



APEBORG

# Smart Contract Audit Report

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# AUDITED DETAILS

## Audited Project

Project name	Token ticker	Blockchain
APEBORG	APEBORG	Ethereum

## Addresses

Contract address	0xf168d4f47a973a65f61bfb46f924fe7489c74576
Contract deployer address	0xdF22e8B5dF7d6472f875DC3752215089cd8ebC5a

## Project Website

<a href="https://apeborg.com/">https://apeborg.com/</a>
---

## Codebase

<a href="https://etherscan.io/address/0xf168d4f47a973a65f61bfb46f924fe7489c74576#code">https://etherscan.io/address/0xf168d4f47a973a65f61bfb46f924fe7489c74576#code</a>
---

# SUMMARY

APEBORG is a decentralized Meme Token with a NFT Platform, own NFT Collections and a P2E Game to earn and collect tokens. In addition, the APEBORG holders benefit from the reflections on every transaction. This is an auto staking feature. Furthermore, charity activities for people and animals are carried out

## Contract Summary

### Documentation Quality

APEBORG 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 APEBORG 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 974.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 125, 161, 184, 185, 224, 264, 536, 946, 946, 946, 946, 947, 947, 977, 977, 977, 977, 978, 978, 978, 978, 979, 979, 979, 979, 1215, 1218, 1239, 1241, 1300, 1307, 1370, 1391, 1399, 1456, 1218 and 1241.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 15.
- 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 1216, 1217, 1217, 1240, 1241, 1241, 1372, 1373, 1375, 1376, 1531 and 1532.
- SWC-115 | tx.origin should not be used for authorization, use msg.sender instead on lines 1450.

## CONCLUSION

We have audited the NamaFile project released on January 2023 to discover issues and identify potential security vulnerabilities in NamaFile 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 NamaFile 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. We recommend to 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 also avoiding using "tx.origin" as a security control can lead to authorization bypass vulnerabilities. Consider using "msg.sender" unless you really know what you are doing.

# 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.	ISSUE FOUND
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	Saturday Apr 23 2022 19:30:57 GMT+0000 (Coordinated Universal Time)
Finished	Sunday Apr 24 2022 20:49:35 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	APEBORG.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
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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
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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

LINE 125

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
124 function add(uint256 a, uint256 b) internal pure returns (uint256) {  
125     uint256 c = a + b;  
126     require(c >= a, "SafeMath: addition overflow");  
127  
128     return c;  
129 }
```

## SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 161

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
160     require(b <= a, errorMessage);  
161     uint256 c = a - b;  
162  
163     return c;  
164 }  
165
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 184

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
183
184  uint256 c = a * b;
185  require(c / a == b, "SafeMath: multiplication overflow");
186
187  return c;
188
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 185

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
184     uint256 c = a * b;  
185     require(c / a == b, "SafeMath: multiplication overflow");  
186  
187     return c;  
188 }  
189
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 224

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
223     require(b > 0, errorMessage);
224     uint256 c = a / b;
225     // assert(a == b * c + a % b); // There is no case in which this doesn't hold
226
227     return c;
228
```

# SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 264

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
263     require(b != 0, errorMessage);
264     return a % b;
265 }
266 }
267
268
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 536

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
535     _owner = address(0);  
536     _lockTime = block.timestamp + time;  
537     emit OwnershipTransferred(_owner, address(0));  
538 }  
539  
540
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 946

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
945  uint256 private constant MAX = ~uint256(0);
946  uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
947  uint256 private _rTotal = (MAX - (MAX % _tTotal));
948  uint256 private _tFeeTotal;
949
950
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 946

## low SEVERITY

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

## Source File

- APEBORG.sol

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950
```

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948 uint256 private _tFeeTotal;
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```

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948 uint256 private _tFeeTotal;
949
950
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 947

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
946 uint256 private _tTotal = 10000000000 * 10**6 * 10**9;  
947 uint256 private _rTotal = (MAX - (MAX % _tTotal));  
948 uint256 private _tFeeTotal;  
949  
950  
951
```

# SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 947

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
946 uint256 private _tTotal = 10000000000 * 10**6 * 10**9;  
947 uint256 private _rTotal = (MAX - (MAX % _tTotal));  
948 uint256 private _tFeeTotal;  
949  
950  
951
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 977

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
976
977  uint256 public _maxTxAmount = 10000000000 * 10**6 * 10**9;
978  uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
979  uint256 public _maxWalletSize = 1 * 10**13 * 10**9;
980
981
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 977

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
976
977  uint256 public _maxTxAmount = 10000000000 * 10**6 * 10**9;
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980
981
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 977

## low SEVERITY

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

## Source File

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## Locations

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976
977  uint256 public _maxTxAmount = 10000000000 * 10**6 * 10**9;
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980
981
```

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LINE 977

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
976
977  uint256 public _maxTxAmount = 10000000000 * 10**6 * 10**9;
978  uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
979  uint256 public _maxWalletSize = 1 * 10**13 * 10**9;
980
981
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 978

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
977 uint256 public _maxTxAmount = 1000000000 * 10**6 * 10**9;
978 uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
979 uint256 public _maxWalletSize = 1 * 10**13 * 10**9;
980
981 event botAddedToBlacklist(address account);
982
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 978

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
977 uint256 public _maxTxAmount = 1000000000 * 10**6 * 10**9;
978 uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
979 uint256 public _maxWalletSize = 1 * 10**13 * 10**9;
980
981 event botAddedToBlacklist(address account);
982
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 978

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
977 uint256 public _maxTxAmount = 1000000000 * 10**6 * 10**9;
978 uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
979 uint256 public _maxWalletSize = 1 * 10**13 * 10**9;
980
981 event botAddedToBlacklist(address account);
982
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 978

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
977 uint256 public _maxTxAmount = 1000000000 * 10**6 * 10**9;
978 uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
979 uint256 public _maxWalletSize = 1 * 10**13 * 10**9;
980
981 event botAddedToBlacklist(address account);
982
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 979

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
978 uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;  
979 uint256 public _maxWalletSize = 1 * 10**13 * 10**9;  
980  
981 event botAddedToBlacklist(address account);  
982 event botRemovedFromBlacklist(address account);  
983
```

# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 979

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
978 uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;  
979 uint256 public _maxWalletSize = 1 * 10**13 * 10**9;  
980  
981 event botAddedToBlacklist(address account);  
982 event botRemovedFromBlacklist(address account);  
983
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 979

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
978 uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;  
979 uint256 public _maxWalletSize = 1 * 10**13 * 10**9;  
980  
981 event botAddedToBlacklist(address account);  
982 event botRemovedFromBlacklist(address account);  
983
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 979

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
978 uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;  
979 uint256 public _maxWalletSize = 1 * 10**13 * 10**9;  
980  
981 event botAddedToBlacklist(address account);  
982 event botRemovedFromBlacklist(address account);  
983
```

# SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1215

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1214     require(!_isBlackListedBot[account], "Account is not blacklisted");
1215     for (uint256 i = 0; i < _blackListedBots.length; i++) {
1216         if (_blackListedBots[i] == account) {
1217             _blackListedBots[i] = _blackListedBots[
1218                 _blackListedBots.length - 1
1219             ];
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1218

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1217  _blackListedBots[i] = _blackListedBots[
1218  _blackListedBots.length - 1
1219  ];
1220  _isBlackListedBot[account] = false;
1221  _blackListedBots.pop();
1222
```

# SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1239

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1238     require(!_isExcluded[account], "Account is not excluded");
1239     for (uint256 i = 0; i < _excluded.length; i++) {
1240         if (_excluded[i] == account) {
1241             _excluded[i] = _excluded[_excluded.length - 1];
1242             _tOwned[account] = 0;
1243         }
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1241

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1240   if (_excluded[i] == account) {  
1241     _excluded[i] = _excluded[_excluded.length - 1];  
1242     _tOwned[account] = 0;  
1243     _isExcluded[account] = false;  
1244     _excluded.pop();  
1245   }
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 1300

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1299     function setMaxTxPercent(uint256 maxTxPercent) external onlyOwner {
1300         _maxTxAmount = _tTotal.mul(maxTxPercent).div(10**2);
1301     }
1302
1303     function _setMaxWalletSizePercent(uint256 maxWalletSize)
1304
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 1307

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1306 {  
1307   _maxWalletSize = _tTotal.mul(maxWalletSize).div(10**2);  
1308 }  
1309  
1310 function setSwapAndLiquifyEnabled(bool _enabled) public onlyOwner {  
1311
```

# SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1370

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1369     uint256 tSupply = _tTotal;
1370     for (uint256 i = 0; i < _excluded.length; i++) {
1371         if (
1372             _rOwned[_excluded[i]] > rSupply ||
1373             _tOwned[_excluded[i]] > tSupply
1374         )
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 1391

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1390     function calculateTaxFee(uint256 _amount) private view returns (uint256) {  
1391         return _amount.mul(_taxFee).div(10**2);  
1392     }  
1393  
1394     function calculateLiquidityFee(uint256 _amount)  
1395
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 1399

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1398 {  
1399     return _amount.mul(_liquidityFee).div(10**2);  
1400 }  
1401  
1402 function removeAllFee() private {  
1403
```

## SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1456

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1455     if(to != uniswapV2Pair) {  
1456         require(balanceOf(to) + amount < _maxWalletSize, "TOKEN: Balance exceeds wallet  
size!");  
1457     }  
1458 }  
1459  
1460
```

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

LINE 1218

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1217  _blackListedBots[i] = _blackListedBots[
1218  _blackListedBots.length - 1
1219  ];
1220  _isBlackListedBot[account] = false;
1221  _blackListedBots.pop();
1222
```

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

LINE 1241

## low SEVERITY

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

## Source File

- APEBORG.sol

## Locations

```
1240     if (_excluded[i] == account) {  
1241         _excluded[i] = _excluded[_excluded.length - 1];  
1242         _tOwned[account] = 0;  
1243         _isExcluded[account] = false;  
1244         _excluded.pop();  
1245     }
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 15

### low SEVERITY

The current pragma Solidity directive is `""^0.8.10""`. 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

- APEBORG.sol

### Locations

```
14  /// @custom:security-contact contact@apeborg.com
15  pragma solidity ^0.8.10;
16
17  // SPDX-License-Identifier: Unlicensed
18  interface IERC20 {
19
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 974

### 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

- APEBORG.sol

### Locations

```
973
974  bool inSwapAndLiquify;
975  bool public swapAndLiquifyEnabled = true;
976
977  uint256 public _maxTxAmount = 10000000000 * 10**6 * 10**9;
978
```

# SWC-115 | USE OF "TX.ORIGIN" AS A PART OF AUTHORIZATION CONTROL.

LINE 1450

## low SEVERITY

Using "tx.origin" as a security control can lead to authorization bypass vulnerabilities. Consider using "msg.sender" unless you really know what you are doing.

## Source File

- APEBORG.sol

## Locations

```
1449     require(!_isBlackListedBot[msg.sender], "you are blacklisted");
1450     require(!_isBlackListedBot[tx.origin], "blacklisted");
1451
1452     if (!_isExcludedFromLimit[from] && !_isExcludedFromLimit[to]) {
1453         require(amount <= _maxTxAmount, "Transfer amount exceeds the maxTxAmount.");
1454     }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1216

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1215   for (uint256 i = 0; i < _blackListedBots.length; i++) {  
1216     if (_blackListedBots[i] == account) {  
1217       _blackListedBots[i] = _blackListedBots[  
1218         _blackListedBots.length - 1  
1219       ];  
1220     }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1217

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1216   if (_blackListedBots[i] == account) {  
1217     _blackListedBots[i] = _blackListedBots[  
1218       _blackListedBots.length - 1  
1219     ];  
1220     _isBlackListedBot[account] = false;  
1221   }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1217

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1216   if (_blackListedBots[i] == account) {  
1217     _blackListedBots[i] = _blackListedBots[  
1218       _blackListedBots.length - 1  
1219     ];  
1220     _isBlackListedBot[account] = false;  
1221   }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1240

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1239   for (uint256 i = 0; i < _excluded.length; i++) {  
1240     if (_excluded[i] == account) {  
1241       _excluded[i] = _excluded[_excluded.length - 1];  
1242       _tOwned[account] = 0;  
1243       _isExcluded[account] = false;  
1244     }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1241

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1240   if (_excluded[i] == account) {  
1241     _excluded[i] = _excluded[_excluded.length - 1];  
1242     _tOwned[account] = 0;  
1243     _isExcluded[account] = false;  
1244     _excluded.pop();  
1245
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1241

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1240   if (_excluded[i] == account) {  
1241     _excluded[i] = _excluded[_excluded.length - 1];  
1242     _tOwned[account] = 0;  
1243     _isExcluded[account] = false;  
1244     _excluded.pop();  
1245   }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1372

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

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

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1373

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

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

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1375

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1374     ) return (_rTotal, _tTotal);  
1375     rSupply = rSupply.sub(_rOwned[_excluded[i]]);  
1376     tSupply = tSupply.sub(_tOwned[_excluded[i]]);  
1377     }  
1378     if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);  
1379
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1376

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1375   rSupply = rSupply.sub(_rOwned[_excluded[i]]);  
1376   tSupply = tSupply.sub(_tOwned[_excluded[i]]);  
1377   }  
1378   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);  
1379   return (rSupply, tSupply);  
1380
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1531

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1530     address[] memory path = new address[](2);
1531     path[0] = address(this);
1532     path[1] = uniswapV2Router.WETH();
1533
1534     _approve(address(this), address(uniswapV2Router), tokenAmount);
1535
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1532

### low SEVERITY

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

### Source File

- APEBORG.sol

### Locations

```
1531 path[0] = address(this);
1532 path[1] = uniswapV2Router.WETH();
1533
1534 _approve(address(this), address(uniswapV2Router), tokenAmount);
1535
1536
```

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