



MetaDoge

# Smart Contract Audit Report

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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](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 <code>abi.encodePacked()</code> with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The <code>transfer()</code> and <code>send()</code> 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





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



<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
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<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-120</b>	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	<b>low</b>	acknowledged
<b>SWC-120</b>	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	<b>low</b>	acknowledged

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 588

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 588

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 619

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 619

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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



# SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 670

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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
```

## SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 678

### low SEVERITY

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

### Source File

- Token.sol

### Locations

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

# SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 720

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 840

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 840

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 859

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 859

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 863

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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



# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 863

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 889

## low SEVERITY

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

## Source File

-Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 936

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 938

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 1108

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1138

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1201

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 1276

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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



# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 1276

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1420

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1430

## low 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
```

# SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1434

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

## SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1513

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 1798

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 1913

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

## SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1936

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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

## low SEVERITY

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

## Source File

-Token.sol

## Locations

```
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
```



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

LINE 1513

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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

### low 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

```
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

### low 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

## low 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

## Locations

```
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

## low 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

## Locations

```
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
```

# SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 572

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 573

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 574

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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
```



# SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 577

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 578

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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
```

# SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 579

## low SEVERITY

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

## Source File

- Token.sol

## Locations

```
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
```

# SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 671

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 679

### low SEVERITY

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

### Source File

- Token.sol

### Locations

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

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 721

### low SEVERITY

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

### Source File

- Token.sol

### Locations

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

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 968

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 969

### low SEVERITY

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

### Source File

- Token.sol

### Locations

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



## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 990

### low SEVERITY

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

### Source File

- Token.sol

### Locations

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

# SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 991

## low SEVERITY

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

## Source File

- Token.sol

## Locations

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

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 992

### low SEVERITY

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

### Source File

- Token.sol

### Locations

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

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1426

### low 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
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1484

### low 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  {
1485      return map.keys[index];
1486  }
1487
1488
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1514

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1519

### low SEVERITY

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

### Source File

- Token.sol

### Locations

```
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

## low 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

```
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

## low 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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