

YuanXiaoTu
Smart Contract
Audit Report





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AUDITED DETAILS

| Audited Project

Project name	Token ticker	Blockchain	
YuanXiaoTu	YXT	Binance Smart Chain	

Addresses

Contract address	0xaCDAc7BAbfABF21E9D0854d858824F98d352C7Ca
Contract deployer address	0x3e4Eef90fC1e1F050b6e03d4D6a6bc22EA10e4A8

Project Website

https://t.me/YSBP888

Codebase

https://bscscan.com/address/0xaCDAc7BAbfABF21E9D0854d858824F98d352C7Ca#code



SUMMARY

Pre-sale guaranteed compensation for the first project in the community, all projects in the community, white list pre-sale secured payment, do what you say!

Contract Summary

Documentation Quality

YuanXiaoTu 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 YuanXiaoTu 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 572, 582, 590, 609, 611, 623, 624, 638, 640, 793, 809, 810, 877, 934, 941, 946, 951, 956, 983, 984, 994, 1001, 1002, 1019, 1050 and 1072.
- SWC-110 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 1007, 1008, 1039, 1040, 1041, 1061, 1062 and 1063.
- SWC-120 | It is recommended to use external sources of randomness via oracles on lines 902, 967 and 973.



CONCLUSION

We have audited the YuanXiaoTu project released on January 2023 to discover issues and identify potential security vulnerabilities in YuanXiaoTu 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 code on YuanXiaoTu smart contract 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, weak sources of randomness and out of bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value.



AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	PASS
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	
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
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
Assert Violation	SWC-110	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	Delegate calls should only be allowed to trusted addresses.	
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.	
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
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120		ISSUE FOUND
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



SMART CONTRACT ANALYSIS

Started	Wednesday Jan 11 2023 14:57:00 GMT+0000 (Coordinated Universal Time)		
Finished	Thursday Jan 12 2023 16:04:13 GMT+0000 (Coordinated Universal Time)		
Mode	Standard		
Main Source File	SAFU.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-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
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SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged
SWC-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged
SWC-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged



LINE 572

low SEVERITY

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

Source File

- SAFU.sol

```
571 unchecked {
572 _approve(sender, _msgSender(), currentAllowance - amount);
573 }
574 }
575
576
```



LINE 582

low SEVERITY

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

Source File

- SAFU.sol

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



LINE 590

low SEVERITY

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

Source File

- SAFU.sol

```
589 unchecked {
590    _approve(_msgSender(), spender, currentAllowance - subtractedValue);
591  }
592
593    return true;
594
```



LINE 609

low SEVERITY

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

Source File

- SAFU.sol

```
608 unchecked {
609  _balances[sender] = senderBalance - amount;
610  }
611  _balances[recipient] += amount;
612
613
```



LINE 611

low SEVERITY

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

Source File

- SAFU.sol

```
610  }
611  _balances[recipient] += amount;
612
613  emit Transfer(sender, recipient, amount);
614
615
```



LINE 623

low SEVERITY

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

Source File

- SAFU.sol

```
622
623 _totalSupply += amount;
624 _balances[account] += amount;
625 emit Transfer(address(0), account, amount);
626
627
```



LINE 624

low SEVERITY

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

Source File

- SAFU.sol

```
__totalSupply += amount;
624    __balances[account] += amount;
625    emit Transfer(address(0), account, amount);
626
627    __afterTokenTransfer(address(0), account, amount);
628
```



LINE 638

low SEVERITY

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

Source File

- SAFU.sol

```
637 unchecked {
638  _balances[account] = accountBalance - amount;
639  }
640  _totalSupply -= amount;
641
642
```



LINE 640

low SEVERITY

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

Source File

- SAFU.sol

```
639 }
640 _totalSupply -= amount;
641
642 emit Transfer(account, address(0), amount);
643
644
```



LINE 793

low SEVERITY

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

Source File

- SAFU.sol

```
792
793 totalFeesOnBuySell = liquidityFeeOnBuySell + marketingFeeOnBuySell +
communityFeeOnBuySell + burnFeeOnBuySell;
794
795 walletToWalletTransferFee = walletToWalletTransferFee_;
796
797
```



LINE 809

low SEVERITY

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

Source File

- SAFU.sol

```
808
809  _mint(owner(), totalSupply_ * (10 ** decimals()));
810  swapTokensAtAmount = totalSupply() / 5_000;
811  }
812
813
```



LINE 810

low SEVERITY

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

Source File

- SAFU.sol

```
809 _mint(owner(), totalSupply_ * (10 ** decimals()));
810  swapTokensAtAmount = totalSupply() / 5_000;
811  }
812
813  receive() external payable {
814
```



LINE 877

low SEVERITY

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

Source File

- SAFU.sol

```
876
877 totalFeesOnBuySell = liquidityFeeOnBuySell + marketingFeeOnBuySell + communityFeeOnBuySell + burnFeeOnBuySell;
878
879 if (walletToWallet) {
880 require(walletToWalletTransferFee != 0, "walletToWalletTransferFee is zero");
881
```



LINE 934

low SEVERITY

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

Source File

- SAFU.sol

```
933 totalFeesOnBuySell > 0 &&
934 totalFeesOnBuySell == (liquidityFeeOnBuySell + marketingFeeOnBuySell +
communityFeeOnBuySell + burnFeeOnBuySell)
935 ) {
936 swapping = true;
937
938
```



LINE 941

low SEVERITY

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

Source File

- SAFU.sol

```
940 if (liquidityFeeOnBuySell > 0) {
941    uint256 liquidityTokens = contractTokenBalance * liquidityFeeOnBuySell /
totalFeesOnBuySell;
942    swapAndLiquify(liquidityTokens);
943    }
944
945
```



LINE 946

low SEVERITY

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

Source File

- SAFU.sol

```
945 if (marketingFeeOnBuySell > 0) {
946    uint256 marketingTokens = contractTokenBalance * marketingFeeOnBuySell /
totalFeesOnBuySell;
947    swapAndSendMarketing(marketingTokens);
948    }
949
950
```



LINE 951

low SEVERITY

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

Source File

- SAFU.sol

```
950 if (communityFeeOnBuySell > 0) {
951    uint256    communityTokens = contractTokenBalance * communityFeeOnBuySell /
totalFeesOnBuySell;
952    swapAndSendCommunity(communityTokens);
953    }
954
955
```



LINE 956

low SEVERITY

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

Source File

- SAFU.sol

```
if (burnFeeOnBuySell > 0) {
    uint256 burnTokens = contractTokenBalance * burnFeeOnBuySell / totalFeesOnBuySell;
    super._transfer(address(this), address(0xdead), burnTokens);
}

959
960
```



LINE 983

low SEVERITY

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

Source File

- SAFU.sol

```
982 if (_totalFees > 0) {
983    uint256 fees = (amount * _totalFees) / 100;
984    amount = amount - fees;
985    super._transfer(from, address(this), fees);
986  }
987
```



LINE 984

low SEVERITY

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

Source File

- SAFU.sol

```
983  uint256 fees = (amount * _totalFees) / 100;
984  amount = amount - fees;
985  super._transfer(from, address(this), fees);
986  }
987
988
```



LINE 994

low SEVERITY

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

Source File

- SAFU.sol

```
function setSwapTokensAtAmount(uint256 newAmount) external onlyOwner{
    require(newAmount > totalSupply() / 1_000_000, "SwapTokensAtAmount must be greater
    than 0.0001% of total supply");
    swapTokensAtAmount = newAmount;

    emit SwapTokensAtAmountUpdated(swapTokensAtAmount);

    emit SwapTokensAtAmountUpdated(swapTokensAtAmount);
}
```



LINE 1001

low SEVERITY

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

Source File

- SAFU.sol

```
function swapAndLiquify(uint256 tokens) private {
    uint256 half = tokens / 2;
    uint256 otherHalf = tokens - half;
    uint256 otherHalf = tokens - half;
    uint256 initialBalance = erc20UsdtToken.balanceOf(address(this));
    1005
```



LINE 1002

low SEVERITY

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

Source File

- SAFU.sol

```
1001  uint256 half = tokens / 2;
1002  uint256 otherHalf = tokens - half;
1003
1004  uint256 initialBalance = erc20UsdtToken.balanceOf(address(this));
1005
1006
```



LINE 1019

low SEVERITY

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

Source File

- SAFU.sol



LINE 1050

low SEVERITY

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

Source File

- SAFU.sol

```
1049
1050 uint256 newBalance = address(this).balance - initialBalance;
1051
1052 payable(marketingWallet).sendValue(newBalance);
1053
1054
```



LINE 1072

low SEVERITY

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

Source File

- SAFU.sol

```
1071
1072  uint256 newBalance = address(this).balance - initialBalance;
1073
1074  payable(communityWallet).sendValue(newBalance);
1075
1076
```



LINE 1007

low SEVERITY

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

Source File

- SAFU.sol

```
1006  address[] memory path = new address[](2);
1007  path[0] = address(this);
1008  path[1] = address(erc20UsdtToken);
1009
1010  uniswapV2Router.swapExactTokensForTokensSupportingFeeOnTransferTokens(
1011
```



LINE 1008

low SEVERITY

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

Source File

- SAFU.sol

```
1007 path[0] = address(this);
1008 path[1] = address(erc20UsdtToken);
1009
1010 uniswapV2Router.swapExactTokensForTokensSupportingFeeOnTransferTokens(
1011 half,
1012
```



LINE 1039

low SEVERITY

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

Source File

- SAFU.sol

```
1038  address[] memory path = new address[](3);
1039  path[0] = address(this);
1040  path[1] = address(erc20UsdtToken);
1041  path[2] = uniswapV2Router.WETH();
1042
1043
```



LINE 1040

low SEVERITY

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

Source File

- SAFU.sol

```
1039 path[0] = address(this);
1040 path[1] = address(erc20UsdtToken);
1041 path[2] = uniswapV2Router.WETH();
1042
1043 uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
1044
```



LINE 1041

low SEVERITY

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

Source File

- SAFU.sol

```
path[1] = address(erc20UsdtToken);
1041  path[2] = uniswapV2Router.WETH();
1042
1043  uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
1044  tokenAmount,
1045
```



LINE 1061

low SEVERITY

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

Source File

- SAFU.sol

```
1060 address[] memory path = new address[](3);
1061 path[0] = address(this);
1062 path[1] = address(erc20UsdtToken);
1063 path[2] = uniswapV2Router.WETH();
1064
1065
```



LINE 1062

low SEVERITY

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

Source File

- SAFU.sol

```
1061 path[0] = address(this);
1062 path[1] = address(erc20UsdtToken);
1063 path[2] = uniswapV2Router.WETH();
1064
1065 uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
1066
```



LINE 1063

low SEVERITY

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

Source File

- SAFU.sol

```
path[1] = address(erc20UsdtToken);
path[2] = uniswapV2Router.WETH();

1064
1065    uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
    tokenAmount,
1067
```



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

LINE 902

low SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- SAFU.sol

```
901 require(makeOfferBlock == 0, "Have started trading");
902 makeOfferBlock = block.number;
903
904 emit MakeOffer(makeOfferBlock);
905 }
906
```



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

LINE 967

low SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- SAFU.sol

```
966 } else if (from == uniswapV2Pair) {
967  if (makeOfferBlock == 0 || block.number < makeOfferBlock) {
968   _totalFees = 89;
969 } else {
970   _totalFees = totalFeesOnBuySell;
971
```



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

LINE 973

low SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- SAFU.sol

```
972  } else if (to == uniswapV2Pair) {
973  if (makeOfferBlock == 0 || block.number < makeOfferBlock) {
974   _totalFees = 89;
975  } else {
976   _totalFees = totalFeesOnBuySell;
977</pre>
```



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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.

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