

MetaDoge Smart Contract Audit Report



09 Jan 2023



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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain	
MetaDoge	MetaDoge	Binance Smart Chain	

Addresses

Contract address	0xf3B185ab60128E4C08008Fd90C3F1F01f4B78d50
Contract deployer address	0x515C65E26BBF5dA731B5Ce6679b9f7fA0230B352

Project Website

https://t.me/Metadoge_GlobalCommunity

Codebase

https://bscscan.com/address/0xf3B185ab60128E4C08008Fd90C3F1F01f4B78d50#code



SUMMARY

Then MetaDoge was born in 2023, which also has the blessing of global traffic and the attention of major media around the world; Including the highlights of the global encryption world; 2023 Hardcore IP Opens the Best DAO Organization in the New Era. Return of the king and continue the legend.

Contract Summary

Documentation Quality

MetaDoge provides a very good documentation with standard of solidity base code.

• The technical description is provided clearly and structured and also dont have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

• Standard solidity basecode and rules are already followed by MetaDoge with the discovery of several low issues.

Test Coverage

Test coverage of the project is 100% (Through Codebase)

Audit Findings Summary

- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 588, 588, 619, 619, 670, 678, 720, 840, 840, 859, 859, 863, 863, 889, 936, 938, 1108, 1138, 1201, 1276, 1276, 1420, 1430, 1434, 1513, 1743, 1775, 1798, 1799, 1834, 1870, 1913, 1917, 1929, 1936, 1945 and 1513.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 6 and 1899.
- SWC-110 SWC-123 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 572, 573, 574, 577, 578, 579, 671, 679, 721, 968, 969, 990, 991, 992, 1426, 1484, 1514 and 1519.
- SWC-115 | tx.origin should not be used for authorization, use msg.sender instead on lines 800 and 920.
- SWC-120 | It is recommended to use external sources of randomness via oracles on lines 632 and 889.



CONCLUSION

We have audited the MetaDoge project released on January 2023 to discover issues and identify potential security vulnerabilities in MetaDoge Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides a satisfactory result with some low-risk issues.

The issues found in the MetaDoge smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are some arithmetic operation issues, a floating pragma is set, a state variable visibility is not set, weak sources of randomness, tx.origin as a part of authorization control and out of bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value. For "tx.origin" issues we recommend to avoid this issue, using "tx.origin" as a security control that can lead to authorization bypass vulnerabilities. Consider using "msg.sender" unless you really know what you are doing. We recommend to don't using any of those environment variables as sources of randomness and being aware that the use of these variables introduces a certain level of trust into miners.



AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	PASS
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	ISSUE FOUND
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	ISSUE Found
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	ISSUE FOUND
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS



DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	ISSUE FOUND
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	ISSUE FOUND
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas griefing attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS



Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS



SMART CONTRACT ANALYSIS

Started	Sunday Jan 08 2023 04:26:48 GMT+0000 (Coordinated Universal Time)
Finished	Monday Jan 09 2023 09:27:19 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	Token.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged



SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged



SWC-101	ARITHMETIC OPERATION "%" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	COMPILER-REWRITABLE " <uint> - 1" DISCOVERED</uint>	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-115	USE OF "TX.ORIGIN" AS A PART OF AUTHORIZATION CONTROL.	low	acknowledged
SWC-115	USE OF "TX.ORIGIN" AS A PART OF AUTHORIZATION CONTROL.	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
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SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
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SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged
SWC-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged





LINE 588

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
587
588 swapTokensAtAmount = __totalSupply * (10**14);
589
590 IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x10ED43C718714eb63d5aA57B78B54704E256024E);
//0x10ED43C718714eb63d5aA57B78B54704E256024E
591 // Create a uniswap pair for this new token
592
```



LINE 588

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
587
588 swapTokensAtAmount = __totalSupply * (10**14);
589
590 IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x10ED43C718714eb63d5aA57B78B54704E256024E);
//0x10ED43C718714eb63d5aA57B78B54704E256024E
591 // Create a uniswap pair for this new token
592
```



LINE 619

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
618 */
619 _mint(tokenReceiver, __totalSupply * (10**18));
620 }
621
622 function setSwapTokensAtAmount(uint256 newValue) public onlyOwner{
623
```



LINE 619

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
618 */
619 _mint(tokenReceiver, __totalSupply * (10**18));
620 }
621
622 function setSwapTokensAtAmount(uint256 newValue) public onlyOwner{
623
```



LINE 670

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
669 function excludeMultipleAccountsFromFees(address[] calldata accounts, bool
excluded) public onlyOwner {
670 for(uint256 i = 0; i < accounts.length; i++) {
671 __isExcludedFromFees[accounts[i]] = excluded;
672 }
673
674</pre>
```



LINE 678

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
677 function mulTransfer(address[] calldata accounts, uint256 amount) public onlyOwner
{
678 for(uint256 i = 0; i < accounts.length; i++) {
679 _transfer(msg.sender, accounts[i], amount);
680 }
681 }
682</pre>
```



LINE 720

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
719 require(addresses.length < 201);
720 for (uint256 i; i < addresses.length; ++i) {
721 __isbclisted[addresses[i]] = value;
722 }
723
724
```



LINE 840

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
839 if (!_isExcludedFromFees[from] && !_isExcludedFromFees[to] && remainEnable) {
840 uint256 maxSellAmount = balanceOf(from) * 9999 / 10000;
841 if (amount > maxSellAmount) {
842 amount = maxSellAmount;
843 }
844
```



LINE 840

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
839 if (!_isExcludedFromFees[from] && !_isExcludedFromFees[to] && remainEnable) {
840 uint256 maxSellAmount = balanceOf(from) * 9999 / 10000;
841 if (amount > maxSellAmount) {
842 amount = maxSellAmount;
843 }
844
```



LINE 859

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
858
859 uint256 marketingTokens = contractTokenBalance.mul(buy_marketingFee +
sell_marketingFee).div(buy_totalFees + sell_totalFees);
860 if(marketingTokens > 0)
861 swapAndSendToFee(marketingTokens);
862
863
```



LINE 859

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
858
859 uint256 marketingTokens = contractTokenBalance.mul(buy_marketingFee +
sell_marketingFee).div(buy_totalFees + sell_totalFees);
860 if(marketingTokens > 0)
861 swapAndSendToFee(marketingTokens);
862
863
```



LINE 863

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
862
863 uint256 swapTokens = contractTokenBalance.mul(buy_liquidityFee +
sell_liquidityFee).div(buy_totalFees + sell_totalFees);
864 if(swapTokens > 0)
865 swapAndLiquify(swapTokens);
866
867
```



LINE 863

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
862
863 uint256 swapTokens = contractTokenBalance.mul(buy_liquidityFee +
sell_liquidityFee).div(buy_totalFees + sell_totalFees);
864 if(swapTokens > 0)
865 swapAndLiquify(swapTokens);
866
867
```



LINE 889

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
888 if (from == uniswapV2Pair) {
889 if(lunachB + killNum > block.number) {
890 __isbclisted[to] = true;
891 }
892 }
893
```



LINE 936

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
935
936 uint256 amount1 = newBalance / 2;
937 IERC20(ETH).transfer(_marketingWalletAddress_1, amount1);
938 IERC20(ETH).transfer(_marketingWalletAddress_2, newBalance - amount1);
939 }
940
```



LINE 938

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
937 IERC20(ETH).transfer(_marketingWalletAddress_1, amount1);
938 IERC20(ETH).transfer(_marketingWalletAddress_2, newBalance - amount1);
939 }
940
941 function swapAndLiquify(uint256 tokens) private {
942
```



LINE 1108

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1107 // see https://github.com/ethereum/EIPs/issues/1726#issuecomment-472352728
1108 uint256 constant internal magnitude = 2**128;
1109
1110 uint256 internal magnifiedDividendPerShare;
1111
1112
```



LINE 1138

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1137 magnifiedDividendPerShare = magnifiedDividendPerShare.add(
1138 (amount).mul(magnitude) / totalSupply()
1139 );
1140 emit DividendsDistributed(msg.sender, amount);
1141
1142
```



LINE 1201

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1200 function accumulativeDividendOf(address _owner) public view override
returns(uint256) {
1201 return magnifiedDividendPerShare.mul(balanceOf(_owner)).toInt256Safe()
1202 .add(magnifiedDividendCorrections[_owner]).toUint256Safe() / magnitude;
1203 }
1204
1205
```



LINE 1276

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1275 claimWait = 600;
1276 minimumTokenBalanceForDividends = mushHoldTokenAmount * (10**18); //must hold
1277 }
1278
1279 function _transfer(address, address, uint256) internal override {
1280
```



LINE 1276

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1275 claimWait = 600;
1276 minimumTokenBalanceForDividends = mushHoldTokenAmount * (10**18); //must hold
1277 }
1278
1279 function _transfer(address, address, uint256) internal override {
1280
```



LINE 1420

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1419 while(gasUsed < gas && iterations < numberOfTokenHolders) {
1420 _lastProcessedIndex++;
1421
1422 if(_lastProcessedIndex >= tokenHoldersMap.keys.length) {
1423 _lastProcessedIndex = 0;
1424
```



LINE 1430

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

Locations

1429 if(processAccount(payable(account), true)) {
1430 claims++;
1431 }
1432 }
1433
1434



LINE 1434

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1433
1434 iterations++;
1435
1436 uint256 newGasLeft = gasleft();
1437
1438
```


SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1513

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1512 uint index = map.indexOf[key];
1513 uint lastIndex = map.keys.length - 1;
1514 address lastKey = map.keys[lastIndex];
1515
1516 map.indexOf[lastKey] = index;
1517
```



SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1743

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1742 function add(uint256 a, uint256 b) internal pure returns (uint256) {
1743 uint256 c = a + b;
1744 require(c >= a, "SafeMath: addition overflow");
1745
1746 return c;
1747
```



SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1775

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1774 require(b <= a, errorMessage);
1775 uint256 c = a - b;
1776
1777 return c;
1778 }
1779</pre>
```



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 1798

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1797
1798 uint256 c = a * b;
1799 require(c / a == b, "SafeMath: multiplication overflow");
1800
1801 return c;
1802
```



SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1799

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1798 uint256 c = a * b;
1799 require(c / a == b, "SafeMath: multiplication overflow");
1800
1801 return c;
1802 }
1803
```



SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1834

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1833 require(b > 0, errorMessage);
1834 uint256 c = a / b;
1835 // assert(a == b * c + a % b); // There is no case in which this doesn't hold
1836
1837 return c;
1838
```



SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 1870

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1869 require(b != 0, errorMessage);
1870 return a % b;
1871 }
1872 }
1873
1873
1874
```



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 1913

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1912 function mul(int256 a, int256 b) internal pure returns (int256) {
1913 int256 c = a * b;
1914
1915 // Detect overflow when multiplying MIN_INT256 with -1
1916 require(c != MIN_INT256 || (a & MIN_INT256) != (b & MIN_INT256));
1917
```



SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1917

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1916 require(c != MIN_INT256 || (a & MIN_INT256) != (b & MIN_INT256));
1917 require((b == 0) || (c / b == a));
1918 return c;
1919 }
1920
1921
```



SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1929

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1928 // Solidity already throws when dividing by 0.
1929 return a / b;
1930 }
1931 
1932 /**
1933
```



SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1936

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1935 function sub(int256 a, int256 b) internal pure returns (int256) {
1936 int256 c = a - b;
1937 require((b >= 0 && c <= a) || (b < 0 && c > a));
1938 return c;
1939 }
1940
```





SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1945

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1944 function add(int256 a, int256 b) internal pure returns (int256) {
1945 int256 c = a + b;
1946 require((b >= 0 && c >= a) || (b < 0 && c < a));
1947 return c;
1948 }
1949</pre>
```





SWC-101 | COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED

LINE 1513

Iow SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Token.sol

```
1512 uint index = map.indexOf[key];
1513 uint lastIndex = map.keys.length - 1;
1514 address lastKey = map.keys[lastIndex];
1515
1516 map.indexOf[lastKey] = index;
1517
```



SWC-103 | A FLOATING PRAGMA IS SET.

LINE 6

Iow SEVERITY

The current pragma Solidity directive is ""^0.6.2"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- Token.sol

```
5 // SPDX-License-Identifier: MIT
6 pragma solidity ^0.6.2;
7 
8 /**
9 * @dev Interface of the ERC20 standard as defined in the EIP.
10
```





SWC-103 | A FLOATING PRAGMA IS SET.

LINE 1899

Iow SEVERITY

The current pragma Solidity directive is ""^0.6.2"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- Token.sol

Locations

1898
1899 pragma solidity ^0.6.2;
1900
1901 /**
1902 * @title SafeMathInt
1903



SWC-115 USE OF "TX.ORIGIN" AS A PART OF AUTHORIZATION CONTROL.

LINE 800

Iow SEVERITY

Using "tx.origin" as a security control can lead to authorization bypass vulnerabilities. Consider using "msg.sender" unless you really know what you are doing.

Source File

- Token.sol

```
799 (uint256 iterations, uint256 claims, uint256 lastProcessedIndex) =
dividendTracker.process(gas);
800 emit ProcessedDividendTracker(iterations, claims, lastProcessedIndex, false, gas,
tx.origin);
801 }
802
803 function claim() external {
804
```





SWC-115 USE OF "TX.ORIGIN" AS A PART OF AUTHORIZATION CONTROL.

LINE 920

Iow SEVERITY

Using "tx.origin" as a security control can lead to authorization bypass vulnerabilities. Consider using "msg.sender" unless you really know what you are doing.

Source File

- Token.sol

```
919 try dividendTracker.process(gas) returns (uint256 iterations, uint256 claims,
uint256 lastProcessedIndex) {
920 emit ProcessedDividendTracker(iterations, claims, lastProcessedIndex, true, gas,
tx.origin);
921 }
922 catch {
923
924
```



LINE 572

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
571
572 buy_marketingFee = _buyfees[0];
573 buy_liquidityFee = _buyfees[1];
574 buy_ETHRewardsFee = _buyfees[2];
575 buy_totalFees = buy_ETHRewardsFee.add(buy_liquidityFee).add(buy_marketingFee);
576
```



LINE 573

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
572 buy_marketingFee = _buyfees[0];
573 buy_liquidityFee = _buyfees[1];
574 buy_ETHRewardsFee = _buyfees[2];
575 buy_totalFees = buy_ETHRewardsFee.add(buy_liquidityFee).add(buy_marketingFee);
576
577
```



LINE 574

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
573 buy_liquidityFee = _buyfees[1];
574 buy_ETHRewardsFee = _buyfees[2];
575 buy_totalFees = buy_ETHRewardsFee.add(buy_liquidityFee).add(buy_marketingFee);
576
577 sell_marketingFee = _sellfees[0];
578
```



LINE 577

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
576
577 sell_marketingFee = _sellfees[0];
578 sell_liquidityFee = _sellfees[1];
579 sell_ETHRewardsFee = _sellfees[2];
580 sell_totalFees = sell_ETHRewardsFee.add(sell_liquidityFee).add(sell_marketingFee);
581
```



LINE 578

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
577 sell_marketingFee = _sellfees[0];
578 sell_liquidityFee = _sellfees[1];
579 sell_ETHRewardsFee = _sellfees[2];
580 sell_totalFees = sell_ETHRewardsFee.add(sell_liquidityFee).add(sell_marketingFee);
581
582
```



LINE 579

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
578 sell_liquidityFee = _sellfees[1];
579 sell_ETHRewardsFee = _sellfees[2];
580 sell_totalFees = sell_ETHRewardsFee.add(sell_liquidityFee).add(sell_marketingFee);
581
582 _marketingWalletAddress_1 = address(marketWallet_1);
583
```



LINE 671

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
670 for(uint256 i = 0; i < accounts.length; i++) {
671 __isExcludedFromFees[accounts[i]] = excluded;
672 }
673
674 emit ExcludeMultipleAccountsFromFees(accounts, excluded);
675</pre>
```



LINE 679

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
678 for(uint256 i = 0; i < accounts.length; i++) {
679 __transfer(msg.sender, accounts[i], amount);
680 }
681 }
682
683</pre>
```



LINE 721

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
720 for (uint256 i; i < addresses.length; ++i) {
721 __isbclisted[addresses[i]] = value;
722 }
723
724 }
725</pre>
```



LINE 968

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
967 address[] memory path = new address[](2);
968 path[0] = address(this);
969 path[1] = uniswapV2Router.WETH();
970
971 _approve(address(this), address(uniswapV2Router), tokenAmount);
972
```



LINE 969

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
968 path[0] = address(this);
969 path[1] = uniswapV2Router.WETH();
970
971 _approve(address(this), address(uniswapV2Router), tokenAmount);
972
973
```



LINE 990

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
989 address[] memory path = new address[](3);
990 path[0] = address(this);
991 path[1] = uniswapV2Router.WETH();
992 path[2] = ETH;
993
994
```



LINE 991

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
990 path[0] = address(this);
991 path[1] = uniswapV2Router.WETH();
992 path[2] = ETH;
993
994 __approve(address(this), address(uniswapV2Router), tokenAmount);
995
```



LINE 992

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
991 path[1] = uniswapV2Router.WETH();
992 path[2] = ETH;
993
994 _approve(address(this), address(uniswapV2Router), tokenAmount);
995
996
```



LINE 1426

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

Locations

1425
1426 address account = tokenHoldersMap.keys[_lastProcessedIndex];
1427
1428 if(canAutoClaim(lastClaimTimes[account])) {
1429 if(processAccount(payable(account), true)) {
1430



LINE 1484

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

Locations

1483 function getKeyAtIndex(Map storage map, uint index) public view returns (address)
{
1484 return map.keys[index];
1485 }
1486
1487
1488



LINE 1514

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
1513 uint lastIndex = map.keys.length - 1;
1514 address lastKey = map.keys[lastIndex];
1515
1516 map.indexOf[lastKey] = index;
1517 delete map.indexOf[key];
1518
```



LINE 1519

Iow SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Token.sol

```
1518
1519 map.keys[index] = lastKey;
1520 map.keys.pop();
1521 }
1522 }
1523
```



SWC-120 | POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.

LINE 632

Iow SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- Token.sol

```
631 isL = s;
632 lunachB = block.number;
633 killNum = muchB;
634 }
635
636
```




SWC-120 | POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.

LINE 889

Iow SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- Token.sol

Locations

```
888 if (from == uniswapV2Pair) {
889 if(lunachB + killNum > block.number) {
890 __isbclisted[to] = true;
891 }
892 }
893
```





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