



CATCEO

Smart Contract Audit Report

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
CATCEO	CATCEO	Binance Smart Chain

Addresses

Contract address	0x4937e7d93dd8d8e76eb83659f109cdc633ffdee9
Contract deployer address	0xca94554ea45D90897F46F7d12aff87e4f2D997c1

Project Website

<https://catceo.ai/>

Codebase

<https://bscscan.com/address/0x4937e7d93dd8d8e76eb83659f109cdc633ffdee9#code>

SUMMARY

\$CATCEO Tokens burning is used to increase the price of a crypto asset by controlling the supply. It involves sending crypto tokens to a wallet that does not have private keys. When tickets are sent to this wallet address, they essentially become inaccessible.

Contract Summary

Documentation Quality

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

- The technical description is provided clearly and structured and also don't have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by CATCEO 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 132, 132, 132, 132, 133, 133, 135, 135, 232, 238, 248, 281, 296, 298, 320, 321, 326, 329, 331, 359, 359, 360, 360, 362, 362, 383, 389, 390, 392, 392, 400, 406, 409, 410, 412, 468, 472, 475, 476, 514 and 298.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 6.
- 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 297, 298, 298, 407, 407, 409, 410, 498, 499 and 515.

CONCLUSION

We have audited the CATCEO project released on March 2023 to discover issues and identify potential security vulnerabilities in CATCEO 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 satisfactory results with low-risk issues.

The CATCEO smart contract code issues 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, and out-of-bounds array access which the index access expression can cause an exception in case an invalid array index value is used. The current pragma Solidity directive is `^0.8.17`. Specifying a fixed compiler version is recommended 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.

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.	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 <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

SMART CONTRACT ANALYSIS

Started	Thursday Mar 02 2023 04:33:01 GMT+0000 (Coordinated Universal Time)
Finished	Friday Mar 03 2023 03:36:07 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	CATCEO.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

LINE 132

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
131
132  uint256 private _tTotal = 420 *10**15 * 10**_decimals;
133  uint256 private _rTotal = (MAX - (MAX % _tTotal));
134
135  uint256 public swapTokensAtAmount = 1e14 * 10**_decimals;
136
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 132

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
131
132  uint256 private _tTotal = 420 *10**15 * 10**_decimals;
133  uint256 private _rTotal = (MAX - (MAX % _tTotal));
134
135  uint256 public swapTokensAtAmount = 1e14 * 10**_decimals;
136
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 132

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
131
132  uint256 private _tTotal = 420 *10**15 * 10**_decimals;
133  uint256 private _rTotal = (MAX - (MAX % _tTotal));
134
135  uint256 public swapTokensAtAmount = 1e14 * 10**_decimals;
136
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 132

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
131
132  uint256 private _tTotal = 420 *10**15 * 10**_decimals;
133  uint256 private _rTotal = (MAX - (MAX % _tTotal));
134
135  uint256 public swapTokensAtAmount = 1e14 * 10**_decimals;
136
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 133

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
132 uint256 private _tTotal = 420 *10**15 * 10**_decimals;
133 uint256 private _rTotal = (MAX - (MAX % _tTotal));
134
135 uint256 public swapTokensAtAmount = 1e14 * 10**_decimals;
136
137
```


SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 133

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
132 uint256 private _tTotal = 420 *10**15 * 10**_decimals;
133 uint256 private _rTotal = (MAX - (MAX % _tTotal));
134
135 uint256 public swapTokensAtAmount = 1e14 * 10**_decimals;
136
137
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 135

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
134
135  uint256 public swapTokensAtAmount = 1e14 * 10**_decimals;
136
137  address public deadWallet = 0x00000000000000000000000000000000dEaD;
138  address public marketingWallet = 0xca94554ea45D90897F46F7d12aff87e4f2D997c1;
139
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 135

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
134
135  uint256 public swapTokensAtAmount = 1e14 * 10**_decimals;
136
137  address public deadWallet = 0x0000000000000000000000000000000000000000000000000000000000000000dEaD;
138  address public marketingWallet = 0xca94554ea45D90897F46F7d12aff87e4f2D997c1;
139
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 232

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
231   require(currentAllowance >= amount, "BEP20: transfer amount exceeds allowance");
232   _approve(sender, _msgSender(), currentAllowance - amount);
233
234   return true;
235   }
236
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 238

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
237 function increaseAllowance(address spender, uint256 addedValue) public returns
(bool) {
238     _approve(_msgSender(), spender, _allowances[_msgSender()][spender] + addedValue);
239     return true;
240 }
241
242
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 248

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
247   require(currentAllowance >= subtractedValue, "BEP20: decreased allowance below
zero");
248   _approve(_msgSender(), spender, currentAllowance - subtractedValue);
249
250   return true;
251   }
252
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 281

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
280  uint256 currentRate = _getRate();
281  return rAmount / currentRate;
282  }
283
284  //@dev kept original RFI naming -> "reward" as in reflection
285
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 296

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
295   require(!_isExcluded[account], "Account is not excluded");
296   for (uint256 i = 0; i < _excluded.length; i++) {
297     if (_excluded[i] == account) {
298       _excluded[i] = _excluded[_excluded.length - 1];
299       _tOwned[account] = 0;
300
```


SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 298

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
297   if (_excluded[i] == account) {  
298     _excluded[i] = _excluded[_excluded.length - 1];  
299     _tOwned[account] = 0;  
300     _isExcluded[account] = false;  
301     _excluded.pop();  
302
```

SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED

LINE 320

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
319     function _reflectRfi(uint256 rRfi, uint256 tRfi) private {
320         _rTotal -= rRfi;
321         totFeesPaid.rfi += tRfi;
322     }
323
324
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 321

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
320  _rTotal -= rRfi;  
321  totFeesPaid.rfi += tRfi;  
322  }  
323  
324  
325
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 326

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
325     function _takeMarketing(uint256 rMarketing, uint256 tMarketing) private {
326         totFeesPaid.marketing += tMarketing;
327
328         if (!_isExcluded[address(this)]) {
329             _tOwned[address(this)] += tMarketing;
330         }
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 329

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
328     if (!_isExcluded[address(this)]) {
329         _tOwned[address(this)] += tMarketing;
330     }
331     _rOwned[address(this)] += rMarketing;
332 }
333
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 331

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
330     }  
331     _rOwned[address(this)] += rMarketing;  
332     }  
333  
334  
335
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 359

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
358
359  s.tRfi = (tAmount * taxes.rfi) / 100;
360  s.tMarketing = (tAmount * taxes.marketing) / 100;
361  s.tTransferAmount =
362  tAmount -
363
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 359

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
358
359  s.tRfi = (tAmount * taxes.rfi) / 100;
360  s.tMarketing = (tAmount * taxes.marketing) / 100;
361  s.tTransferAmount =
362  tAmount -
363
```


SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 360

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
359 s.tRfi = (tAmount * taxes.rfi) / 100;  
360 s.tMarketing = (tAmount * taxes.marketing) / 100;  
361 s.tTransferAmount =  
362 tAmount -  
363 s.tRfi -  
364
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 360

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
359 s.tRfi = (tAmount * taxes.rfi) / 100;  
360 s.tMarketing = (tAmount * taxes.marketing) / 100;  
361 s.tTransferAmount =  
362 tAmount -  
363 s.tRfi -  
364
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 362

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
361     s.tTransferAmount =
362     tAmount -
363     s.tRfi -
364     s.tMarketing;
365     return s;
366
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 362

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
361 s.tTransferAmount =  
362 tAmount -  
363 s.tRfi -  
364 s.tMarketing;  
365 return s;  
366
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 383

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
382  {  
383  rAmount = tAmount * currentRate;  
384  
385  if (!takeFee) {  
386  return (rAmount, rAmount, 0, 0);  
387
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 389

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
388
389   rRfi = s.tRfi * currentRate;
390   rMarketing = s.tMarketing * currentRate;
391   rTransferAmount =
392   rAmount -
393
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 390

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
389   rRfi = s.tRfi * currentRate;  
390   rMarketing = s.tMarketing * currentRate;  
391   rTransferAmount =  
392   rAmount -  
393   rRfi -  
394
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 392

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
391   rTransferAmount =
392   rAmount -
393   rRfi -
394   rMarketing;
395   return (rAmount, rTransferAmount, rRfi, rMarketing);
396
```


SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 392

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
391   rTransferAmount =
392   rAmount -
393   rRfi -
394   rMarketing;
395   return (rAmount, rTransferAmount, rRfi, rMarketing);
396
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 400

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
399 (uint256 rSupply, uint256 tSupply) = _getCurrentSupply();
400 return rSupply / tSupply;
401 }
402
403 function _getCurrentSupply() private view returns (uint256, uint256) {
404
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 406

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
405 uint256 tSupply = _tTotal;
406 for (uint256 i = 0; i < _excluded.length; i++) {
407     if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply)
408         return (_rTotal, _tTotal);
409     rSupply = rSupply - _rOwned[_excluded[i]];
410 }
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 409

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
408 return (_rTotal, _tTotal);
409 rSupply = rSupply - _rOwned[_excluded[i]];
410 tSupply = tSupply - _tOwned[_excluded[i]];
411 }
412 if (rSupply < _rTotal / _tTotal) return (_rTotal, _tTotal);
413
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 410

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
409     rSupply = rSupply - _rOwned[_excluded[i]];
410     tSupply = tSupply - _tOwned[_excluded[i]];
411   }
412   if (rSupply < _rTotal / _tTotal) return (_rTotal, _tTotal);
413   return (rSupply, tSupply);
414
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 412

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
411 }  
412 if (rSupply < _rTotal / _tTotal) return (_rTotal, _tTotal);  
413 return (rSupply, tSupply);  
414 }  
415  
416
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 468

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
467 //from excluded
468 _tOwned[sender] = _tOwned[sender] - tAmount;
469 }
470 if (!_isExcluded[recipient]) {
471 //to excluded
472
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 472

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
471 //to excluded
472 _tOwned[recipient] = _tOwned[recipient] + s.tTransferAmount;
473 }
474
475 _rOwned[sender] = _rOwned[sender] - s.rAmount;
476
```


SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 475

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
474
475  _rOwned[sender] = _rOwned[sender] - s.rAmount;
476  _rOwned[recipient] = _rOwned[recipient] + s.rTransferAmount;
477
478  if (s.rRfi > 0 || s.tRfi > 0) _reflectRfi(s.rRfi, s.tRfi);
479
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 476

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
475  _rOwned[sender] = _rOwned[sender] - s.rAmount;
476  _rOwned[recipient] = _rOwned[recipient] + s.rTransferAmount;
477
478  if (s.rRfi > 0 || s.tRfi > 0) _reflectRfi(s.rRfi, s.tRfi);
479  if (s.rMarketing > 0 || s.tMarketing > 0) _takeMarketing(s.rMarketing,
s.tMarketing);
480
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 514

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
513     function bulkExcludeFee(address[] memory accounts, bool state) external onlyOwner {
514         for (uint256 i = 0; i < accounts.length; i++) {
515             _isExcludedFromFee[accounts[i]] = state;
516         }
517     }
518 }
```

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

LINE 298

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
297   if (_excluded[i] == account) {  
298     _excluded[i] = _excluded[_excluded.length - 1];  
299     _tOwned[account] = 0;  
300     _isExcluded[account] = false;  
301     _excluded.pop();  
302
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 6

low SEVERITY

The current pragma Solidity directive is `""^0.8.17"`. 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

- CATCEO.sol

Locations

```
5 // SPDX-License-Identifier: UNLICENSE
6 pragma solidity ^0.8.17;
7
8 interface IBEP20 {
9     function totalSupply() external view returns (uint256);
10
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 297

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
296   for (uint256 i = 0; i < _excluded.length; i++) {
297     if (_excluded[i] == account) {
298       _excluded[i] = _excluded[_excluded.length - 1];
299       _tOwned[account] = 0;
300       _isExcluded[account] = false;
301     }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 298

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
297   if (_excluded[i] == account) {  
298     _excluded[i] = _excluded[_excluded.length - 1];  
299     _tOwned[account] = 0;  
300     _isExcluded[account] = false;  
301     _excluded.pop();  
302
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 298

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
297   if (_excluded[i] == account) {
298     _excluded[i] = _excluded[_excluded.length - 1];
299     _tOwned[account] = 0;
300     _isExcluded[account] = false;
301     _excluded.pop();
302
```


SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 407

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
406   for (uint256 i = 0; i < _excluded.length; i++) {
407     if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply)
408       return (_rTotal, _tTotal);
409     rSupply = rSupply - _rOwned[_excluded[i]];
410     tSupply = tSupply - _tOwned[_excluded[i]];
411   }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 407

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
406   for (uint256 i = 0; i < _excluded.length; i++) {
407     if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply)
408       return (_rTotal, _tTotal);
409     rSupply = rSupply - _rOwned[_excluded[i]];
410     tSupply = tSupply - _tOwned[_excluded[i]];
411   }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 409

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
408     return (_rTotal, _tTotal);
409     rSupply = rSupply - _rOwned[_excluded[i]];
410     tSupply = tSupply - _tOwned[_excluded[i]];
411 }
412 if (rSupply < _rTotal / _tTotal) return (_rTotal, _tTotal);
413
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 410

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
409   rSupply = rSupply - _rOwned[_excluded[i]];
410   tSupply = tSupply - _tOwned[_excluded[i]];
411   }
412   if (rSupply < _rTotal / _tTotal) return (_rTotal, _tTotal);
413   return (rSupply, tSupply);
414
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 498

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
497 address[] memory path = new address[](2);
498 path[0] = address(this);
499 path[1] = router.WETH();
500
501 _approve(address(this), address(router), tokenAmount);
502
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 499

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
498     path[0] = address(this);
499     path[1] = router.WETH();
500
501     _approve(address(this), address(router), tokenAmount);
502
503
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 515

low SEVERITY

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

Source File

- CATCEO.sol

Locations

```
514   for (uint256 i = 0; i < accounts.length; i++) {  
515     _isExcludedFromFee[accounts[i]] = state;  
516   }  
517 }  
518  
519
```

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