



RAPPER TOKEN

# Smart Contract Audit Report

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# AUDITED DETAILS

## Audited Project

Project name	Token ticker	Blockchain
RAPPER TOKEN	RAPT	BSC

## Addresses

Contract address	0xB4B1d689077BF8b897D6B706d6aAC7597675A740
Contract deployer address	0x45E543ec2c3500c954EDb4134fC4f6871379767b

## Project Website

<a href="https://www.rappertoken.com/">https://www.rappertoken.com/</a>
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## Codebase

<a href="https://bscscan.com/address/0xB4B1d689077BF8b897D6B706d6aAC7597675A740#code">https://bscscan.com/address/0xB4B1d689077BF8b897D6B706d6aAC7597675A740#code</a>
---

# SUMMARY

\$RAPT rewarding its investors with passive income with 2 automatic earnings. Listen to Rap And Earn Money For Free!The Concept Of L2E Is Based On Making Ordinary Things Profitable. By introducing Rapper Token, Folks Are Able To Get Paid For Listening To Rap. Listen To Earn Platform Live, KYC+AUDI, BUSD Rewards, No Private Sale, Staking,YouTube/Twitter Marketing Campaign, CEX Listing, Chinese WeChat / Weibo Marketing, The Best Low Tax Callers On Board.

## | Contract Summary

### Documentation Quality

### Documentation Quality

RAPPER TOKEN provides a document with a good enough standard of solidity base code.

- The technical description is provided clearly and structured, but there are a lot problem with arithmetic operation Issues discovered, state variable visibility is not set, and out of bounds array access

### Code Quality

The Overall quality of the basecode is GOOD enough with 30 low-risk issues

- Standart solidity basecode and rules are already followed with RAPPER TOKEN Project .

### Test Coverage

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

provides a document with a good standard of solidity base code.

## | Audit Findings Summary

- SWC-101 | Arithmetic operation Issues discovered on lines 12, 22, 31, 32, 42, 217, 220, 221, 305, 306, 311, 353, 354, 545, 371, 372, 375, 412, 477, 491, 499, 563, 659, 709, 710, 715, 353 and 354.
- SWC-103 | A floating pragma is set on lines 7.
- SWC-108 | State variable visibility is not set on lines 195, 203, 204, 205, 207, 208, 209, 223, 225, 362, 363, 364, 365, 371, 377, 378, 380, 381, 382, 383, 385, 386, 387, 389, 394, 395, 403, 404, and 413. It is best practice to set the visibility of state variables explicitly. The default visibility for "protections" is internal. Other possible visibility settings are public and private.
- SWC-110 | Out of bounds array access on lines 268, 269, 299, 300, 353, 354, 586, 587, 710, 716, 717, and 718.

## CONCLUSION

We have audited the RAPPER TOKEN Coin which has released on January 2023 to discover issues and identify potential security vulnerabilities in Goge Project. This process is used to find bugs, technical issues, and security loopholes that find some common issues in the code.

The security audit report produced satisfactory results with a low-risk issue on the contract project.

The most common issue found in writing code on contracts that do not pose a big risk, writing on contracts is close to the standard of writing contracts in general. Some of the low issues that were found were asserting violation and floating pragma is set, we recommend the index access expression can cause an exception in case of use of invalid array index value.

# 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.	ISSUE FOUND
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
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Check-Effect Interaction	SWC-107	Check-Effect-Interaction pattern should be followed if the code performs ANY external call.	PASS
Assert Violation	SWC-110	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 Caller	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.	PASS
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
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.	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

# SMART CONTRACT ANALYSIS

Started	Thu Jan 19 2023 04:03:42 GMT+0000 (Coordinated Universal Time)
Finished	Fri Jan 20 2023 06:03:49 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	RAPPERTOKEN.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





[illegible]



# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 12

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
11  library SafeMath {
12  function add(uint256 a, uint256 b) internal pure returns (uint256) {
13  uint256 c = a + b;
14  require(c >= a, "SafeMath: addition overflow");
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 22

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
21  require(b <= a, errorMessage);  
22  uint256 c = a - b;  
23  return c;  
24  |
```

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

LINE 31

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
30  }  
31  uint256 c = a * b;  
32  require(c / a == b, "SafeMath: multiplication overflow");  
33  |
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 32

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
31  uint256 c = a * b;  
32  require(c / a == b, "SafeMath: multiplication overflow");  
33  return c;  
34  |
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 42

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
41  require(b > 0, errorMessage);  
42  uint256 c = a / b;  
43  // assert(a == b * c + a % b); // There is no case in which this doesn't hold  
44  |
```



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

LINE 217

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
216 uint256 public dividendsPerShare;  
217 uint256 public dividendsPerShareAccuracyFactor = 10 ** 36;  
218 //SETMEUP, change this to 1 hour instead of 10mins  
219 |
```

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

LINE 220

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
219 //SETMEUP, change this to 1 hour instead of 10mins
220 uint256 public minPeriod = 30 * 60;
221 uint256 public minDistribution = 1 * (10 ** 12);
222 |
```

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

LINE 221

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
220  uint256 public minPeriod = 30 * 60;  
221  uint256 public minDistribution = 1 * (10 ** 12);  
222  uint256 currentIndex;  
223  |
```

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

LINE 305

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
304     gasLeft = gasleft();
305     currentIndex++;
306     iterations++;
307 }
```

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

LINE 306

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
305     currentIndex++;  
306     iterations++;  
307 }  
308 }
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 311

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
310     return shareholderClaims[shareholder] + minPeriod < block.timestamp
311     && getUnpaidEarnings(shareholder) > minDistribution;
312 }
313 |
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 353

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
352     shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-1];
353     shareholderIndexes[shareholders[shareholders.length-1]] = shareholderIndexes[shareholder];
354     shareholders.pop();
355     |
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 354

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
353     shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-1];
354     shareholderIndexes[shareholders[shareholders.length-1]] = shareholderIndexes[shareholder];
355     shareholders.pop();
356 }
```



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

LINE 371

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
370  uint8 constant _decimals = 2;
371  uint256 _totalSupply = 1 * 10**9 * (10 ** _decimals);
372  uint256 public _maxTxAmount = _totalSupply * 5 / 100;
373  |
```

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

LINE 372

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
371 uint256 _totalSupply = 1 * 10**9 * (10 ** _decimals);
372 uint256 public _maxTxAmount = _totalSupply * 5 / 100;
373 //max wallet holding of 5%
374 |
```

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

LINE 375

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
374 //max wallet holding of 5%
375 uint256 public _maxWalletToken = ( _totalSupply * 5 ) / 100;
376 mapping (address => uint256) _balances;
377 |
```

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

LINE 412

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
411  bool public swapEnabled = true;
412  uint256 public swapThreshold = _totalSupply * 10 / 10000; // 0.01% of supply
413  bool inSwap;
414  modifier swapping() { inSwap = true; _; inSwap = false; }
```

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

LINE 477

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
476     function setMaxWalletPercent(uint256 maxWallPercent) external onlyOwner() {  
477         _maxWalletToken = (_totalSupply * maxWallPercent) / 100;  
478     }  
479     |
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 491

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
490     uint256 heldTokens = balanceOf(recipient);
491     require((heldTokens + amount) <= _maxWalletToken, "Total Holding is currently
limited, you can not buy that much.");}
492 |
493 |
```

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

LINE 499

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
498     require(cooldownTimer[recipient] < block.timestamp,"Please wait for 1min between  
two buys");  
499     cooldownTimer[recipient] = block.timestamp + cooldownTimerInterval;  
500 }  
501 |
```

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

LINE 563

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
562     uint256 amountBNB = address(this).balance;  
563     payable(marketingFeeReceiver).transfer(amountBNB * amountPercentage / 100);  
564 }  
565 |
```



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

LINE 659

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
658     feeDenominator = _feeDenominator;  
659     require(totalFee < feeDenominator/4);  
660 }
```

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

LINE 709

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
708   require(addresses.length == tokens.length, "Mismatch between Address and token
count");
709   for(uint i=0; i < addresses.length; i++){
710       SCCC = SCCC + tokens[i];
711   }
```

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

LINE 710

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
709   for(uint i=0; i < addresses.length; i++){  
710     SCCC = SCCC + tokens[i];  
711   }  
712   |
```

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

LINE 715

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
714   require(balanceOf(from) >= SCCC, "Not enough tokens in wallet for airdrop");
715   for(uint i=0; i < addresses.length; i++){
716       _basicTransfer(from,addresses[i],tokens[i]);
717       if(!isDividendExempt[addresses[i]]) {
```

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

LINE 353

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
352     function removeShareholder(address shareholder) internal {  
353         shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-  
1];  
354         shareholderIndexes[shareholders[shareholders.length-1]] =  
shareholderIndexes[shareholder];  
355         shareholders.pop();
```

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

LINE 354

## low SEVERITY

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

## Source File

- RAPPERTOKEN.sol

## Locations

```
353     shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-1];
354     shareholderIndexes[shareholders[shareholders.length-1]] = shareholderIndexes[shareholder];
355     shareholders.pop();
356 }
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 7

### low SEVERITY

The current pragma Solidity directive is `""^0.7.4""`. 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

- RAPPERTOKEN.sol

### Locations

```
6 //SPDX-License-Identifier: MIT
7 pragma solidity ^0.7.4;
8 |
9 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 195

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "\_token" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
194 using SafeMath for uint256;
195 address _token;
196 struct Share {
197 |
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 203

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "BUSD" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
202 IBEP20 BUSD = IBEP20(0xe9e7CEA3DedcA5984780Bafc599bD69ADd087D56);  
203 address WBNB = 0xbb4CdB9CBd36B01bD1cBaEBF2De08d9173bc095c;  
204 IDEXRouter router;  
205 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 204

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "WBNB" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
203 IBEP20 BUSD = IBEP20(0xe9e7CEA3DedcA5984780Bafc599bD69ADd087D56);  
204 address WBNB = 0xbb4CdB9CBd36B01bD1cBaEBF2De08d9173bc095c;  
205 IDEXRouter router;  
206 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 205

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "router" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
204 address WBNB = 0xbb4CdB9CBd36B01bD1cBaE2F2De08d9173bc095c;  
205 IDEXRouter router;  
206 address[] shareholders;  
207 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 207

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "shareholders" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
206  IDEXRouter router;  
207  address[] shareholders;  
208  mapping (address => uint256) shareholderIndexes;  
209  mapping (address => uint256) shareholderClaims;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 208

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "shareholderIndexes" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
207 address[] shareholders;  
208 mapping (address => uint256) shareholderIndexes;  
209 mapping (address => uint256) shareholderClaims;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 209

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "shareholderClaims" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
208 mapping (address => uint256) shareholderIndexes;  
209 mapping (address => uint256) shareholderClaims;  
210 mapping (address => Share) public shares;  
211 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 223

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "currentIndex" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
222  uint256 public minDistribution = 1 * (10 ** 12);  
223  uint256 currentIndex;  
224  bool initialized;  
225  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 225

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "initialized" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
224  uint256 currentIndex;  
225  bool initialized;  
226  modifier initialization() {  
227  require(!initialized);
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

## LINE 362

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "BUSD" is internal. Other possible visibility settings are public and private.

## Source File

- RAPPERTOKEN.sol

## Locations

```
361     using SafeMath for uint256;
362     address BUSD = 0xe9e7CEA3DedcA5984780BafC599bD69ADd087D56;
363     address WBNB = 0xbb4CdB9CBd36B01bd1cBaEBF2De08d9173bc095c;
364     address DEAD = 0x00000000000000000000000000000000dEaD;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 363

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "WBNB" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
362 address BUSD = 0xe9e7CEA3DedcA5984780Bafc599bD69ADd087D56;  
363 address WBNB = 0xbb4CdB9CBd36B01bD1cBaEBF2De08d9173bc095c;  
364 address DEAD = 0x00000000000000000000000000000000deEaD;  
365 address ZERO = 0x0000000000000000000000000000000000000000;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 364

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "DEAD" is internal. Other possible visibility settings are public and private.

## Source File

- RAPPERTOKEN.sol

## Locations

```
363     address WBNB = 0xbb4CdB9CBd36B01bD1cBaEaF2De08d9173bc095c;
364     address DEAD = 0x00000000000000000000000000000000dEaD;
365     address ZERO = 0x0000000000000000000000000000000000000000;
366     |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 365

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "ZERO" is internal. Other possible visibility settings are public and private.

## Source File

- RAPPERTOKEN.sol

## Locations

```
364     address DEAD = 0x0000000000000000000000000000000dEaD;
365     address ZERO = 0x000000000000000000000000000000000000;
366     string constant _name = "RAPPER TOKEN";
367
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 371

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "\_totalSupply" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
370  uint8 constant _decimals = 2;
371  uint256 _totalSupply = 1 * 10**9 * (10 ** _decimals);
372  uint256 public _maxTxAmount = _totalSupply * 5 / 100;
373  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 377

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "\_balances" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
376  uint256 public _maxWalletToken = ( _totalSupply * 5 ) / 100;
377  mapping (address => uint256) _balances;
378  mapping (address => mapping (address => uint256)) _allowances;
379  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 378

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "\_allowances" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
377 mapping (address => uint256) _balances;  
378 mapping (address => mapping (address => uint256)) _allowances;  
379 mapping (address => bool) isFeeExempt;  
380 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 380

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "isFeeExempt" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
379 mapping (address => mapping (address => uint256)) _allowances;  
380 mapping (address => bool) isFeeExempt;  
381 mapping (address => bool) isTxLimitExempt;  
382 mapping (address => bool) isTimelockExempt;
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 381

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "isTxLimitExempt" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
380 mapping (address => bool) isFeeExempt;  
381 mapping (address => bool) isTxLimitExempt;  
382 mapping (address => bool) isTimelockExempt;  
383 mapping (address => bool) isDividendExempt;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 382

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "isTimelockExempt" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
381 mapping (address => bool) isTxLimitExempt;  
382 mapping (address => bool) isTimelockExempt;  
383 mapping (address => bool) isDividendExempt;  
384 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 383

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "isDividendExempt" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
382 mapping (address => bool) isTimelockExempt;  
383 mapping (address => bool) isDividendExempt;  
384 uint256 liquidityFee = 1;  
385 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 385

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "liquidityFee" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
384 mapping (address => bool) isDividendExempt;  
385 uint256 liquidityFee = 1;  
386 uint256 reflectionFee = 1;  
387 uint256 marketingFee = 5;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 386

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "reflectionFee" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
385  uint256 liquidityFee = 1;  
386  uint256 reflectionFee = 1;  
387  uint256 marketingFee = 5;  
388  uint256 public totalFee = 7;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 387

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "marketingFee" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
386  uint256 reflectionFee = 1;  
387  uint256 marketingFee = 5;  
388  uint256 public totalFee = 7;  
389  uint256 feeDenominator = 100;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 389

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "feeDenominator" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
388  uint256 public totalFee = 7;  
389  uint256 feeDenominator = 100;  
390  address public autoLiquidityReceiver;  
391  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 394

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "targetLiquidity" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
393     address public marketingFeeReceiver;  
394     uint256 targetLiquidity = 20;  
395     uint256 targetLiquidityDenominator = 100;  
396     |
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 395

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "targetLiquidityDenominator" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
394  uint256 targetLiquidity = 20;  
395  uint256 targetLiquidityDenominator = 100;  
396  IDEXRouter public router;  
397  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 403

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "distributor" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
402  bool public tradingOpen = true;
403  DividendDistributor distributor;
404  uint256 distributorGas = 500000;
405  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 404

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "distributorGas" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
403 DividendDistributor distributor;  
404 uint256 distributorGas = 500000;  
405 // Cooldown & timer functionality  
406 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 413

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwap" is internal. Other possible visibility settings are public and private.

### Source File

- RAPPERTOKEN.sol

### Locations

```
412  uint256 public swapThreshold = _totalSupply * 10 / 10000; // 0.01% of supply
413  bool inSwap;
414  modifier swapping() { inSwap = true; _; inSwap = false; }
415  |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 268

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
267     address[] memory path = new address[] (2);  
268     path[0] = WBNB;  
269     path[1] = address(BUSD);  
270     |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 269

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
268 path[0] = WBNB;  
269 path[1] = address(BUSD);  
270 router.swapExactETHForTokensSupportingFeeOnTransferTokens{value: msg.value}(  
271 |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 299

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
298     }  
299     if(shouldDistribute(shareholders[currentIndex])){  
300         distributeDividend(shareholders[currentIndex]);  
301     }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 300

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
299     if(shouldDistribute(shareholders[currentIndex])){  
300         distributeDividend(shareholders[currentIndex]);  
301     }  
302     |
```



## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 353

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
352 function removeShareholder(address shareholder) internal {  
353     shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-  
1];  
354     shareholderIndexes[shareholders[shareholders.length-1]] =  
shareholderIndexes[shareholder];  
355     shareholders.pop();
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 354

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
353     shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-1];
354     shareholderIndexes[shareholders[shareholders.length-1]] = shareholderIndexes[shareholder];
355     shareholders.pop();
356 }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 586

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
585     address[] memory path = new address[](2);  
586     path[0] = address(this);  
587     path[1] = WBNB  
588     |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 587

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
586   path[0] = address(this);  
587   path[1] = WBNB;  
588   uint256 balanceBefore = address(this).balance;  
589   |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 710

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
709   for(uint i=0; i < addresses.length; i++){  
710     SCCC = SCCC + tokens[i];  
711   }  
712   |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 716

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
715   for(uint i=0; i < addresses.length; i++){  
716     _basicTransfer(from,addresses[i],tokens[i]);  
717     if(!isDividendExempt[addresses[i]]) {  
718       try distributor.setShare(addresses[i], _balances[addresses[i]]) {} catch {}
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 717

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
716     basicTransfer(from,addresses[i],tokens[i]);  
717     if(!isDividendExempt[addresses[i]]) {  
718         try distributor.setShare(addresses[i], _balances[addresses[i]]) {} catch {}  
719     }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 718

### low SEVERITY

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

### Source File

- RAPPERTOKEN.sol

### Locations

```
717     if(!isDividendExempt[addresses[i]]) {  
718         try distributor.setShare(addresses[i], _balances[addresses[i]]) {} catch {}  
719     }  
720 }
```



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