



CatGirl

Smart Contract Audit Report

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
CatGirl	CATGIRL	Binance Smart Chain

Addresses

Contract address	0x79ebc9a2ce02277a4b5b3a768b1c0a4ed75bd936
Contract deployer address	0x79eBC9A2ce02277A4b5b3A768b1C0A4ed75Bd936

Project Website

<https://www.catgirl.io/>

Codebase

<https://bscscan.com/address/0x79ebc9a2ce02277a4b5b3a768b1c0a4ed75bd936#code>

SUMMARY

Catgirl combines the limitless potential of crypto and NFTs into one modern, colorful, and interactive experience.

Contract Summary

Documentation Quality

CatGirl 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 CatGirl 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 662 and 663.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 96, 125, 145, 146, 178, 211, 416, 635, 635, 639, 639, 639, 639, 640, 640, 668, 668, 668, 668, 669, 669, 669, 669, 670, 670, 670, 670, 673, 673, 673, 673, 818, 820, 890, 945, 990, 1019, 1025, 1031, 1036 and 820.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 8.
- 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 819, 820, 820, 946, 946, 947, 948, 968, 971, 1156 and 1157.
- SWC-120 | It is recommended to use external sources of randomness via oracles on lines 962.

CONCLUSION

We have audited the CatGirl project released on May 2021 to discover issues and identify potential security vulnerabilities in CatGirl 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 issues found in the CatGirl 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, the potential use of "block.number" as a source of randomness, 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.	ISSUE FOUND
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas 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 May 31 2021 07:15:40 GMT+0000 (Coordinated Universal Time)
Finished	Tuesday Jun 01 2021 09:01:49 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	CatGirlCoin.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
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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-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	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
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
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-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 96

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
95  function add(uint256 a, uint256 b) internal pure returns (uint256) {
96  uint256 c = a + b;
97  require(c >= a, "SafeMath: addition overflow");
98  return c;
99  }
100
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 125

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
124   require(b <= a, errorMessage);  
125   uint256 c = a - b;  
126   return c;  
127   }  
128   /**  
129
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 145

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
144     }  
145     uint256 c = a * b;  
146     require(c / a == b, "SafeMath: multiplication overflow");  
147     return c;  
148     }  
149 }
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 146

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
145     uint256 c = a * b;  
146     require(c / a == b, "SafeMath: multiplication overflow");  
147     return c;  
148 }  
149 /**  
150
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 178

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
177     require(b > 0, errorMessage);
178     uint256 c = a / b;
179     // assert(a == b * c + a % b); // There is no case in which this doesn't hold
180     return c;
181 }
182
```


SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 211

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
210     require(b != 0, errorMessage);
211     return a % b;
212 }
213 }
214 abstract contract Context {
215
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 416

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
415     _owner = address(0);  
416     _lockTime = block.timestamp + time;  
417     emit OwnershipTransferred(_owner, address(0));  
418 }  
419  
420
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 635

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
634
635  uint256 private _minLottoBalance = 10000000000 * 10**9;
636
637
638  uint256 private constant MAX = ~uint256(0);
639
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 635

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
634
635  uint256 private _minLottoBalance = 10000000000 * 10**9;
636
637
638  uint256 private constant MAX = ~uint256(0);
639
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 639

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
638 uint256 private constant MAX = ~uint256(0);
639 uint256 private _tTotal = 100000 * 10**12 * 10**9;
640 uint256 private _rTotal = (MAX - (MAX % _tTotal));
641
642 uint256 private _tFeeTotal;
643
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 639

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
638 uint256 private constant MAX = ~uint256(0);
639 uint256 private _tTotal = 100000 * 10**12 * 10**9;
640 uint256 private _rTotal = (MAX - (MAX % _tTotal));
641
642 uint256 private _tFeeTotal;
643
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 639

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
638  uint256 private constant MAX = ~uint256(0);
639  uint256 private _tTotal = 100000 * 10**12 * 10**9;
640  uint256 private _rTotal = (MAX - (MAX % _tTotal));
641
642  uint256 private _tFeeTotal;
643
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 639

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
638  uint256 private constant MAX = ~uint256(0);
639  uint256 private _tTotal = 100000 * 10**12 * 10**9;
640  uint256 private _rTotal = (MAX - (MAX % _tTotal));
641
642  uint256 private _tFeeTotal;
643
```


SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 640

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
639 uint256 private _tTotal = 100000 * 10**12 * 10**9;
640 uint256 private _rTotal = (MAX - (MAX % _tTotal));
641
642 uint256 private _tFeeTotal;
643 string private _name = "CatGirl";
644
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 640

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
639 uint256 private _tTotal = 100000 * 10**12 * 10**9;
640 uint256 private _rTotal = (MAX - (MAX % _tTotal));
641
642 uint256 private _tFeeTotal;
643 string private _name = "CatGirl";
644
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 668

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
667
668  uint256 public _maxTxAmount = 100000 * 10**12 * 10**9;
669  uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670  uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671  // anti whale
672
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 668

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
667
668  uint256 public _maxTxAmount = 100000 * 10**12 * 10**9;
669  uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670  uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671  // anti whale
672
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 668

low SEVERITY

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

Source File

- CatGirlCoin.sol

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668  uint256 public _maxTxAmount = 100000 * 10**12 * 10**9;
669  uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
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671  // anti whale
672
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 668

low SEVERITY

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Source File

- CatGirlCoin.sol

Locations

```
667
668  uint256 public _maxTxAmount = 100000 * 10**12 * 10**9;
669  uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670  uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671  // anti whale
672
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 669

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
668 uint256 public _maxTxAmount = 100000 * 10**12 * 10**9;
669 uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670 uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671 // anti whale
672 bool public _isAntiWhaleEnabled = true;
673
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 669

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
668 uint256 public _maxTxAmount = 100000 * 10**12 * 10**9;
669 uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670 uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671 // anti whale
672 bool public _isAntiWhaleEnabled = true;
673
```


SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 669

low SEVERITY

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Source File

- CatGirlCoin.sol

Locations

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668 uint256 public _maxTxAmount = 100000 * 10**12 * 10**9;
669 uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670 uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671 // anti whale
672 bool public _isAntiWhaleEnabled = true;
673
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 669

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
668 uint256 public _maxTxAmount = 100000 * 10**12 * 10**9;
669 uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670 uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671 // anti whale
672 bool public _isAntiWhaleEnabled = true;
673
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 670

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
669  uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670  uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671  // anti whale
672  bool    public _isAntiWhaleEnabled = true;
673  uint256 public _antiWhaleThreshold = 1 * 10**15 * 10**9;
674
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 670

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
669  uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670  uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671  // anti whale
672  bool    public _isAntiWhaleEnabled = true;
673  uint256 public _antiWhaleThreshold = 1 * 10**15 * 10**9;
674
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 670

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
669  uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670  uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671  // anti whale
672  bool    public _isAntiWhaleEnabled = true;
673  uint256 public _antiWhaleThreshold = 1 * 10**15 * 10**9;
674
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 670

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
669 uint256 private numTokensSellToAddToLiquidity = 500 * 10**12 * 10**9;
670 uint256 public lotteryThreshold = 10 * 10**12 * 10**9;
671 // anti whale
672 bool public _isAntiWhaleEnabled = true;
673 uint256 public _antiWhaleThreshold = 1 * 10**15 * 10**9;
674
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 673

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
672     bool        public _isAntiWhaleEnabled = true;
673     uint256 public _antiWhaleThreshold = 1 * 10**15 * 10**9;
674
675     struct TData {
676         uint256 tAmount;
677     }
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 673

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
672     bool        public _isAntiWhaleEnabled = true;
673     uint256 public _antiWhaleThreshold = 1 * 10**15 * 10**9;
674
675     struct TData {
676         uint256 tAmount;
677     }
```


SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 673

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
672  bool    public _isAntiWhaleEnabled = true;
673  uint256 public _antiWhaleThreshold = 1 * 10**15 * 10**9;
674
675  struct TData {
676    uint256 tAmount;
677
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 673

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
672     bool        public _isAntiWhaleEnabled = true;
673     uint256 public _antiWhaleThreshold = 1 * 10**15 * 10**9;
674
675     struct TData {
676         uint256 tAmount;
677     }
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 818

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
817     require(!_isExcluded[account], "Account is already excluded");
818     for (uint256 i = 0; i < _excluded.length; i++) {
819         if (_excluded[i] == account) {
820             _excluded[i] = _excluded[_excluded.length - 1];
821             _tOwned[account] = 0;
822         }
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 820

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
819     if (_excluded[i] == account) {  
820         _excluded[i] = _excluded[_excluded.length - 1];  
821         _tOwned[account] = 0;  
822         _isExcluded[account] = false;  
823         _excluded.pop();  
824     }
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 890

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
889     _maxTxAmount = _tTotal.mul(maxTxPercent).div(  
890         10**2  
891     );  
892 }  
893 function setSwapAndLiquifyEnabled(bool _enabled) public onlyOwner {  
894
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 945

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
944  uint256 tSupply = _tTotal;
945  for (uint256 i = 0; i < _excluded.length; i++) {
946    if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
    (_rTotal, _tTotal);
947    rSupply = rSupply.sub(_rOwned[_excluded[i]]);
948    tSupply = tSupply.sub(_tOwned[_excluded[i]]);
949
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 990

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
989     _totalLottoPrize = _totalLottoPrize.add(amount);
990     ++_lottoDrawCount;
991     emit DrawLotto(amount, _lottoDrawCount);
992 }
993
994
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1019

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
1018     return _amount.mul(_lottoFee).div(  
1019         10**2  
1020     );  
1021 }  
1022  
1023
```


SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1025

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
1024     return _amount.mul(_devFee).div(  
1025         10**2  
1026     );  
1027 }  
1028  
1029
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1031

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
1030     return _amount.mul(_taxFee).div(  
1031         10**2  
1032     );  
1033 }  
1034 function calculateLiquidityFee(uint256 _amount) private view returns (uint256) {  
1035
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 1036

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
1035     return _amount.mul(_liquidityFee).div(  
1036         10**2  
1037     );  
1038 }  
1039  
1040
```

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

LINE 820

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
819   if (_excluded[i] == account) {  
820     _excluded[i] = _excluded[_excluded.length - 1];  
821     _tOwned[account] = 0;  
822     _isExcluded[account] = false;  
823     _excluded.pop();  
824
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 8

low SEVERITY

The current pragma Solidity directive is `""^0.8.4""`. 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

- CatGirlCoin.sol

Locations

```
7  */
8  pragma solidity ^0.8.4;
9  // SPDX-License-Identifier: Unlicensed
10 interface IBEP20 {
11     function totalSupply() external view returns (uint256);
12 }
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 662

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

- CatGirlCoin.sol

Locations

```
661
662  bool inSwapAndLiquify;
663  bool inLotteryDraw;
664  bool public swapAndLiquifyEnabled = true;
665  bool public lottoEnabled = true;
666
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 663

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
662  bool inSwapAndLiquify;  
663  bool inLotteryDraw;  
664  bool public swapAndLiquifyEnabled = true;  
665  bool public lottoEnabled = true;  
666  bool public _shouldSwapToBNB = false;  
667
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 819

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
818   for (uint256 i = 0; i < _excluded.length; i++) {  
819     if (_excluded[i] == account) {  
820       _excluded[i] = _excluded[_excluded.length - 1];  
821       _tOwned[account] = 0;  
822       _isExcluded[account] = false;  
823     }
```


SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 820

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
819     if (_excluded[i] == account) {  
820         _excluded[i] = _excluded[_excluded.length - 1];  
821         _tOwned[account] = 0;  
822         _isExcluded[account] = false;  
823         _excluded.pop();  
824     }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 820

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
819   if (_excluded[i] == account) {  
820     _excluded[i] = _excluded[_excluded.length - 1];  
821     _tOwned[account] = 0;  
822     _isExcluded[account] = false;  
823     _excluded.pop();  
824
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 946

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
945   for (uint256 i = 0; i < _excluded.length; i++) {  
946     if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return  
      (_rTotal, _tTotal);  
947     rSupply = rSupply.sub(_rOwned[_excluded[i]]);  
948     tSupply = tSupply.sub(_tOwned[_excluded[i]]);  
949   }  
950
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 946

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
945   for (uint256 i = 0; i < _excluded.length; i++) {  
946     if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return  
      (_rTotal, _tTotal);  
947     rSupply = rSupply.sub(_rOwned[_excluded[i]]);  
948     tSupply = tSupply.sub(_tOwned[_excluded[i]]);  
949   }  
950
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 947

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
946   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
      (_rTotal, _tTotal);
947   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
948   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
949   }
950   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
951
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 948

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
947   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
948   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
949   }
950   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
951   return (rSupply, tSupply);
952
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 968

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
967
968  uint256 ownedAmount = _rOwned[_addressList[randomNumber]];
969
970  if (ownedAmount >= _minLottoBalance) {
971    return _addressList[randomNumber];
972
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 971

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
970     if (ownedAmount >= _minLottoBalance) {  
971         return _addressList[randomNumber];  
972     }  
973     return _devWallet;  
974 }  
975
```


SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1156

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
1155     address[] memory path = new address[](2);
1156     path[0] = address(this);
1157     path[1] = uniswapV2Router.WETH();
1158     _approve(address(this), address(uniswapV2Router), tokenAmount);
1159     // make the swap
1160
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1157

low SEVERITY

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

Source File

- CatGirlCoin.sol

Locations

```
1156 path[0] = address(this);
1157 path[1] = uniswapV2Router.WETH();
1158 _approve(address(this), address(uniswapV2Router), tokenAmount);
1159 // make the swap
1160 uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
1161
```

SWC-120 | POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.

LINE 962

low SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- CatGirlCoin.sol

Locations

```
961  function random() private view returns (uint) {  
962  return uint(keccak256(abi.encodePacked(block.difficulty, block.timestamp,  
block.number)));  
963  }  
964  
965  function lotteryize() private view returns(address) {  
966
```

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