BabyChita Token

Smart Contract Audit Report

SYSFIXED

30 Dec 2022

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
BabyChita Token	BCT	Binance Smart Chain

Addresses

Contract address	0x6859b546FB887fb5018AE0cd01DA0fff2B3f5Bc7
Contract deployer address	0x8F04869d0F90a14b7E210817e1e719786BA864eB

Project Website

https://chitaverse.com/

Codebase

https://bscscan.com/address/0x6859b546FB887fb5018AE0cd01DA0fff2B3f5Bc7#code

SUMMARY

BabyChita is an exciting P2E project built on BNB network. Visit BabyChita in its virtual world with the demo version of our currently active game and discover its exciting virtual world. After the listing, we are here with the original version of the game and start shaping your future with your BabyChitas!!!

Contract Summary

Documentation Quality

BabyChita Token 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 BabyChita Token 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 185, 186, 187, 188, 194, 198, 199, 201, 202, 203, 206, 207, 208, 209, 210 and 223.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 26, 36, 45, 46, 56, 194, 194, 195, 195, 196, 196, 222, 222, 291, 297, 328 and 414.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 22.
- 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 355, 356, 394 and 395.
- SWC-120 | It is recommended to use external sources of randomness via oracles on lines 328 and 410.

CONCLUSION

We have audited the BabyChita Token project released on December 2022 to discover issues and identify potential security vulnerabilities in BabyChita Token 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 BabyChita Token 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, weak sources 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 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	Thursday Dec 29 2022 19:46:02 GMT+0000 (Coordinated Universal Time)
Finished	Friday Dec 30 2022 23:21:16 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	CHITAVERSE.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-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
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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-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged
SWC-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 26

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
25   function add(uint256 a, uint256 b) internal pure returns (uint256) {
26   uint256 c = a + b;
27   require(c >= a, "SafeMath: addition overflow");
28
29   return c;
30
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 36

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
35   require(b <= a, errorMessage);
36   uint256 c = a - b;
37
38   return c;
39   }
40
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 45

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
44
45   uint256 c = a * b;
46   require(c / a == b, "SafeMath: multiplication overflow");
47
48   return c;
49
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 46

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
45   uint256 c = a * b;
46   require(c / a == b, "SafeMath: multiplication overflow");
47
48   return c;
49   }
50
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 56

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
55   require(b > 0, errorMessage);
56   uint256 c = a / b;
57   // assert(a == b * c + a % b); // There is no case in which this doesn't hold
58
59   return c;
60
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 194

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
193
194   uint256 _totalSupply = 10000000000 * (10 ** _decimals);
195   uint256 public _maxTxAmount = (_totalSupply * 100 ) / 100;
196   uint256 public _maxWalletSize = (_totalSupply * 100) / 100;
197
198
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 194

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
193
194   uint256 _totalSupply = 10000000000 * (10 ** _decimals);
195   uint256 public _maxTxAmount = (_totalSupply * 100 ) / 100;
196   uint256 public _maxWalletSize = (_totalSupply * 100) / 100;
197
198
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 195

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
194   uint256 _totalSupply = 10000000000 * (10 ** _decimals);
195   uint256 public _maxTxAmount = (_totalSupply * 100 ) / 100;
196   uint256 public _maxWalletSize = (_totalSupply * 100) / 100;
197
198   mapping (address => uint256) _balances;
199
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 195

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
194   uint256 _totalSupply = 10000000000 * (10 ** _decimals);
195   uint256 public _maxTxAmount = (_totalSupply * 100 ) / 100;
196   uint256 public _maxWalletSize = (_totalSupply * 100) / 100;
197
198   mapping (address => uint256) _balances;
199
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 196

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
195   uint256 public _maxTxAmount = (_totalSupply * 100 ) / 100;
196   uint256 public _maxWalletSize = (_totalSupply * 100) / 100;
197
198   mapping (address => uint256) _balances;
199   mapping (address => mapping (address => uint256)) _allowances;
200
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 196

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
195   uint256 public _maxTxAmount = (_totalSupply * 100 ) / 100;
196   uint256 public _maxWalletSize = (_totalSupply * 100) / 100;
197
198   mapping (address => uint256) _balances;
199   mapping (address => mapping (address => uint256)) _allowances;
200
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 222

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
221   bool public swapEnabled = true;
222   uint256 public swapThreshold = _totalSupply / 10000 * 50; // 0.25%
223   bool inSwap;
224   modifier swapping() { inSwap = true; _; inSwap = false; }
225
226
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 222

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
221   bool public swapEnabled = true;
222   uint256 public swapThreshold = _totalSupply / 10000 * 50; // 0.25%
223   bool inSwap;
224   modifier swapping() { inSwap = true; _; inSwap = false; }
225
226
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 291

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
290   if (recipient != pair && recipient != DEAD) {
291   require(isTxLimitExempt[recipient] || _balances[recipient] + amount <=
_maxWalletSize, "Transfer amount exceeds the bag size.");
292   }
293   if (sender == pair &&
294   opCooldownEnabled &&
295
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 297

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
296   require(cooldownTimer[recipient] < block.timestamp,"Please wait for 1min between
two operations");
297   cooldownTimer[recipient] = block.timestamp + cooldownTimerInterval;
298   }
299   if(shouldSwapBack()){ swapBack(); }
300
301
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 328

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
327   function getTotalFee(bool selling) public view returns (uint256) {
328   if(launchedAt + 5 >= block.number){ return feeDenominator.sub(1); }
329   if(selling) { return totalFee.mul(_sellMultiplier); }
330   return totalFee;
331   }
332
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 414

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
413   function setMaxWallet(uint256 amount) external onlyOwner {
414   require(amount >= _totalSupply / 1000 );
415   _maxWalletSize = amount;
416   }
417
418
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 22

low SEVERITY

The current pragma Solidity directive is ""^0.8.7"". 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

- CHITAVERSE.sol

Locations

```
21   //SPDX-License-Identifier: MIT
22   pragma solidity ^0.8.7;
23
24   library SafeMath {
25   function add(uint256 a, uint256 b) internal pure returns (uint256) {
26
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 185

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
184
185   address WBNB = 0xbb4CdB9CBd36B01bD1cBaEBF2De08d9173bc095c;
186   address DEAD = 0x000000000000000000000000000000000000dEaD;
187   address ZERO = 0x0000000000000000000000000000000000000000;
188   address routerAddress = 0x10ED43C718714eb63d5aA57B78B54704E256024E; // MAINNET
189
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 186

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
185   address WBNB = 0xbb4CdB9CBd36B01bD1cBaEBF2De08d9173bc095c;
186   address DEAD = 0x000000000000000000000000000000000000dEaD;
187   address ZERO = 0x0000000000000000000000000000000000000000;
188   address routerAddress = 0x10ED43C718714eb63d5aA57B78B54704E256024E; // MAINNET
189
190
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 187

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
186   address DEAD = 0x000000000000000000000000000000000000dEaD;
187   address ZERO = 0x0000000000000000000000000000000000000000;
188   address routerAddress = 0x10ED43C718714eb63d5aA57B78B54704E256024E; // MAINNET
189
190   string constant _name = "BabyChita Token";
191
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 188

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
187   address ZERO = 0x0000000000000000000000000000000000000000;
188   address routerAddress = 0x10ED43C718714eb63d5aA57B78B54704E256024E; // MAINNET
189
190   string constant _name = "BabyChita Token";
191   string constant _symbol = "BCT";
192
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 194

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
193
194   uint256 _totalSupply = 10000000000 * (10 ** _decimals);
195   uint256 public _maxTxAmount = (_totalSupply * 100 ) / 100;
196   uint256 public _maxWalletSize = (_totalSupply * 100) / 100;
197
198
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 198

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
197
198   mapping (address => uint256) _balances;
199   mapping (address => mapping (address => uint256)) _allowances;
200
201   mapping (address => bool) isFeeExempt;
202
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 199

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
198   mapping (address => uint256) _balances;
199   mapping (address => mapping (address => uint256)) _allowances;
200
201   mapping (address => bool) isFeeExempt;
202   mapping (address => bool) isTxLimitExempt;
203
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 201

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
200
201   mapping (address => bool) isFeeExempt;
202   mapping (address => bool) isTxLimitExempt;
203   mapping (address => bool) isTimelockExempt;
204   mapping (address => bool) public isBot;
205
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 202

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
201   mapping (address => bool) isFeeExempt;
202   mapping (address => bool) isTxLimitExempt;
203   mapping (address => bool) isTimelockExempt;
204   mapping (address => bool) public isBot;
205
206
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 203

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
202   mapping (address => bool) isTxLimitExempt;
203   mapping (address => bool) isTimelockExempt;
204   mapping (address => bool) public isBot;
205
206   uint256 liquidityFee = 0;
207
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 206

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
205
206   uint256 liquidityFee = 0;
207   uint256 devFee = 0;
208   uint256 marketingFee = 5;
209   uint256 totalFee = 5;
210
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 207

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
206   uint256 liquidityFee = 0;
207   uint256 devFee = 0;
208   uint256 marketingFee = 5;
209   uint256 totalFee = 5;
210   uint256 feeDenominator = 100;
211
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 208

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
207   uint256 devFee = 0;
208   uint256 marketingFee = 5;
209   uint256 totalFee = 5;
210   uint256 feeDenominator = 100;
211   uint256 public _sellMultiplier = 1;
212
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 209

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
208   uint256 marketingFee = 5;
209   uint256 totalFee = 5;
210   uint256 feeDenominator = 100;
211   uint256 public _sellMultiplier = 1;
212
213
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 210

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
209   uint256 totalFee = 5;
210   uint256 feeDenominator = 100;
211   uint256 public _sellMultiplier = 1;
212
213   address public marketingFeeReceiver = 0x8F04869d0F90a14b7E210817e1e719786BA864eB;
214
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 223

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
222   uint256 public swapThreshold = _totalSupply / 10000 * 50; // 0.25%
223   bool inSwap;
224   modifier swapping() { inSwap = true; _; inSwap = false; }
225
226   // Cooldown & timer functionality
227
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 355

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
354   address[] memory path = new address[](2);
355   path[0] = address(this);
356   path[1] = WBNB;
357
358   uint256 balanceBefore = address(this).balance;
359
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 356

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
355   path[0] = address(this);
356   path[1] = WBNB;
357
358   uint256 balanceBefore = address(this).balance;
359
360
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 394

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
393   address[] memory path = new address[](2);
394   path[0] = WBNB;
395   path[1] = address(this);
396
397   router.swapExactETHForTokensSupportingFeeOnTransferTokens{value: amount}(
398
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 395

low SEVERITY

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

Source File

- CHITAVERSE.sol

Locations

```
394   path[0] = WBNB;
395   path[1] = address(this);
396
397   router.swapExactETHForTokensSupportingFeeOnTransferTokens{value: amount}(
398   0,
399
```

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

LINE 328

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

- CHITAVERSE.sol

Locations

```
327   function getTotalFee(bool selling) public view returns (uint256) {
328   if(launchedAt + 5 >= block.number){ return feeDenominator.sub(1); }
329   if(selling) { return totalFee.mul(_sellMultiplier); }
330   return totalFee;
331   }
332
```

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

LINE 410

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

- CHITAVERSE.sol

Locations

```
409   function launch() internal {
410   launchedAt = block.number;
411   }
412
413   function setMaxWallet(uint256 amount) external onlyOwner {
414
```

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