



Lobby Token  
**Smart Contract  
Audit Report**

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## Disclaimer

## About Us

# AUDITED DETAILS

## Audited Project

Project name	Token ticker	Blockchain
Lobby Token	LBY	Ethereum

## Addresses

Contract address	0xac042d9284df95cc6bd35982f6a61e3e7a6f875b
Contract deployer address	0x98600d7F402950f830D510CCc9d3ead4f6109033

## Project Website

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

## Codebase

<https://etherscan.io/address/0xac042d9284df95cc6bd35982f6a61e3e7a6f875b#code>

# SUMMARY

\$LBY is a governance token that powers and secures the Lobby DAO. Holders of \$LBY can vote on proposals for Lobby DAO as well as all future products within the Lobby DAO ecosystem.

## Contract Summary

### Documentation Quality

Lobby 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 Lobby 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 723 and 749.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 156, 188, 206, 206, 242, 282, 503, 753, 753, 753, 753, 753, 754, 773, 773, 773, 773, 774, 774, 774, 774, 871, 871, 883, 884, 884, 922, 924, 972, 972, 980, 980, 1052, 1083, 1085, 1188 and 924.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 51.
- 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 882, 883, 922, 923, 924, 1052, 1053, 1058, 1059, 1198 and 1199.

## CONCLUSION

We have audited the Lobby Token project released on November 2022 to discover issues and identify potential security vulnerabilities in Lobby 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 in the Lobby 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, and out-of-bounds array access which the index access expression can cause an exception in case of using 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.	<b>ISSUE FOUND</b>
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	<b>ISSUE FOUND</b>
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	<b>PASS</b>
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	<b>ISSUE FOUND</b>
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	<b>PASS</b>
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	<b>PASS</b>
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	<b>PASS</b>
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	<b>PASS</b>
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	<b>PASS</b>
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	<b>ISSUE FOUND</b>
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	<b>PASS</b>
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	<b>PASS</b>

DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	PASS
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	PASS
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas griefing attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using <code>abi.encodePacked()</code> with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The <code>transfer()</code> and <code>send()</code> functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS



# SMART CONTRACT ANALYSIS

Started	Monday Nov 21 2022 00:28:45 GMT+0000 (Coordinated Universal Time)
Finished	Tuesday Nov 22 2022 21:54:14 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	Lobby.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
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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

LINE 156

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
155  *
156  * - Subtraction cannot overflow.
157  */
158  function sub(uint256 a, uint256 b, string memory errorMessage) internal pure
returns (uint256) {
159  require(b <= a, errorMessage);
160
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 188

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
187     }
188
189     /**
190     * @dev Returns the integer division of two unsigned integers. Reverts on
191     * division by zero. The result is rounded towards zero.
192     */
```

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

LINE 206

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
205  /**
206  * @dev Returns the integer division of two unsigned integers. Reverts with custom
message on
207  * division by zero. The result is rounded towards zero.
208  *
209  * Counterpart to Solidity's `/` operator. Note: this function uses a
210
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 206

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
205  /**
206  * @dev Returns the integer division of two unsigned integers. Reverts with custom
message on
207  * division by zero. The result is rounded towards zero.
208  *
209  * Counterpart to Solidity's `/` operator. Note: this function uses a
210
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 242

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
241  /**
242  * @dev Returns the remainder of dividing two unsigned integers. (unsigned integer
modulo),
243  * Reverts with custom message when dividing by zero.
244  *
245  * Counterpart to Solidity's `%` operator. This function uses a `revert`
246
```



# SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 282

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
281 * It is unsafe to assume that an address for which this function returns
282 * false is an externally-owned account (EOA) and not a contract.
283 *
284 * Among others, `isContract` will return false for the following
285 * types of addresses:
286
```

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

LINE 503

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
502
503  function getPair(address tokenA, address tokenB) external view returns (address
pair);
504  function allPairs(uint) external view returns (address pair);
505  function allPairsLength() external view returns (uint);
506
507
```

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

LINE 753

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
752 uint256 public _maxTxAmount = 1000000 * 10**3 * 10**9;  
753 uint256 public numTokensSellToAddToLiquidity = 1000000 * 10**3 * 10**9;  
754  
755 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);  
756 event SwapAndLiquifyEnabledUpdated(bool enabled);  
757
```

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

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753 uint256 public numTokensSellToAddToLiquidity = 1000000 * 10**3 * 10**9;
754
755 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
756 event SwapAndLiquifyEnabledUpdated(bool enabled);
757
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 753

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
752 uint256 public _maxTxAmount = 1000000 * 10**3 * 10**9;
753 uint256 public numTokensSellToAddToLiquidity = 1000000 * 10**3 * 10**9;
754
755 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
756 event SwapAndLiquifyEnabledUpdated(bool enabled);
757
```

# SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 754

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
753 uint256 public numTokensSellToAddToLiquidity = 1000000 * 10**3 * 10**9;
754
755 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
756 event SwapAndLiquifyEnabledUpdated(bool enabled);
757 event SwapAndLiquify(
758
```



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

LINE 773

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
772 //IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x10ED43C718714eb63d5aA57B78B54704E256024E); //Mainnet BSC
773 //IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x9Ac64Cc6e4415144C455BD8E4837Fea55603e5c3); //Testnet BSC
774 IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x7a250d5630B4cF539739dF2C5dAcb4c659F2488D); //Mainnet & Testnet ETH
775 // Create a uniswap pair for this new token
776 uniswapV2Pair = IUniswapV2Factory(_uniswapV2Router.factory())
777
```

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

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775 // Create a uniswap pair for this new token
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# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 774

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
773 //IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x9Ac64Cc6e4415144C455BD8E4837Fea55603e5c3); //Testnet BSC
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IUniswapV2Router02(0x7a250d5630B4cF539739dF2C5dAcb4c659F2488D); //Mainnet & Testnet ETH
775 // Create a uniswap pair for this new token
776 uniswapV2Pair = IUniswapV2Factory(_uniswapV2Router.factory())
777 .createPair(address(this), _uniswapV2Router.WETH());
778
```

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

LINE 774

## low SEVERITY

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## Source File

- Lobby.sol

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```
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777 .createPair(address(this), _uniswapV2Router.WETH());
778
```

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775 // Create a uniswap pair for this new token  
776 uniswapV2Pair = IUniswapV2Factory(_uniswapV2Router.factory())  
777 .createPair(address(this), _uniswapV2Router.WETH());  
778
```



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

LINE 871

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
870 address sender = _msgSender();
871 require(!_isExcluded[sender], "Excluded addresses cannot call this function");
872 (uint256 rAmount,,,,) = _getValues(tAmount);
873 _rOwned[sender] = _rOwned[sender].sub(rAmount);
874 _rTotal = _rTotal.sub(rAmount);
875
```

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

LINE 871

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
870 address sender = _msgSender();
871 require(!_isExcluded[sender], "Excluded addresses cannot call this function");
872 (uint256 rAmount,,,,) = _getValues(tAmount);
873 _rOwned[sender] = _rOwned[sender].sub(rAmount);
874 _rTotal = _rTotal.sub(rAmount);
875
```

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

LINE 883

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
882     return rAmount;
883   } else {
884     (,uint256 rTransferAmount,,,,) = _getValues(tAmount);
885     return rTransferAmount;
886   }
887
```

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

LINE 884

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
883     } else {  
884         (,uint256 rTransferAmount,,,,) = _getValues(tAmount);  
885         return rTransferAmount;  
886     }  
887 }  
888
```

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

LINE 884

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
883     } else {  
884         (,uint256 rTransferAmount,,,,) = _getValues(tAmount);  
885         return rTransferAmount;  
886     }  
887 }  
888
```

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

LINE 922

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
921  _tOwned[recipient] = _tOwned[recipient].add(tTransferAmount);
922  _rOwned[recipient] = _rOwned[recipient].add(rTransferAmount);
923  _takeLiquidity(tLiquidity);
924  _reflectFee(rFee, tFee);
925  emit Transfer(sender, recipient, tTransferAmount);
926
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 924

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
923     _takeLiquidity(tLiquidity);  
924     _reflectFee(rFee, tFee);  
925     emit Transfer(sender, recipient, tTransferAmount);  
926 }  
927  
928
```

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

LINE 972

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
971
972 function clearStuckBalance (address payable walletaddress) external onlyOwner() {
973     walletaddress.transfer(address(this).balance);
974 }
975
976
```



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

LINE 972

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
971
972 function clearStuckBalance (address payable walletaddress) external onlyOwner() {
973     walletaddress.transfer(address(this).balance);
974 }
975
976
```

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

LINE 980

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
979
980 function removeBotWallet(address botwallet) external onlyOwner() {
981     botWallets[botwallet] = false;
982 }
983
984
```

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

LINE 980

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
979
980 function removeBotWallet(address botwallet) external onlyOwner() {
981     botWallets[botwallet] = false;
982 }
983
984
```

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

LINE 1052

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
1051
1052     function calculateTaxFee(uint256 _amount) private view returns (uint256) {
1053     return _amount.mul(_taxFee).div(
1054     10**2
1055     );
1056
```

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

LINE 1083

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
1082
1083 function _approve(address owner, address spender, uint256 amount) private {
1084     require(owner != address(0), "ERC20: approve from the zero address");
1085     require(spender != address(0), "ERC20: approve to the zero address");
1086
1087
```

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

LINE 1085

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
1084 require(owner != address(0), "ERC20: approve from the zero address");
1085 require(spender != address(0), "ERC20: approve to the zero address");
1086
1087 _allowances[owner][spender] = amount;
1088 emit Approval(owner, spender, amount);
1089
```

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

LINE 1188

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
1187     block.timestamp
1188     );
1189     }
1190
1191     function addLiquidity(uint256 tokenAmount, uint256 ethAmount) private {
1192
```

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

LINE 924

## low SEVERITY

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

## Source File

- Lobby.sol

## Locations

```
923     _takeLiquidity(tLiquidity);  
924     _reflectFee(rFee, tFee);  
925     emit Transfer(sender, recipient, tTransferAmount);  
926 }  
927  
928
```



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

LINE 51

### low SEVERITY

The current pragma Solidity directive is `""^0.8.9""`. 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

- Lobby.sol

### Locations

```
50 * @dev Returns the remaining number of tokens that `spender` will be
51 * allowed to spend on behalf of `owner` through {transferFrom}. This is
52 * zero by default.
53 *
54 * This value changes when {approve} or {transferFrom} are called.
55
```

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

LINE 723

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
722 mapping (address => bool) private botWallets;  
723 bool botscantrade = false;  
724  
725 bool public canTrade = false;  
726 uint256 public launchTime;  
727
```

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

LINE 749

### 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

- Lobby.sol

### Locations

```
748
749  bool inSwapAndLiquify;
750  bool public swapAndLiquifyEnabled = true;
751
752  uint256 public _maxTxAmount = 1000000 * 10**3 * 10**9;
753
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 882

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
881 (uint256 rAmount,,,,) = _getValues(tAmount);
882 return rAmount;
883 } else {
884 (,uint256 rTransferAmount,,,,) = _getValues(tAmount);
885 return rTransferAmount;
886
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 883

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
882     return rAmount;
883   } else {
884     (,uint256 rTransferAmount,,,,) = _getValues(tAmount);
885     return rTransferAmount;
886   }
887
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 922

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
921  _tOwned[recipient] = _tOwned[recipient].add(tTransferAmount);
922  _rOwned[recipient] = _rOwned[recipient].add(rTransferAmount);
923  _takeLiquidity(tLiquidity);
924  _reflectFee(rFee, tFee);
925  emit Transfer(sender, recipient, tTransferAmount);
926
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 923

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
922  _rOwned[recipient] = _rOwned[recipient].add(rTransferAmount);
923  _takeLiquidity(tLiquidity);
924  _reflectFee(rFee, tFee);
925  emit Transfer(sender, recipient, tTransferAmount);
926  }
927
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 924

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
923     _takeLiquidity(tLiquidity);  
924     _reflectFee(rFee, tFee);  
925     emit Transfer(sender, recipient, tTransferAmount);  
926 }  
927  
928
```



## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1052

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
1051
1052 function calculateTaxFee(uint256 _amount) private view returns (uint256) {
1053     return _amount.mul(_taxFee).div(
1054         10**2
1055     );
1056
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1053

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
1052 function calculateTaxFee(uint256 _amount) private view returns (uint256) {  
1053 return _amount.mul(_taxFee).div(  
1054 10**2  
1055 );  
1056 }  
1057
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1058

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
1057
1058     function calculateLiquidityFee(uint256 _amount) private view returns (uint256) {
1059         return _amount.mul(_liquidityFee).div(
1060             10**2
1061         );
1062     }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1059

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
1058 function calculateLiquidityFee(uint256 _amount) private view returns (uint256) {  
1059     return _amount.mul(_liquidityFee).div(  
1060         10**2  
1061     );  
1062 }  
1063
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1198

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
1197     address(this),  
1198     tokenAmount,  
1199     0, // slippage is unavoidable  
1200     0, // slippage is unavoidable  
1201     owner(),  
1202
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1199

### low SEVERITY

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

### Source File

- Lobby.sol

### Locations

```
1198     tokenAmount,  
1199     0, // slippage is unavoidable  
1200     0, // slippage is unavoidable  
1201     owner(),  
1202     block.timestamp  
1203
```

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