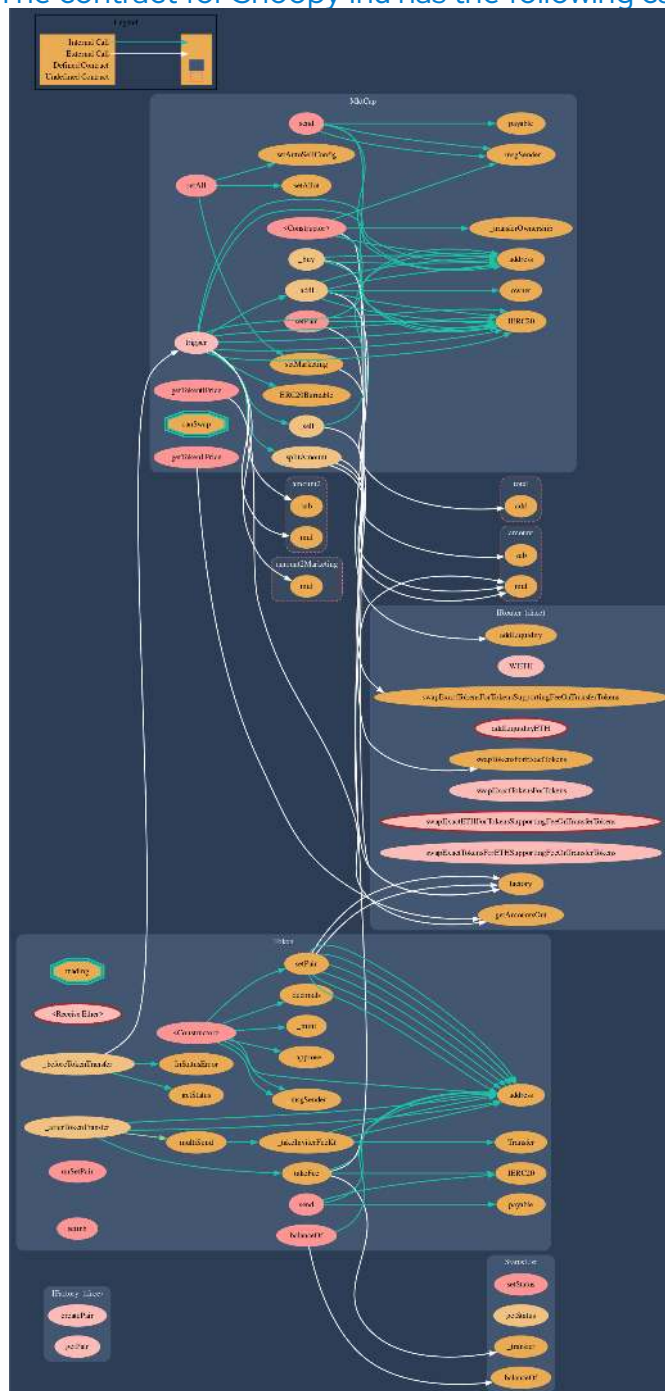
## Solidity Code Provided

SolID	File Sha-1	FileName
Token	116ffbd1b909b1e5fd2b0a595f4182c9e3715e66	Token.sol
Token		
Token		
Token		



# Call Graph

The contract for Snoopy Inu has the following call graph structure.



# Smart Contract Vulnerability Checks

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	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	Token.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	Token.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	Token.sol	L: 0 C: 0
SWC-103	Low	A floating pragma is set.	Token.sol	L: 2 C: 0
SWC-104	Pass	Unchecked Call Return Value.	Token.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	Token.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	Token.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	Token.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	Token.sol	L: 0 C: 0
SWC-109	Pass	Uninitialized Storage Pointer.	Token.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	Token.sol	L: 0 C: 0





ID	Severity	Name	File	location
SWC-111	Pass	Use of Deprecated Solidity Functions.	Token.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	Token.sol	L: 0 C: 0
SWC-113	Pass	Multiple calls are executed in the same transaction.	Token.sol	L: 0 C: 0
SWC-114	Pass	Transaction Order Dependence.	Token.sol	L: 0 C: 0
SWC-115	Pass	Authorization through tx.origin.	Token.sol	L: 0 C: 0
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	Token.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	Token.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	Token.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	Token.sol	L: 0 C: 0
SWC-120	Pass	Potential use of block.number as source of randommness.	Token.sol	L: 0 C: 0
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	Token.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	Token.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	Token.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	Token.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	Token.sol	L: 0 C: 0





ID	Severity	Name	File	location
SWC-126	Pass	Insufficient Gas Griefing.	Token.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	Token.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	Token.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	Token.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U+202E).	Token.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	Token.sol	L: 0 C: 0
SWC-132	Pass	Unexpected Ether balance.	Token.sol	L: 0 C: 0
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	Token.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	Token.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	Token.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	Token.sol	L: 0 C: 0

We scan the contract for additional security issues using MYTHX and industry-standard security scanning tools.



# Smart Contract Vulnerability Details

## SWC-103 - Floating Pragma.

### CWE-664: Improper Control of a Resource Through its Lifetime.

#### References:

#### Description:

Contracts should be deployed with the same compiler version and flags that they have been tested with thoroughly. Locking the pragma helps to ensure that contracts do not accidentally get deployed using, for example, an outdated compiler version that might introduce bugs that affect the contract system negatively.

#### Remediation:

Lock the pragma version and also consider known bugs (<https://github.com/ethereum/solidity/releases>) for the compiler version that is chosen.

Pragma statements can be allowed to float when a contract is intended for consumption by other developers, as in the case with contracts in a library or EthPM package. Otherwise, the developer would need to manually update the pragma in order to compile locally.

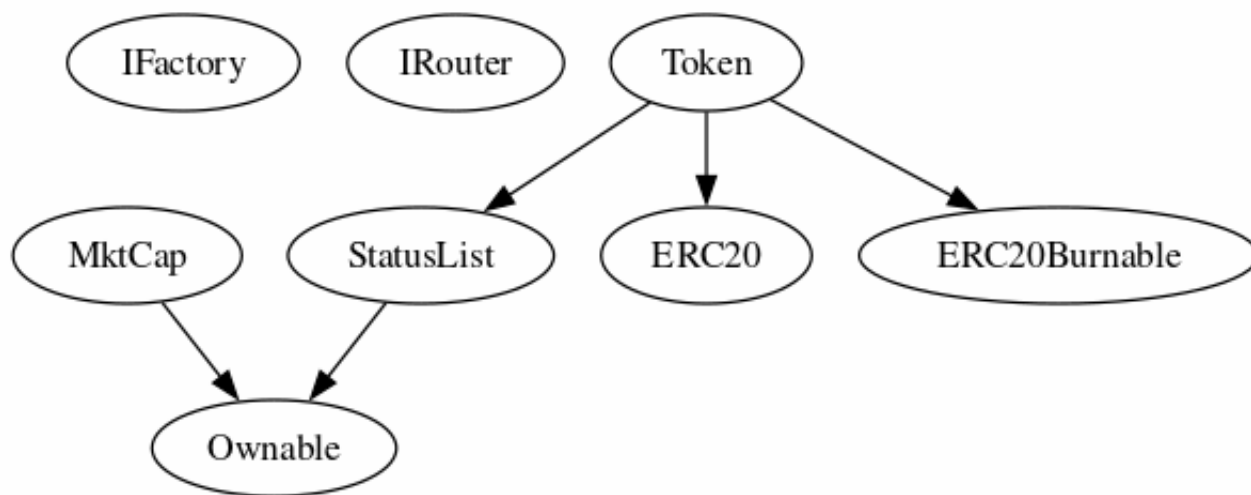
#### References:

Ethereum Smart Contract Best Practices - Lock pragmas to specific compiler version.



# Inheritance

The contract for Snoopy Inu has the following inheritance structure.



# Smart Contract Advance Checks



ID	Severity	Name	Result	Status
Snoopy-01	Minor	Potential Sandwich Attacks.	Pass	Not-Found
Snoopy-02	Minor	Function Visibility Optimization	Fail	Detected
Snoopy-03	Minor	Lack of Input Validation.	Fail	Detected
Snoopy-04	Major	Centralized Risk In addLiquidity.	Fail	Detected
Snoopy-05	Minor	Missing Event Emission.	Fail	Detected
Snoopy-06	Minor	Conformance with Solidity Naming Conventions.	Fail	Detected
Snoopy-07	Minor	State Variables could be Declared Constant.	Pass	Not-Found
Snoopy-08	Minor	Dead Code Elimination.	Pass	Not-Found
Snoopy-09	Major	Third Party Dependencies.	Pass	Not-Found
Snoopy-10	Major	Initial Token Distribution.	Pass	Not-Found
Snoopy-11	Minor	Multisend is present in code.	Fail	Detected
Snoopy-12	Major	Centralization Risks In The X Role	Pass	Not-Found
Snoopy-13	Informational	Extra Gas Cost For User..	Pass	Not-Found
Snoopy-14	Medium	Unnecessary Use Of SafeMath	Fail	Detected
Snoopy-15	Medium	Symbol Length Limitation due to Solidity Naming Standards.	Pass	Not-Found



ID	Severity	Name	Result	Status
Snoopy-16	Medium	Invalid collection of Taxes during Transfer.	Pass	Not-Found
Snoopy-17	Informational	Conformance to numeric notation best practice.	Pass	Not-Found
Snoopy-18	Medium	Stop Transactions by using Enable Trade.	Pass	Not-Detected



## Snoopy-02 | Function Visibility Optimization.

Category	Severity	Location	Status
Gas Optimization	 Minor	Token.sol: L: 296 C: 11	 Detected

### Description

The following functions are declared as public and are not invoked in any of the contracts contained within the projects scope:

Function Name	Parameters	Visibility
setinb		public
unSetPair		public
setStatus		public
send		public
setMarketing		public
setPair		public
setAllot		public
setAutoSellConfig		public
setAll		public

The functions that are never called internally within the contract should have external visibility

### Remediation

We advise that the function's visibility specifiers are set to external, and the array-based arguments change their data location from memory to calldata, optimizing the gas cost of the function.





### References:

external vs public best practices.





## Snoopy-03 | Lack of Input Validation.

Category	Severity	Location	Status
Volatile Code	 Minor	Token.sol: 125,14	 Detected

### Description

The given input is missing the check for the non-zero address.

The given input is missing the check for the unSetPair is missing required function.

### Remediation


We advise the client to add the check for the passed-in values to prevent unexpected errors as below:

```
...  
    require(receiver != address(0), "Receiver is the zero address");  
...  
...  
    require(value X limitation, "Your not able to do this function");  
...
```

We also recommend customer to review the following function that is missing a required validation. unSetPair is missing required function.



## Snoopy-04 | Centralized Risk In addLiquidity.

Category	Severity	Location	Status
Coding Style	<span style="color: orange;">●</span> Major	Token.sol: 162,13	 Detected

### Description

`uniswapV2Router.addLiquidityETH{value: ethAmount}(address(this), tokenAmount, 0, 0, owner(), block.timestamp);`

The `addLiquidity` function calls the `uniswapV2Router.addLiquidityETH` function with the `to` address specified as `owner()` for acquiring the generated LP tokens from the Snoopy-WBNB pool.

As a result, over time the `_owner` address will accumulate a significant portion of LP tokens. If the `_owner` is an EOA (Externally Owned Account), mishandling of its private key can have devastating consequences to the project as a whole.

### Remediation

We advise the `to` address of the `uniswapV2Router.addLiquidityETH` function call to be replaced by the contract itself, i.e. `address(this)`, and to restrict the management of the LP tokens within the scope of the contract's business logic. This will also protect the LP tokens from being stolen if the `_owner` account is compromised. In general, we strongly recommend centralized privileges or roles in the protocol to be improved via a decentralized mechanism or via smart-contract based accounts with enhanced security practices, f.e. Multisignature wallets.

1. Indicatively, here are some feasible solutions that would also mitigate the potential risk:
2. Time-lock with reasonable latency, i.e. 48 hours, for awareness on privileged operations;
3. Assignment of privileged roles to multi-signature wallets to prevent single point of failure due to the private key;



Introduction of a DAO / governance / voting module to increase transparency and user involvement

### Project Action

liquidity is set to owner



## Snoopy-05 | Missing Event Emission.

Category	Severity	Location	Status
Volatile Code	 Minor	Token.sol: 125, 14	 Detected

### 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. The linked code does not create an event for the transfer.

### Remediation

Emit an event for critical parameter changes. It is recommended emitting events for the sensitive functions that are controlled by centralization roles.



## Snoopy-06 | Conformance with Solidity Naming Conventions.

Category	Severity	Location	Status
Coding Style	 Minor	Token.sol: 693,13	 Detected

### 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.

```
setinb
```



### Remediation

Follow the Solidity naming convention.

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



## Snoopy-11 | Multisend is present in code..

Category	Severity	Location	Status
Optimization	 Minor	Token.sol: 305,14	 Detected

### Description

Multisend is found in code along with a different send method that dont follow erc20 standard.



### Remediation

Recommended to remove multisend.

### Project Action



## Snoopy-14 | Unnecessary Use Of SafeMath

Category	Severity	Location	Status
Logical Issue	 Medium	Token.sol: 7,9	 Detected

### Description

The SafeMath library is used unnecessarily. With Solidity compiler versions 0.8.0 or newer, arithmetic operations

will automatically revert in case of integer overflow or underflow.

library SafeMath {

An implementation of SafeMath library is found.

using SafeMath for uint256;

SafeMath library is used for uint256 type in contract.

### Remediation

We advise removing the usage of SafeMath library and using the built-in arithmetic operations provided by the

Solidity programming language

### Project Action








# Technical Findings Summary

## Classification of Risk

Severity	Description
 Critical	Risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
 Major	Risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
 Medium	Risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform
 Minor	Risks can be any of the above but on a smaller scale. They generally do not compromise the overall integrity of the Project, but they may be less efficient than other solutions.
 Informational	Errors are often recommended to improve the code's style or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

## Findings

Severity	Found	Pending	Resolved
 Critical	0	0	0
 Major	2	0	0
 Medium	0	0	0
 Minor	4	0	0
 Informational	1	0	0
Total	7	0	0





# Social Media Checks

Social Media	URL	Result
Twitter	<a href="https://twitter.com/CryptoSnoopy_">https://twitter.com/CryptoSnoopy_</a>	Pass
Other		Fail
Website	<a href="http://cryptosnoopy.art">http://cryptosnoopy.art</a>	Pass
Telegram	<a href="https://t.me/CryptoSnoopy_Finance">https://t.me/CryptoSnoopy_Finance</a>	Pass

We recommend to have 3 or more social media sources including a completed working websites.

**Social Media Information Notes:**

**Auditor Notes:** undefined

**Project Owner Notes:**



# Assessment Results

## Score Results

Review	Score
Overall Score	78/100
Auditor Score	70/100
Review by Section	Score
Manual Scan Score	35/53
SWC Scan Score	36 /37
Advance Check Score	7 /19

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 80 Points, if a project does not attain 80% is an automatic failure. Read our notes and final assessment below.

## Audit Fail



## Assessment Results

### Important Notes:

- No issues or vulnerabilities were found.
- This code has some items that are not standard and can lead to unexpected scenarios or transfer failures.

**Auditor Score =70**  
**Audit Fail**



# Appendix

## Finding Categories

### Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that act against the nature of decentralization, such as explicit ownership or specialized access roles in combination with a mechanism to relocate funds.

### Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.

### Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on how block.timestamp works.

### Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functions being invoke-able by anyone under certain circumstances.

### Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that may result in a vulnerability.

### Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the codebase more legible and, as a result, easily maintainable.

### Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code, such as a constructor assignment imposing different requirements on the input variables than a setter function.

### Coding Best Practices

ERC 20 Coding Standards are a set of rules that each developer should follow to ensure the code meets a set of criteria and is readable by all the developers.



## Disclaimer

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