

Fable Of The Dragon Smart Contract Audit Report



21 Oct 2022



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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
Fable Of The Dragon	TYRANT	Ethereum

Addresses

Contract address	0x8ee325ae3e54e83956ef2d5952d3c8bc1fa6ec27	
Contract deployer address	0x6BD72A62bd476BC7113010CB939EE39fA80D6a19	

Project Website

https://fableofthedragon.com/

Codebase

https://etherscan.io/address/0x8ee325ae3e54e83956ef2d5952d3c8bc1fa6ec27#code



SUMMARY

\$TYRANT uses special alchemy to vanquish taxes and fill the King's marketing coffers all at once – leaving the dragon's hoard ready for noble investors to plunder.

Contract Summary

Documentation Quality

Fable Of The Dragon 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 Fable Of The Dragon 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 961.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 769, 793, 809, 812, 834, 836, 887, 906, 909, 949, 949, 950, 950, 959, 959, 960, 960, 985, 985, 1019, 1025, 1038, 1041, 1041, 1042, 1042, 1043, 1043, 1044, 1046, 1056, 1057, 1063, 1082 and 1116.
- 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 1072 and 1073.



CONCLUSION

We have audited the Fable Of The Dragon project released on January 2023 to discover issues and identify potential security vulnerabilities in Fable Of The Dragon 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 Fable Of The Dragon 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 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. Labeling the visibility explicitly makes it easier to catch incorrect assumptions about who can access the variable. Variables can be specified as being public, internal or private. Explicitly define visibility for all state variables.



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.	ions ISSUE lows. 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.	PASS	
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.	t 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 aISSUEfailing assert statement.FOUNI		
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.	
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	
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.	
Shadowing State Variable	SWC-119	State variables should not be shadowed.	
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	
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 For locations.	
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/.	
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.	
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	



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.	
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.	
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS



SMART CONTRACT ANALYSIS

Started	Thursday Oct 20 2022 02:56:00 GMT+0000 (Coordinated Universal Time)		
Finished	Friday Oct 21 2022 03:53:27 GMT+0000 (Coordinated Universal Time)		
Mode	Standard		
Main Source File	Tyrant.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

SYSFIXED

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

SYSFIXED

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-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-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 769

Iow SEVERITY

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

Source File

- Tyrant.sol

```
768 unchecked {
769 _approve(owner, spender, currentAllowance - subtractedValue);
770 }
771
772 return true;
773
```



SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 793

Iow SEVERITY

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

Source File

- Tyrant.sol

```
792 address owner = _msgSender();
793 _approve(owner, spender, allowance(owner, spender) + addedValue);
794 return true;
795 }
796
797
```



SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 809

Iow SEVERITY

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

Source File

- Tyrant.sol

```
808
809 _totalSupply += amount;
810 unchecked {
811 // Overflow not possible: balance + amount is at most totalSupply + amount, which
is checked above.
812 _balances[account] += amount;
813
```



SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 812

Iow SEVERITY

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

Source File

- Tyrant.sol

```
811 // Overflow not possible: balance + amount is at most totalSupply + amount, which
is checked above.
812 _balances[account] += amount;
813 }
814 emit Transfer(address(0), account, amount);
815 }
816
```



SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 834

Iow SEVERITY

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

Source File

- Tyrant.sol

```
833 unchecked {
834 _balances[account] = accountBalance - amount;
835 // Overflow not possible: amount <= accountBalance <= totalSupply.
836 _totalSupply -= amount;
837 }
838</pre>
```



SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED

LINE 836

Iow SEVERITY

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

Source File

- Tyrant.sol

```
835 // Overflow not possible: amount <= accountBalance <= totalSupply.
836 _totalSupply -= amount;
837 }
838
839 emit Transfer(account, address(0), amount);
840
```



SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 887

Iow SEVERITY

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

Source File

- Tyrant.sol

```
886 unchecked {
887 __approve(owner, spender, currentAllowance - amount);
888 }
889 }
890 }
891
```



SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 906

Iow SEVERITY

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

Source File

- Tyrant.sol

```
905 unchecked {
906 __balances[from] = fromBalance - amount;
907 // Overflow not possible: the sum of all balances is capped by totalSupply, and the
sum is preserved by
908 // decrementing then incrementing.
909 __balances[to] += amount;
910
```



SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 909

Iow SEVERITY

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

Source File

- Tyrant.sol

```
908 // decrementing then incrementing.
909 _balances[to] += amount;
910 }
911
912 emit Transfer(from, to, amount);
913
```



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 949

Iow SEVERITY

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

Source File

- Tyrant.sol

Locations



SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 949

Iow SEVERITY

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

Source File

- Tyrant.sol

Locations



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 950

Iow SEVERITY

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

Source File

- Tyrant.sol



SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 950

Iow SEVERITY

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

Source File

- Tyrant.sol



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 959

Iow SEVERITY

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

Source File

- Tyrant.sol

```
958 mapping(address => bool) private _isExcludedFromFee;
959 uint256 private _numTokensSellToAddToLiquidity = 5000 * 10**_decimals;
960 uint256 private _numTokensSellToAddToETH = 2000 * 10**_decimals;
961 bool inSwapAndLiquify;
962
963
```



SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 959

Iow SEVERITY

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

Source File

- Tyrant.sol

```
958 mapping(address => bool) private _isExcludedFromFee;
959 uint256 private _numTokensSellToAddToLiquidity = 5000 * 10**_decimals;
960 uint256 private _numTokensSellToAddToETH = 2000 * 10**_decimals;
961 bool inSwapAndLiquify;
962
963
```



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 960

Iow SEVERITY

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

Source File

- Tyrant.sol

```
959 uint256 private _numTokensSellToAddToLiquidity = 5000 * 10**_decimals;
960 uint256 private _numTokensSellToAddToETH = 2000 * 10**_decimals;
961 bool inSwapAndLiquify;
962
963 event SwapAndLiquify(
964
```



SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 960

Iow SEVERITY

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

Source File

- Tyrant.sol

```
959 uint256 private _numTokensSellToAddToLiquidity = 5000 * 10**_decimals;
960 uint256 private _numTokensSellToAddToETH = 2000 * 10**_decimals;
961 bool inSwapAndLiquify;
962
963 event SwapAndLiquify(
964
```



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 985

Iow SEVERITY

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

Source File

- Tyrant.sol

```
984 constructor() ERC20(_name, _symbol) {
985 _mint(msg.sender, (_supply * 10**_decimals));
986
987 IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x7a250d5630B4cF539739dF2C5dAcb4c659F2488D);
988 uniswapV2Pair =
IUniswapV2Factory(_uniswapV2Router.factory()).createPair(address(this),
_uniswapV2Router.WETH());
989
```





SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 985

Iow SEVERITY

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

Source File

- Tyrant.sol

```
984 constructor() ERC20(_name, _symbol) {
985 _mint(msg.sender, (_supply * 10**_decimals));
986
987 IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x7a250d5630B4cF539739dF2C5dAcb4c659F2488D);
988 uniswapV2Pair =
IUniswapV2Factory(_uniswapV2Router.factory()).createPair(address(this),
_uniswapV2Router.WETH());
989
```





SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1019

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1018 if (from != uniswapV2Pair) {
1019 uint256 contractLiquidityBalance = balanceOf(address(this)) - _marketingReserves;
1020 if (contractLiquidityBalance >= _numTokensSellToAddToLiquidity) {
1021 _swapAndLiquify(_numTokensSellToAddToLiquidity);
1022 }
1023
```



SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED

LINE 1025

Iow SEVERITY

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

Source File

- Tyrant.sol

Locations

1024 _swapTokensForEth(_numTokensSellToAddToETH); 1025 _marketingReserves -= _numTokensSellToAddToETH; 1026 bool sent = payable(marketingWallet).send(address(this).balance); 1027 require(sent, "Failed to send ETH"); 1028 } 1029



SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1038

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1037 if(from == uniswapV2Pair){
1038 require((amount + balanceOf(to)) <= maxWalletAmount, "ERC20: balance amount
exceeded max wallet amount limit");
1039 }
1040
1041 uint256 marketingShare = ((amount * taxForMarketing) / 100);
1042</pre>
```



SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1041

Iow SEVERITY

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

Source File

- Tyrant.sol

Locations

1040 1041 uint256 marketingShare = ((amount * taxForMarketing) / 100); 1042 uint256 liquidityShare = ((amount * taxForLiquidity) / 100); 1043 transferAmount = amount - (marketingShare + liquidityShare); 1044 __marketingReserves += marketingShare; 1045



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 1041

Iow SEVERITY

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

Source File

- Tyrant.sol

Locations

1040 1041 uint256 marketingShare = ((amount * taxForMarketing) / 100); 1042 uint256 liquidityShare = ((amount * taxForLiquidity) / 100); 1043 transferAmount = amount - (marketingShare + liquidityShare); 1044 __marketingReserves += marketingShare; 1045



SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1042

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1041 uint256 marketingShare = ((amount * taxForMarketing) / 100);
1042 uint256 liquidityShare = ((amount * taxForLiquidity) / 100);
1043 transferAmount = amount - (marketingShare + liquidityShare);
1044 __marketingReserves += marketingShare;
1045
1046
```



SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 1042

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1041 uint256 marketingShare = ((amount * taxForMarketing) / 100);
1042 uint256 liquidityShare = ((amount * taxForLiquidity) / 100);
1043 transferAmount = amount - (marketingShare + liquidityShare);
1044 __marketingReserves += marketingShare;
1045
1046
```



SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1043

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1042 uint256 liquidityShare = ((amount * taxForLiquidity) / 100);
1043 transferAmount = amount - (marketingShare + liquidityShare);
1044 __marketingReserves += marketingShare;
1045
1046 super._transfer(from, address(this), (marketingShare + liquidityShare));
1047
```



SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1043

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1042 uint256 liquidityShare = ((amount * taxForLiquidity) / 100);
1043 transferAmount = amount - (marketingShare + liquidityShare);
1044 __marketingReserves += marketingShare;
1045
1046 super._transfer(from, address(this), (marketingShare + liquidityShare));
1047
```



SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 1044

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1043 transferAmount = amount - (marketingShare + liquidityShare);
1044 __marketingReserves += marketingShare;
1045
1046 super._transfer(from, address(this), (marketingShare + liquidityShare));
1047 }
1048
```



SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1046

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1045
1046 super._transfer(from, address(this), (marketingShare + liquidityShare));
1047 }
1048 super._transfer(from, to, transferAmount);
1049 }
1050
```



SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 1056

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1055 function _swapAndLiquify(uint256 contractTokenBalance) private lockTheSwap {
1056 uint256 half = (contractTokenBalance / 2);
1057 uint256 otherHalf = (contractTokenBalance - half);
1058
1059 uint256 initialBalance = address(this).balance;
1060
```



SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1057

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1056 uint256 half = (contractTokenBalance / 2);
1057 uint256 otherHalf = (contractTokenBalance - half);
1058
1059 uint256 initialBalance = address(this).balance;
1060
1061
```



SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1063

Iow SEVERITY

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

Source File

- Tyrant.sol

Locations

1062 1063 uint256 newBalance = (address(this).balance - initialBalance); 1064 1065 __addLiquidity(otherHalf, newBalance); 1066 1067



SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1082

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1081 address(this),
1082 (block.timestamp + 300)
1083 );
1084 }
1085
1086
```



SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1116

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1115 {
1116 require((_taxForLiquidity+_taxForMarketing) <= 100, "ERC20: total tax must not be
greater than 100");
1117 taxForLiquidity = _taxForLiquidity;
1118 taxForMarketing = _taxForMarketing;
1119
1120</pre>
```



SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 961

Iow 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

- Tyrant.sol

```
960 uint256 private _numTokensSellToAddToETH = 2000 * 10**_decimals;
961 bool inSwapAndLiquify;
962
963 event SwapAndLiquify(
964 uint256 tokensSwapped,
965
```



SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1072

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1071 address[] memory path = new address[](2);
1072 path[0] = address(this);
1073 path[1] = uniswapV2Router.WETH();
1074
1075 _approve(address(this), address(uniswapV2Router), tokenAmount);
1076
```



SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1073

Iow SEVERITY

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

Source File

- Tyrant.sol

```
1072 path[0] = address(this);
1073 path[1] = uniswapV2Router.WETH();
1074
1075 _approve(address(this), address(uniswapV2Router), tokenAmount);
1076
1077
```



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Sysfixed is a blockchain security certification organization established in 2021 with the objective to provide smart contract security services and verify their correctness in blockchain-based protocols. Sysfixed automatically scans for security vulnerabilities in Ethereum and other EVM-based blockchain smart contracts. Sysfixed a comprehensive range of analysis techniques—including static analysis, dynamic analysis, and symbolic execution—can accurately detect security vulnerabilities to provide an in-depth analysis report. With a vibrant ecosystem of world-class integration partners that amplify developer productivity, Sysfixed can be utilized in all phases of your project's lifecycle. Our team of security experts is dedicated to the research and improvement of our tools and techniques used to fortify your code.