



# Survival DAO Smart Contract Audit Report

# TABLE OF CONTENTS

## [Audited Details](#)

- Audited Project
- Blockchain
- Addresses
- Project Website
- Codebase

## [Summary](#)

- Contract Summary
- Audit Findings Summary
- Vulnerabilities Summary

## [Conclusion](#)

## [Audit Results](#)

## [Smart Contract Analysis](#)

- Detected Vulnerabilities

## [Disclaimer](#)

## [About Us](#)

# AUDITED DETAILS

## Audited Project

Project name	Token ticker	Blockchain
Survival DAO	Survive	Binance Smart Chain

## Addresses

Contract address	0x698bCFcBDd8a53628b46E0eBC7F0A13bdad6396A
Contract deployer address	0x1aB55f8244C5716be9d4D38D2F7dd29e7CCaFB54

## Project Website

<https://survivaldao.net/>

## Codebase

<https://bscscan.com/address/0x698bCFcBDd8a53628b46E0eBC7F0A13bdad6396A#code>

# SUMMARY

Are you ready for the next P2E style game? Survival DAO puts you, the holders, at an advantage. SDAO Treasury rewards it's holders and give the DAO the choices of what rewards while introducing a series of SURVIVAL games. Every Survival game and challenge works in a way where all SDAO holders earn! Each mini game objective is to win the SURVIVAL prize pool. DAO ready, challenges ready, partnerships ready. Don't be late! HOLD \* EARN \* PLAY \* SURVIVE!

## Contract Summary

### Documentation Quality

Survival DAO 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 Survival DAO with the discovery of several low issues.

### Test Coverage

Test coverage of the project is 100% ( Through Codebase )

## Audit Findings Summary

- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 132, 142, 150, 169, 171, 183, 184, 198, 200, 498, 498, 499, 553, 553, 560, 560, 566, 566, 572, 572, 636, 644, 645, 646, 647, 663, 666, 666, 671, 671, 676, 676, 698, 698, 700 and 722.
- 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 653, 654, 738 and 739.

## CONCLUSION

We have audited the Survival DAO project released on January 2023 to discover issues and identify potential security vulnerabilities in Survival DAO 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 Survival DAO 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 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.	PASS
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.	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.	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.	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	Wednesday Jan 18 2023 05:56:01 GMT+0000 (Coordinated Universal Time)
Finished	Thursday Jan 19 2023 23:31:45 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	SurvivalDAO.sol

## Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged

SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
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-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-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 132

### low SEVERITY

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

### Source File

- SurvivalDAO.sol

### Locations

```
131     unchecked {  
132         _approve(sender, _msgSender(), currentAllowance - amount);  
133     }  
134 }  
135  
136
```

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

LINE 142

### low SEVERITY

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

### Source File

- SurvivalDAO.sol

### Locations

```
141     function increaseAllowance(address spender, uint256 addedValue) public virtual
returns (bool) {
142     _approve(_msgSender(), spender, _allowances[_msgSender()][spender] + addedValue);
143     return true;
144 }
145
146
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 150

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
149     unchecked {  
150         _approve(_msgSender(), spender, currentAllowance - subtractedValue);  
151     }  
152  
153     return true;  
154
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 169

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
168     unchecked {  
169         _balances[sender] = senderBalance - amount;  
170     }  
171     _balances[recipient] += amount;  
172  
173
```

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

LINE 171

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
170     }  
171     _balances[recipient] += amount;  
172  
173     emit Transfer(sender, recipient, amount);  
174  
175
```



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

LINE 183

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
182
183     _totalSupply += amount;
184     _balances[account] += amount;
185     emit Transfer(address(0), account, amount);
186
187
```

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

LINE 184

### low SEVERITY

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

### Source File

- SurvivalDAO.sol

### Locations

```
183     _totalSupply += amount;  
184     _balances[account] += amount;  
185     emit Transfer(address(0), account, amount);  
186  
187     _afterTokenTransfer(address(0), account, amount);  
188
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 198

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
197     unchecked {  
198         _balances[account] = accountBalance - amount;  
199     }  
200     _totalSupply -= amount;  
201  
202
```

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

LINE 200

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
199     }  
200     _totalSupply -= amount;  
201  
202     emit Transfer(account, address(0), amount);  
203  
204
```

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

LINE 498

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
497
498     _mint(owner(), 1e8 * (10 ** 18));
499     swapTokensAtAmount = totalSupply() / 5000;
500 }
501
502
```

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

LINE 498

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
497
498     _mint(owner(), 1e8 * (10 ** 18));
499     swapTokensAtAmount = totalSupply() / 5000;
500 }
501
502
```

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

LINE 499

### low SEVERITY

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

### Source File

- SurvivalDAO.sol

### Locations

```
498  _mint(owner(), 1e8 * (10 ** 18));
499  swapTokensAtAmount = totalSupply() / 5000;
500  }
501
502  receive() external payable {
503
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 553

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
552     require(  
553         _treasuryFeeOnBuy + _operationsFeeOnBuy + _rewardFeeOnBuy <= 15,  
554         "Fees must be less than 16%"  
555     );  
556     treasuryFeeOnBuy = _treasuryFeeOnBuy;  
557
```



# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 553

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
552     require(  
553         _treasuryFeeOnBuy + _operationsFeeOnBuy + _rewardFeeOnBuy <= 15,  
554         "Fees must be less than 16%"  
555     );  
556     treasuryFeeOnBuy = _treasuryFeeOnBuy;  
557
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 560

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
559
560  _totalFeesOnBuy    = treasuryFeeOnBuy + operationsFeeOnBuy + rewardFeeOnBuy;
561  emit UpdateBuyFees(_treasuryFeeOnBuy, _operationsFeeOnBuy, _rewardFeeOnBuy);
562  }
563
564
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 560

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
559
560  _totalFeesOnBuy    = treasuryFeeOnBuy + operationsFeeOnBuy + rewardFeeOnBuy;
561  emit UpdateBuyFees(_treasuryFeeOnBuy, _operationsFeeOnBuy, _rewardFeeOnBuy);
562  }
563
564
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 566

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
565     require(  
566         _treasuryFeeOnSell + _operationsFeeOnSell + _rewardFeeOnSell <= 15,  
567         "Fees must be less than 16%"  
568     );  
569     treasuryFeeOnSell = _treasuryFeeOnSell;  
570
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 566

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
565     require(  
566         _treasuryFeeOnSell + _operationsFeeOnSell + _rewardFeeOnSell <= 15,  
567         "Fees must be less than 16%"  
568     );  
569     treasuryFeeOnSell = _treasuryFeeOnSell;  
570
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 572

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
571     rewardFeeOnSell = _rewardFeeOnSell;  
572     _totalFeesOnSell  = treasuryFeeOnSell + operationsFeeOnSell + rewardFeeOnSell;  
573     emit UpdateSellFees(_treasuryFeeOnSell, _operationsFeeOnSell, _rewardFeeOnSell);  
574 }  
575  
576
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 572

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
571     rewardFeeOnSell = _rewardFeeOnSell;  
572     _totalFeesOnSell  = treasuryFeeOnSell + operationsFeeOnSell + rewardFeeOnSell;  
573     emit UpdateSellFees(_treasuryFeeOnSell, _operationsFeeOnSell, _rewardFeeOnSell);  
574 }  
575  
576
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 636

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
635     automatedMarketMakerPairs[to] &&  
636     _totalFeesOnBuy + _totalFeesOnSell > 0  
637     ) {  
638         swapping = true;  
639  
640
```



# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 644

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
643
644     uint256 totalFee = _totalFeesOnBuy + _totalFeesOnSell;
645     uint256 treasuryShare = treasuryFeeOnBuy + treasuryFeeOnSell;
646     uint256 operationsShare = operationsFeeOnBuy + operationsFeeOnSell;
647     uint256 rewardShare = rewardFeeOnBuy + rewardFeeOnSell;
648
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 645

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
644 uint256 totalFee = _totalFeesOnBuy + _totalFeesOnSell;  
645 uint256 treasuryShare = treasuryFeeOnBuy + treasuryFeeOnSell;  
646 uint256 operationsShare = operationsFeeOnBuy + operationsFeeOnSell;  
647 uint256 rewardShare = rewardFeeOnBuy + rewardFeeOnSell;  
648  
649
```

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

LINE 646

### low SEVERITY

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

### Source File

- SurvivalDAO.sol

### Locations

```
645     uint256 treasuryShare = treasuryFeeOnBuy + treasuryFeeOnSell;  
646     uint256 operationsShare = operationsFeeOnBuy + operationsFeeOnSell;  
647     uint256 rewardShare = rewardFeeOnBuy + rewardFeeOnSell;  
648  
649     if(contractTokenBalance > 0 && totalFee > 0) {  
650
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 647

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
646  uint256 operationsShare = operationsFeeOnBuy + operationsFeeOnSell;  
647  uint256 rewardShare = rewardFeeOnBuy + rewardFeeOnSell;  
648  
649  if(contractTokenBalance > 0 && totalFee > 0) {  
650  uint256 initialBalance = address(this).balance;  
651
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 663

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
662
663     uint256 newBalance = address(this).balance - initialBalance;
664
665     if(treasuryShare > 0) {
666         uint256 treasuryAmount = newBalance * treasuryShare / totalFee;
667     }
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 666

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
665     if(treasuryShare > 0) {  
666         uint256 treasuryAmount = newBalance * treasuryShare / totalFee;  
667         swapETHForTokens(treasuryAmount, treasuryToken, address(this));  
668     }  
669  
670
```

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

LINE 666

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
665     if(treasuryShare > 0) {  
666         uint256 treasuryAmount = newBalance * treasuryShare / totalFee;  
667         swapETHForTokens(treasuryAmount, treasuryToken, address(this));  
668     }  
669  
670
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 671

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
670     if(operationsShare > 0) {  
671         uint256 operationsAmount = newBalance * operationsShare / totalFee;  
672         payable(operationWallet).transfer(operationsAmount);  
673     }  
674  
675
```



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

LINE 671

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
670     if(operationsShare > 0) {  
671         uint256 operationsAmount = newBalance * operationsShare / totalFee;  
672         payable(operationWallet).transfer(operationsAmount);  
673     }  
674  
675
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 676

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
675     if(rewardShare > 0) {  
676         uint256 rewardAmount = newBalance * rewardShare / totalFee;  
677         swapETHForTokens(rewardAmount, rewardToken, rewardWallet);  
678     }  
679 }  
680
```

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

LINE 676

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
675     if(rewardShare > 0) {  
676         uint256 rewardAmount = newBalance * rewardShare / totalFee;  
677         swapETHForTokens(rewardAmount, rewardToken, rewardWallet);  
678     }  
679 }  
680
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 698

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
697     }  
698     uint256 fees = amount * _totalFees / 100;  
699  
700     amount = amount - fees;  
701  
702
```

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

LINE 698

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
697     }  
698     uint256 fees = amount * _totalFees / 100;  
699  
700     amount = amount - fees;  
701  
702
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 700

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
699
700  amount = amount - fees;
701
702  if(fees > 0) {
703    super._transfer(from, address(this), fees);
704
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 722

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
721     require(  
722         newAmount > totalSupply() / 1_000_000,  
723         "New Amount must more than 0.0001% of total supply"  
724     );  
725     swapTokensAtAmount = newAmount;  
726
```

# SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 653

## low SEVERITY

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

## Source File

- SurvivalDAO.sol

## Locations

```
652     address[] memory path = new address[](2);
653     path[0] = address(this);
654     path[1] = uniswapV2Router.WETH();
655
656     uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
657
```



## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 654

### low SEVERITY

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

### Source File

- SurvivalDAO.sol

### Locations

```
653     path[0] = address(this);  
654     path[1] = uniswapV2Router.WETH();  
655  
656     uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(  
657         contractTokenBalance,  
658
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 738

### low SEVERITY

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

### Source File

- SurvivalDAO.sol

### Locations

```
737     address[] memory path = new address[](2);  
738     path[0] = uniswapV2Router.WETH();  
739     path[1] = _token;  
740  
741     uniswapV2Router.swapExactETHForTokensSupportingFeeOnTransferTokens{value: amount}(  
742
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 739

### low SEVERITY

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

### Source File

- SurvivalDAO.sol

### Locations

```
738 path[0] = uniswapV2Router.WETH();  
739 path[1] = _token;  
740  
741 uniswapV2Router.swapExactETHForTokensSupportingFeeOnTransferTokens(value: amount)(  
742 0,  
743
```

# DISCLAIMER

This report is subject to the terms and conditions (including without limitation, description of services, confidentiality, disclaimer and limitation of liability) set forth in the Services Agreement, or the scope of services, and terms and conditions provided to you ("Customer" or the "Company") in connection with the Agreement. This report provided in connection with the Services set forth in the Agreement shall be used by the Company only to the extent permitted under the terms and conditions set forth in the Agreement. This report may not be transmitted, disclosed, referred to, or relied upon by any person for any purposes, nor may copies be delivered to any other person other than the Company, without Sysfixed's prior written consent in each instance.

This report is not, nor should be considered, an "endorsement" or "disapproval" of any particular project or team. This report is not, nor should be considered, an indication of the economics or value of any "product" or "asset" created by any team or project that contracts Sysfixed to perform a security assessment. This report does not provide any warranty or guarantee regarding the absolute bug-free nature of the technology analyzed, nor do they provide any indication of the technologies proprietors, business, business model, or legal compliance.

This is a limited report on our findings based on our analysis, in accordance with good industry practice as of the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

This report should not be used in any way to make decisions around investment or involvement with any particular project. This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.

This report is provided for information purposes only and on a non-reliance basis and does not constitute investment advice. No one shall have any right to rely on the report or its contents, and Sysfixed and its affiliates (including holding companies, shareholders, subsidiaries, employees, directors, officers, and other representatives) (Sysfixed) owe no duty of care.

## ABOUT US

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.