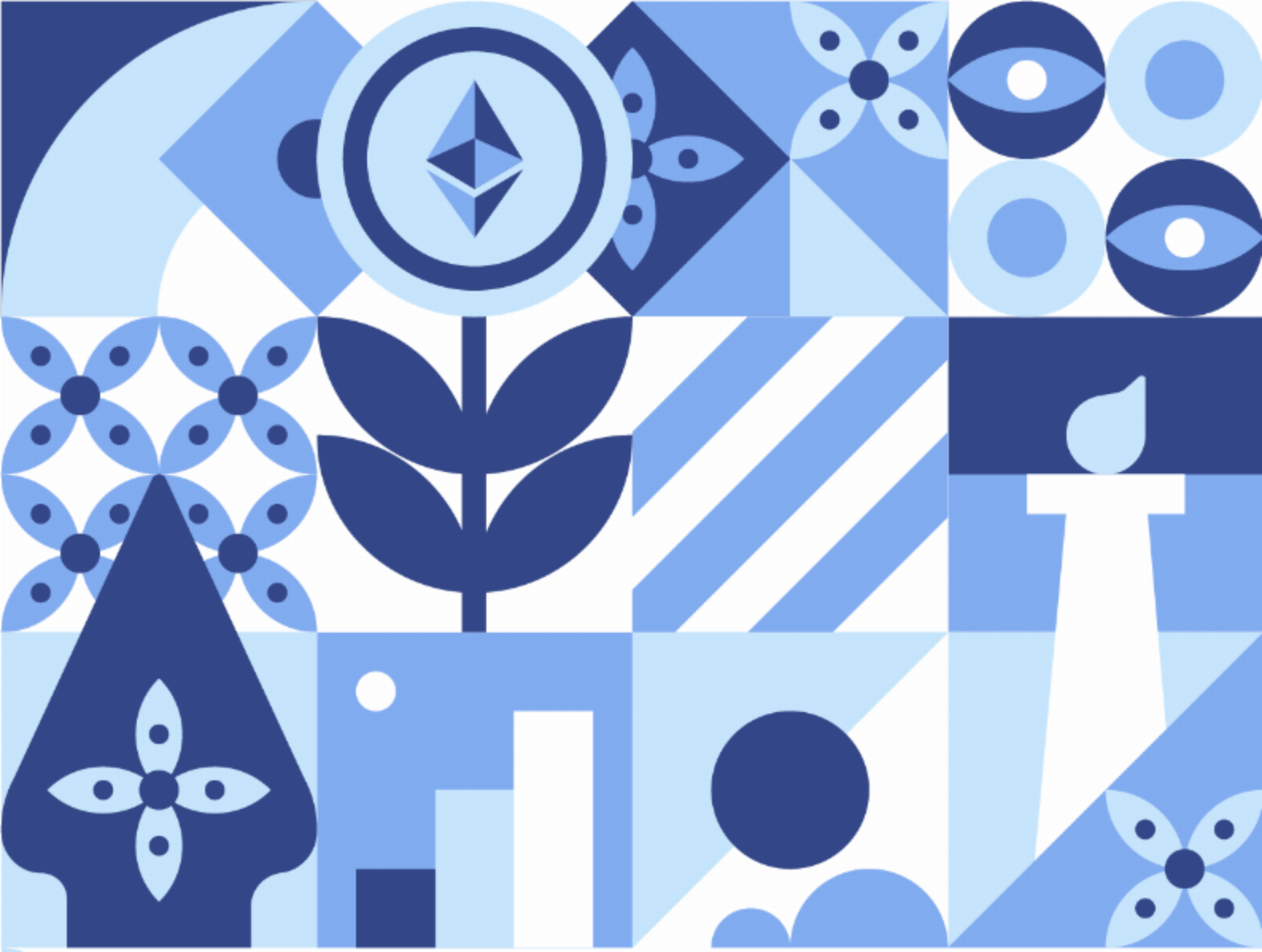

AKITSUKI

Smart Contract Audit Report

SYSFIXED

06 Aug 2022

TABLE OF CONTENTS

AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
AKITSUKI	AKI	Ethereum

Addresses

Contract address	0x9eFdFC77017cB9b878300eCdcA21fAB0529a22A0
Contract deployer address	0x1F0D529287B2acaD6480ba771bd73862C9a1b0f5

Project Website

https://akitsuki.org/

Codebase

https://etherscan.io/address/0x9eFdFC77017cB9b878300eCdcA21fAB0529a22A0#code

SUMMARY

Hello Holy Guards!After a successful Guardian Game on League of Legends, the clan is getting stronger! Many players are joining us! Protectors discord server boosters are receiving a share of the cash prize as well. Something is cooking, stay tuned.

Contract Summary

Documentation Quality

AKITSUKI 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 AKITSUKI with the discovery of several low issues.

Test Coverage

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

Audit Findings Summary

- SWC-100 SWC-108 | Explicitly define visibility for all state variables on lines 957.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 213, 227, 242, 243, 256, 268, 283, 297, 311, 325, 341, 364, 387, 413, 998, 998, 998, 998, 1007, 1007, 1019, 1203, 1205, 1249, 1249, 1249, 1249, 1260, 1260, 1260, 1260, 1367, 1401, 1409, 1418 and 1205.
- 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 1204, 1205, 1205, 1369, 1370, 1372, 1373, 1521 and 1522.

CONCLUSION

We have audited the AKITSUKI project released on August 2022 to discover issues and identify potential security vulnerabilities in AKITSUKI 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 AKITSUKI 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 state variable visibility is not set, 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.

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.	PASS
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.	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
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.	PASS
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	Friday Aug 05 2022 01:08:57 GMT+0000 (Coordinated Universal Time)
Finished	Saturday Aug 06 2022 08:59:11 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	LiquidityGeneratorToken.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	COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
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-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-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 213

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
212   unchecked {
213   uint256 c = a + b;
214   if (c < a) return (false, 0);
215   return (true, c);
216   }
217
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 227

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
226   if (b > a) return (false, 0);
227   return (true, a - b);
228   }
229   }
230
231
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 242

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
241   if (a == 0) return (true, 0);
242   uint256 c = a * b;
243   if (c / a != b) return (false, 0);
244   return (true, c);
245   }
246
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 243

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
242   uint256 c = a * b;
243   if (c / a != b) return (false, 0);
244   return (true, c);
245   }
246   }
247
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 256

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
255   if (b == 0) return (false, 0);
256   return (true, a / b);
257   }
258   }
259
260
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 268

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
267   if (b == 0) return (false, 0);
268   return (true, a % b);
269   }
270   }
271
272
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 283

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
282   function add(uint256 a, uint256 b) internal pure returns (uint256) {
283   return a + b;
284   }
285
286   /**
287
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 297

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
296   function sub(uint256 a, uint256 b) internal pure returns (uint256) {
297   return a - b;
298   }
299
300   /**
301
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 311

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
310   function mul(uint256 a, uint256 b) internal pure returns (uint256) {
311   return a * b;
312   }
313
314   /**
315
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 325

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
324   function div(uint256 a, uint256 b) internal pure returns (uint256) {
325   return a / b;
326   }
327
328   /**
329
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 341

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
340   function mod(uint256 a, uint256 b) internal pure returns (uint256) {
341   return a % b;
342   }
343
344   /**
345
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 364

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
363   require(b <= a, errorMessage);
364   return a - b;
365   }
366   }
367
368
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 387

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
386   require(b > 0, errorMessage);
387   return a / b;
388   }
389   }
390
391
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 413

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
412   require(b > 0, errorMessage);
413   return a % b;
414   }
415   }
416   }
417
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 998

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
997   require(
998   taxFeeBps_ + liquidityFeeBps_ + charityFeeBps_ <= 10**4 / 4,
999   "Total fee is over 25%"
1000   );
1001
1002
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 998

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
997   require(
998   taxFeeBps_ + liquidityFeeBps_ + charityFeeBps_ <= 10**4 / 4,
999   "Total fee is over 25%"
1000   );
1001
1002
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 998

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
997   require(
998   taxFeeBps_ + liquidityFeeBps_ + charityFeeBps_ <= 10**4 / 4,
999   "Total fee is over 25%"
1000   );
1001
1002
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 998

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
997   require(
998   taxFeeBps_ + liquidityFeeBps_ + charityFeeBps_ <= 10**4 / 4,
999   "Total fee is over 25%"
1000   );
1001
1002
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1007

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1006   _tTotal = totalSupply_;
1007   _rTotal = (MAX - (MAX % _tTotal));
1008
1009   _taxFee = taxFeeBps_;
1010   _previousTaxFee = _taxFee;
1011
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 1007

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1006   _tTotal = totalSupply_;
1007   _rTotal = (MAX - (MAX % _tTotal));
1008
1009   _taxFee = taxFeeBps_;
1010   _previousTaxFee = _taxFee;
1011
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1019

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1018
1019   numTokensSellToAddToLiquidity = totalSupply_.mul(5).div(10**4); // 0.05%
1020
1021   swapAndLiquifyEnabled = true;
1022
1023
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1203

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1202   require(_isExcluded[account], "Account is already excluded");
1203   for (uint256 i = 0; i < _excluded.length; i++) {
1204   if (_excluded[i] == account) {
1205   _excluded[i] = _excluded[_excluded.length - 1];
1206   _tOwned[account] = 0;
1207
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1205

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1204   if (_excluded[i] == account) {
1205   _excluded[i] = _excluded[_excluded.length - 1];
1206   _tOwned[account] = 0;
1207   _isExcluded[account] = false;
1208   _excluded.pop();
1209
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1249

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1248   require(
1249   _taxFee + _liquidityFee + _charityFee <= 10**4 / 4,
1250   "Total fee is over 25%"
1251   );
1252   }
1253
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1249

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1248   require(
1249   _taxFee + _liquidityFee + _charityFee <= 10**4 / 4,
1250   "Total fee is over 25%"
1251   );
1252   }
1253
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1249

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1248   require(
1249   _taxFee + _liquidityFee + _charityFee <= 10**4 / 4,
1250   "Total fee is over 25%"
1251   );
1252   }
1253
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1249

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1248   require(
1249   _taxFee + _liquidityFee + _charityFee <= 10**4 / 4,
1250   "Total fee is over 25%"
1251   );
1252   }
1253
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1260

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1259   require(
1260   _taxFee + _liquidityFee + _charityFee <= 10**4 / 4,
1261   "Total fee is over 25%"
1262   );
1263   }
1264
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1260

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1259   require(
1260   _taxFee + _liquidityFee + _charityFee <= 10**4 / 4,
1261   "Total fee is over 25%"
1262   );
1263   }
1264
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1260

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1259   require(
1260   _taxFee + _liquidityFee + _charityFee <= 10**4 / 4,
1261   "Total fee is over 25%"
1262   );
1263   }
1264
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1260

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1259   require(
1260   _taxFee + _liquidityFee + _charityFee <= 10**4 / 4,
1261   "Total fee is over 25%"
1262   );
1263   }
1264
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1367

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1366   uint256 tSupply = _tTotal;
1367   for (uint256 i = 0; i < _excluded.length; i++) {
1368   if (
1369   _rOwned[_excluded[i]] > rSupply ||
1370   _tOwned[_excluded[i]] > tSupply
1371
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1401

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1400   function calculateTaxFee(uint256 _amount) private view returns (uint256) {
1401   return _amount.mul(_taxFee).div(10**4);
1402   }
1403
1404   function calculateLiquidityFee(uint256 _amount)
1405
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1409

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1408   {
1409   return _amount.mul(_liquidityFee).div(10**4);
1410   }
1411
1412   function calculateCharityFee(uint256 _amount)
1413
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1418

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1417   if (_charityAddress == address(0)) return 0;
1418   return _amount.mul(_charityFee).div(10**4);
1419   }
1420
1421   function removeAllFee() private {
1422
```

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

LINE 1205

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1204   if (_excluded[i] == account) {
1205   _excluded[i] = _excluded[_excluded.length - 1];
1206   _tOwned[account] = 0;
1207   _isExcluded[account] = false;
1208   _excluded.pop();
1209
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 957

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
956
957   bool inSwapAndLiquify;
958   bool public swapAndLiquifyEnabled;
959
960   uint256 private numTokensSellToAddToLiquidity;
961
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1204

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1203   for (uint256 i = 0; i < _excluded.length; i++) {
1204   if (_excluded[i] == account) {
1205   _excluded[i] = _excluded[_excluded.length - 1];
1206   _tOwned[account] = 0;
1207   _isExcluded[account] = false;
1208
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1205

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1204   if (_excluded[i] == account) {
1205   _excluded[i] = _excluded[_excluded.length - 1];
1206   _tOwned[account] = 0;
1207   _isExcluded[account] = false;
1208   _excluded.pop();
1209
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1205

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1204   if (_excluded[i] == account) {
1205   _excluded[i] = _excluded[_excluded.length - 1];
1206   _tOwned[account] = 0;
1207   _isExcluded[account] = false;
1208   _excluded.pop();
1209
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1369

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1368   if (
1369   _rOwned[_excluded[i]] > rSupply ||
1370   _tOwned[_excluded[i]] > tSupply
1371   ) return (_rTotal, _tTotal);
1372   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
1373
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1370

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1369   _rOwned[_excluded[i]] > rSupply ||
1370   _tOwned[_excluded[i]] > tSupply
1371   ) return (_rTotal, _tTotal);
1372   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
1373   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
1374
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1372

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1371   ) return (_rTotal, _tTotal);
1372   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
1373   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
1374   }
1375   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
1376
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1373

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1372   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
1373   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
1374   }
1375   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
1376   return (rSupply, tSupply);
1377
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1521

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1520   address[] memory path = new address[](2);
1521   path[0] = address(this);
1522   path[1] = uniswapV2Router.WETH();
1523
1524   _approve(address(this), address(uniswapV2Router), tokenAmount);
1525
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1522

low SEVERITY

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

Source File

- LiquidityGeneratorToken.sol

Locations

```
1521   path[0] = address(this);
1522   path[1] = uniswapV2Router.WETH();
1523
1524   _approve(address(this), address(uniswapV2Router), tokenAmount);
1525
1526
```

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