



KIKI

Smart Contract Audit Report

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AUDITED DETAILS

Audited Project

| Project name | Token ticker | Blockchain |
|--------------|--------------|------------|
| KIKI | KIKI | Ethereum |

Addresses

| | |
|---------------------------|--|
| Contract address | 0x369b77bbeeee50e6ea206dcf41ee670c47360055 |
| Contract deployer address | 0xbb616316B47c91240604A1E17Ac20fb677873302 |

Project Website

<https://www.tabinekokiki.com/>

Codebase

<https://etherscan.io/address/0x369b77bbeeee50e6ea206dcf41ee670c47360055#code>

SUMMARY

Far more than a crypto project, KIKI is a Movement. Combined with NFT, Novel, Charity, and Love, KIKI is one of its kind, a blockchain project with the love of art and charity, an art project with the spirit of blockchain.

Contract Summary

Documentation Quality

KIKI 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 KIKI 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 1093.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 114, 132, 151, 152, 169, 185, 200, 214, 228, 242, 258, 281, 308, 334, 689, 1070, 1070, 1071, 1071, 1096, 1096, 1097, 1097, 1307, 1309, 1342, 1450, 1481, 1489, 1493 and 1309.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 1.
- 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 1308, 1309, 1309, 1452, 1453, 1455, 1456, 1614 and 1615.

CONCLUSION

We have audited the KIKI project released on November 2021 to discover issues and identify potential security vulnerabilities in KIKI 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 KIKI 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, 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. | 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. | 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 grieving 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 | Monday Nov 29 2021 21:55:08 GMT+0000 (Coordinated Universal Time) |
| Finished | Tuesday Nov 30 2021 08:53:40 GMT+0000 (Coordinated Universal Time) |
| Mode | Standard |
| Main Source File | KIKI.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 |

[illegible]

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 114

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
113     unchecked {  
114         uint256 c = a + b;  
115         if (c < a) return (false, 0);  
116         return (true, c);  
117     }  
118
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 132

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
131     if (b > a) return (false, 0);
132     return (true, a - b);
133   }
134 }
135
136
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 151

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
150   if (a == 0) return (true, 0);
151   uint256 c = a * b;
152   if (c / a != b) return (false, 0);
153   return (true, c);
154   }
155
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 152

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
151  uint256 c = a * b;  
152  if (c / a != b) return (false, 0);  
153  return (true, c);  
154  }  
155  }  
156
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 169

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
168   if (b == 0) return (false, 0);
169   return (true, a / b);
170   }
171   }
172
173
```


SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 185

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
184   if (b == 0) return (false, 0);
185   return (true, a % b);
186   }
187   }
188
189
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 200

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
199     function add(uint256 a, uint256 b) internal pure returns (uint256) {  
200         return a + b;  
201     }  
202  
203     /**  
204
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 214

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
213     function sub(uint256 a, uint256 b) internal pure returns (uint256) {  
214         return a - b;  
215     }  
216  
217     /**  
218
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 228

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
227     function mul(uint256 a, uint256 b) internal pure returns (uint256) {  
228         return a * b;  
229     }  
230  
231     /**  
232
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 242

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
241     function div(uint256 a, uint256 b) internal pure returns (uint256) {  
242         return a / b;  
243     }  
244  
245     /**  
246
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 258

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
257     function mod(uint256 a, uint256 b) internal pure returns (uint256) {  
258         return a % b;  
259     }  
260  
261     /**  
262
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 281

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
280   require(b <= a, errorMessage);
281   return a - b;
282   }
283   }
284
285
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 308

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
307     require(b > 0, errorMessage);
308     return a / b;
309 }
310 }
311
312
```


SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 334

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
333     require(b > 0, errorMessage);  
334     return a % b;  
335 }  
336 }  
337 }  
338
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 689

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
688     _owner = address(0);  
689     _lockTime = block.timestamp + time;  
690     emit OwnershipTransferred(_owner, address(0));  
691 }  
692  
693
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 1070

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1069     uint256 private constant MAX = ~uint256(0);
1070     uint256 private _tTotal = 100_000_000 * 10**18;
1071     uint256 private _rTotal = (MAX - (MAX % _tTotal));
1072     uint256 private _tFeeTotal;
1073
1074
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1070

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1069  uint256 private constant MAX = ~uint256(0);
1070  uint256 private _tTotal = 100_000_000 * 10**18;
1071  uint256 private _rTotal = (MAX - (MAX % _tTotal));
1072  uint256 private _tFeeTotal;
1073
1074
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1071

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1070     uint256 private _tTotal = 100_000_000 * 10**18;
1071     uint256 private _rTotal = (MAX - (MAX % _tTotal));
1072     uint256 private _tFeeTotal;
1073
1074     string private _name = "KIKI";
1075
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 1071

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1070  uint256 private _tTotal = 100_000_000 * 10**18;
1071  uint256 private _rTotal = (MAX - (MAX % _tTotal));
1072  uint256 private _tFeeTotal;
1073
1074  string private _name = "KIKI";
1075
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 1096

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1095
1096     uint256 public _maxTxAmount = 100_000_000 * 10**18;
1097     uint256 private numTokensSellToAddToLiquidity = 300_000 * 10**18;
1098
1099     event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
1100
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1096

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1095
1096  uint256 public _maxTxAmount = 100_000_000 * 10**18;
1097  uint256 private numTokensSellToAddToLiquidity = 300_000 * 10**18;
1098
1099  event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
1100
```


SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 1097

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1096 uint256 public _maxTxAmount = 100_000_000 * 10**18;
1097 uint256 private numTokensSellToAddToLiquidity = 300_000 * 10**18;
1098
1099 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
1100 event SwapAndLiquifyEnabledUpdated(bool enabled);
1101
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1097

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1096 uint256 public _maxTxAmount = 100_000_000 * 10**18;
1097 uint256 private numTokensSellToAddToLiquidity = 300_000 * 10**18;
1098
1099 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
1100 event SwapAndLiquifyEnabledUpdated(bool enabled);
1101
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1307

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1306   require(!_isExcluded[account], "Account is already included");
1307   for (uint256 i = 0; i < _excluded.length; i++) {
1308       if (_excluded[i] == account) {
1309           _excluded[i] = _excluded[_excluded.length - 1];
1310           _tOwned[account] = 0;
1311       }
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1309

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1308     if (_excluded[i] == account) {  
1309         _excluded[i] = _excluded[_excluded.length - 1];  
1310         _tOwned[account] = 0;  
1311         _isExcluded[account] = false;  
1312         _excluded.pop();  
1313     }
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1342

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1341     function setMaxTxPercent(uint256 maxTxPercent) external onlyOwner {
1342         _maxTxAmount = _tTotal.mul(maxTxPercent).div(10**2);
1343     }
1344
1345     function setMarketingWallet(address payable marketingWallet)
1346
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1450

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1449     uint256 tSupply = _tTotal;
1450     for (uint256 i = 0; i < _excluded.length; i++) {
1451         if (
1452             _rOwned[_excluded[i]] > rSupply ||
1453             _tOwned[_excluded[i]] > tSupply
1454         )
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1481

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1480     function calculateTaxFee(uint256 _amount) private view returns (uint256) {
1481         return _amount.mul(_taxFee).div(10**2);
1482     }
1483
1484     function calculateLiquidityFee(uint256 _amount)
1485
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1489

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1488 {  
1489     return _amount.mul(_liquidityFee).div(10**2);  
1490 }  
1491  
1492 function calculateBurnFee(uint256 _amount) private view returns (uint256) {  
1493
```


SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1493

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1492     function calculateBurnFee(uint256 _amount) private view returns (uint256) {  
1493         return _amount.mul(_burnFee).div(10**2);  
1494     }  
1495  
1496     function removeAllFee() private {  
1497
```

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

LINE 1309

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1308   if (_excluded[i] == account) {  
1309       _excluded[i] = _excluded[_excluded.length - 1];  
1310       _tOwned[account] = 0;  
1311       _isExcluded[account] = false;  
1312       _excluded.pop();  
1313   }
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 1

low SEVERITY

The current pragma Solidity directive is ""^0.8.5"". 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

- KIKI.sol

Locations

```
0
1  pragma solidity ^0.8.5;
2
3  // SPDX-License-Identifier: Unlicensed
4
5
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 1093

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

- KIKI.sol

Locations

```
1092
1093  bool inSwapAndLiquify;
1094  bool public swapAndLiquifyEnabled = true;
1095
1096  uint256 public _maxTxAmount = 100_000_000 * 10**18;
1097
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1308

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1307   for (uint256 i = 0; i < _excluded.length; i++) {  
1308     if (_excluded[i] == account) {  
1309       _excluded[i] = _excluded[_excluded.length - 1];  
1310       _tOwned[account] = 0;  
1311       _isExcluded[account] = false;  
1312     }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1309

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1308   if (_excluded[i] == account) {  
1309       _excluded[i] = _excluded[_excluded.length - 1];  
1310       _tOwned[account] = 0;  
1311       _isExcluded[account] = false;  
1312       _excluded.pop();  
1313   }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1309

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1308   if (_excluded[i] == account) {  
1309       _excluded[i] = _excluded[_excluded.length - 1];  
1310       _tOwned[account] = 0;  
1311       _isExcluded[account] = false;  
1312       _excluded.pop();  
1313   }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1452

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1451   if (  
1452     _rOwned[_excluded[i]] > rSupply ||  
1453     _tOwned[_excluded[i]] > tSupply  
1454   ) return (_rTotal, _tTotal);  
1455   rSupply = rSupply.sub(_rOwned[_excluded[i]]);  
1456
```


SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1453

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1452  _rOwned[_excluded[i]] > rSupply ||  
1453  _tOwned[_excluded[i]] > tSupply  
1454  ) return (_rTotal, _tTotal);  
1455  rSupply = rSupply.sub(_rOwned[_excluded[i]]);  
1456  tSupply = tSupply.sub(_tOwned[_excluded[i]]);  
1457
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1455

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1454     ) return (_rTotal, _tTotal);  
1455     rSupply = rSupply.sub(_rOwned[_excluded[i]]);  
1456     tSupply = tSupply.sub(_tOwned[_excluded[i]]);  
1457     }  
1458     if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);  
1459
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1456

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1455   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
1456   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
1457   }
1458   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
1459   return (rSupply, tSupply);
1460
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1614

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1613     address[] memory path = new address[](2);
1614     path[0] = address(this);
1615     path[1] = uniswapV2Router.WETH();
1616
1617     _approve(address(this), address(uniswapV2Router), tokenAmount);
1618
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1615

low SEVERITY

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

Source File

- KIKI.sol

Locations

```
1614 path[0] = address(this);
1615 path[1] = uniswapV2Router.WETH();
1616
1617 _approve(address(this), address(uniswapV2Router), tokenAmount);
1618
1619
```

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