AuditAce
FROM INCEPTION TO SUCCESS

# Smart Contract Audit

FOR

# Skills 100

DATED : 08 Mar 23'

# AUDIT SUMMARY

**Project name** – Skills 100

**Date**: 08 March, 2023

**Scope of Audit-** Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

**Audit Status: Passed**

## Issues Found

| Status | Critical | High | Medium | Low | Suggestion |
|---|---|---|---|---|---|
| Open | 0 | 0 | 0 | 1 | 0 |
| Acknowledged | 0 | 0 | 0 | 0 | 0 |
| Resolved | 0 | 0 | 0 | 0 | 0 |

# USED TOOLS

## Tools:

**1- Manual Review:**
a line by line code review has been performed by audit ace team.

**2- BSC Test Network:**
all tests were done on BSC Test network, each test has its transaction has attached to it.

**3- Slither : Static Analysis**

**Testnet Link:** all tests were done using this contract, tests are done on BSC Testnet

https://testnet.bscscan.com/token/0x443a0Eca78bb506149AE747aA7659735aaD7E94E#readContract

# Token Information

**Token Name** : Skills 100

**Token Symbol**: S100

**Decimals:** 18

**Token Supply**: 100,000

**Token Address:**
0x09C0e2bC53A2bB2da18CDDe4b190FE585aF68b75

**Checksum:**
1f2fc18bc0c9d665cb1505a567a63130ac1fb09f

**Owner:**
0x3cb718c917749338f362b99dCC170Fe741057D3F
**(at time of writing the audit)**

# TOKEN OVERVIEW

**Fees:**

Buy Fees: 25% Currently

Sell Fees: 25% Currently

Transfer Fees: 25% Currently

**Fees Privilige:** Owner

**Ownership** : Owned

**Minting:** No mint function

**Max Tx Amount/ Max Wallet Amount:** No

**Blacklist:** No

**Other Priviliges**: including and excluding form fee - changing distirbution settings (min tokens to be eligible, cooldown between claims etc)

# AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
- Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
- Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
- Test coverage analysis determines whether the test cases are covering the code and how much code isexercised when we run the test cases.
- Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
- Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.

# VULNERABILITY CHECKLIST

- [x] Return values of low-level calls
- [x] Private modifier
- [x] Multiple Sends
- [x] Using Suicide
- [x] Gas Limitand Loops
- [x] Address hardcoded
- [x] Exception Disorder
- [x] Using inline assembly
- [x] Divide before multiply
- [x] Missing Zero Address Validation
- [x] Compiler version not fixed
- [x] **Gasless Send**
- [x] Using block.timestamp
- [x] Re-entrancy
- [x] Tautology or contradiction
- [x] Timestamp Dependence
- [x] Revert/require functions
- [x] Use of tx.origin
- [x] Integer overflow/underflow
- [x] Dangerous strict equalities
- [x] Using SHA3
- [x] Using throw

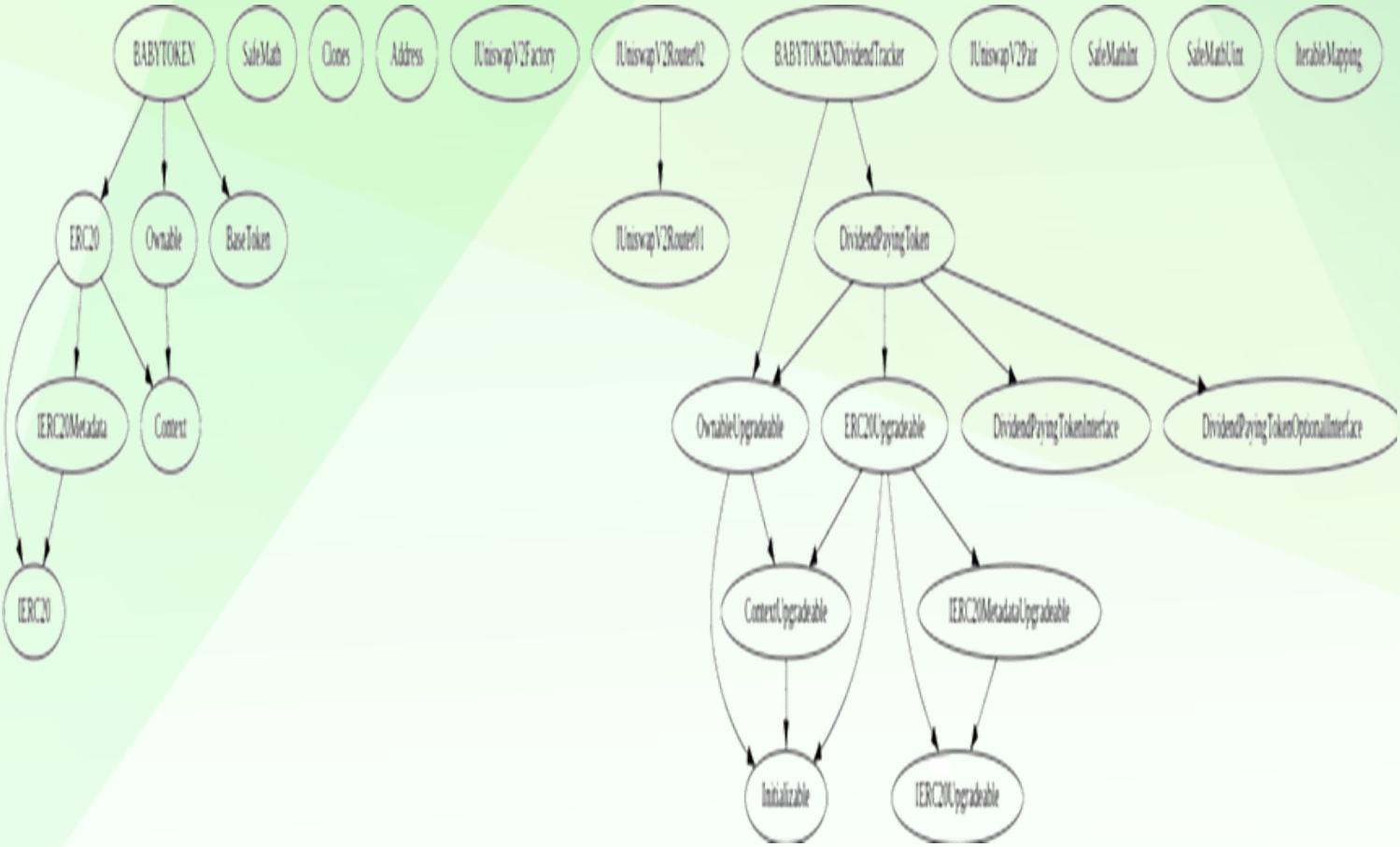
# CLASSIFICATION OF RISK

| Severity | Description |
| --- | --- |
| Critical | These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away. |
| High-Risk | A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way. |
| Medium-Risk | A vulnerability that could affect the desired outcome of executing the contract in a specific scenario. |
| Low-Risk | A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective. |
| Gas Optimization /Suggestion | A vulnerability that has an informational character but is not affecting any of the code. |

# Findings

| Severity | Found |
| --- | --- |
| Critical | 0 |
| High-Risk | 0 |
| Medium-Risk | 0 |
| Low-Risk | 1 |
| Gas Optimization / Suggestions | 0 |

# INHERITANCE TREE



# OVERVIEW

This token has three different types of fees, which are used for marketing, maintaining liquidity, and providing rewards to holders. The fees collected are converted to a stablecoin called BUSD and sent to a marketing wallet. Another part of the fee is used to maintain liquidity and is sent to a dividend tracker to provide BUSD rewards to holders. Rewards are distributed to holders every time a buy, sell or transfer occurs, and can also be manually claimed from the BscScan website.

# POINTS TO NOTE

- Fees are currently 25% on buy/sell/transfers
- Owner is able to change buy/sell/transfer fees but sum of fees can not exceed 25% (however initial fee is more than this number)
- Contract is recognized as proxy in bscscan, however this is because dividend distributor is minimal proxy contract which is not upgradeable currently
- Owner is not able to set max buy/sell/transfer/hold amount
- Owner is not able to blacklist an arbitrary wallet
- Owner is not able to disable trades
- Owner is not able to mint new tokens

# TOKEN DISTRIBUTION

It should be noted that the owner currently holds 100% of the total supply. However, information about the distribution of these tokens is not available, and it is recommended that investors exercise caution when considering this aspect.

# CONTRACT ASSESMENT

| Contract | Type | Bases | | |
|:---|:---|:---|:---|:---|
| └ | **Function Name** | **Visibility** | **Mutability** | **Modifiers** |
| | | | | |
| **IERC20** | Interface | | | |
| └ | totalSupply | External ❗ | | NO❗ |
| └ | balanceOf | External ❗ | | NO❗ |
| └ | transfer | External ❗ | 🛑 | NO❗ |
| └ | allowance | External ❗ | | NO❗ |
| └ | approve | External ❗ | 🛑 | NO❗ |
| └ | transferFrom | External ❗ | 🛑 | NO❗ |
| | | | | |
| **IERC20Metadata** | Interface | IERC20 | | |
| └ | name | External ❗ | | NO❗ |
| └ | symbol | External ❗ | | NO❗ |
| └ | decimals | External ❗ | | NO❗ |
| | | | | |
| **Context** | Implementation | | | |
| └ | _msgSender | Internal 🔒 | | |
| └ | _msgData | Internal 🔒 | | |
| | | | | |
| **ERC20** | Implementation | Context, IERC20, IERC20Metadata | | |
| └ | <Constructor> | Public ❗ | 🛑 | NO❗ |
| └ | name | Public ❗ | | NO❗ |
| └ | symbol | Public ❗ | | NO❗ |
| └ | decimals | Public ❗ | | NO❗ |
| └ | totalSupply | Public ❗ | | NO❗ |
| └ | balanceOf | Public ❗ | | NO❗ |
| └ | transfer | Public ❗ | 🛑 | NO❗ |
| └ | allowance | Public ❗ | | NO❗ |
| └ | approve | Public ❗ | 🛑 | NO❗ |
| └ | transferFrom | Public ❗ | 🛑 | NO❗ |
| └ | increaseAllowance | Public ❗ | 🛑 | NO❗ |
| └ | decreaseAllowance | Public ❗ | 🛑 | NO❗ |
| └ | _transfer | Internal 🔒 | 🛑 | |
| └ | _mint | Internal 🔒 | 🛑 | |
| └ | _burn | Internal 🔒 | 🛑 | |
| └ | _approve | Internal 🔒 | 🛑 | |
| └ | _beforeTokenTransfer | Internal 🔒 | 🛑 | |
| └ | _afterTokenTransfer | Internal 🔒 | 🛑 | |
| | | | | |
| **Ownable** | Implementation | Context | | |

# CONTRACT ASSESMENT

| └ | <Constructor> | Public ❗ | 🛑 | NO❗ |
| --- | --- | --- | --- | --- |
| └ | owner | Public ❗ | | NO❗ |
| └ | renounceOwnership | Public ❗ | 🛑 | onlyOwner |
| └ | transferOwnership | Public ❗ | 🛑 | onlyOwner |
| └ | _setOwner | Private 🔐 | 🛑 | |
| | | | | |
| **SafeMath** | Library | | | |
| └ | tryAdd | Internal 🔒 | | |
| └ | trySub | Internal 🔒 | | |
| └ | tryMul | Internal 🔒 | | |
| └ | tryDiv | Internal 🔒 | | |
| └ | tryMod | Internal 🔒 | | |
| └ | add | Internal 🔒 | | |
| └ | sub | Internal 🔒 | | |
| └ | mul | Internal 🔒 | | |
| └ | div | Internal 🔒 | | |
| └ | mod | Internal 🔒 | | |
| └ | sub | Internal 🔒 | | |
| └ | div | Internal 🔒 | | |
| └ | mod | Internal 🔒 | | |
| | | | | |
| **Clones** | Library | | | |
| └ | clone | Internal 🔒 | 🛑 | |
| └ | cloneDeterministic | Internal 🔒 | 🛑 | |
| └ | predictDeterministicAddress | Internal 🔒 | | |
| └ | predictDeterministicAddress | Internal 🔒 | | |
| | | | | |
| **Address** | Library | | | |
| └ | isContract | Internal 🔒 | | |
| └ | sendValue | Internal 🔒 | 🛑 | |
| └ | functionCall | Internal 🔒 | 🛑 | |
| └ | functionCall | Internal 🔒 | 🛑 | |
| └ | functionCallWithValue | Internal 🔒 | 🛑 | |
| └ | functionCallWithValue | Internal 🔒 | 🛑 | |
| └ | functionStaticCall | Internal 🔒 | | |
| └ | functionStaticCall | Internal 🔒 | | |
| └ | functionDelegateCall | Internal 🔒 | 🛑 | |
| └ | functionDelegateCall | Internal 🔒 | 🛑 | |
| └ | verifyCallResult | Internal 🔒 | | |
| | | | | |
| **IUniswapV2Factory** | Interface | | | |
| └ | feeTo | External ❗ | | NO❗ |

# CONTRACT ASSESMENT

| └ | feeToSetter | External ❗ | | |NO❗ |
| └ | getPair | External ❗ | | |NO❗ |
| └ | allPairs | External ❗ | | |NO❗ |
| └ | allPairsLength | External ❗ | | |NO❗ |
| └ | createPair | External ❗ | 🛑 | |NO❗ |
| └ | setFeeTo | External ❗ | 🛑 | |NO❗ |
| └ | setFeeToSetter | External ❗ | 🛑 | |NO❗ |
|||||||
| **IUniswapV2Router01** | Interface | | |||
| └ | factory | External ❗ | | |NO❗ |
| └ | WETH | External ❗ | | |NO❗ |
| └ | addLiquidity | External ❗ | 🛑 | |NO❗ |
| └ | addLiquidityETH | External ❗ | 💵 | |NO❗ |
| └ | removeLiquidity | External ❗ | 🛑 | |NO❗ |
| └ | removeLiquidityETH | External ❗ | 🛑 | |NO❗ |
| └ | removeLiquidityWithPermit | External ❗ | 🛑 | |NO❗ |
| └ | removeLiquidityETHWithPermit | External ❗ | 🛑 | |NO❗ |
| └ | swapExactTokensForTokens | External ❗ | 🛑 | |NO❗ |
| └ | swapTokensForExactTokens | External ❗ | 🛑 | |NO❗ |
| └ | swapExactETHForTokens | External ❗ | 💵 | |NO❗ |
| └ | swapTokensForExactETH | External ❗ | 🛑 | |NO❗ |
| └ | swapExactTokensForETH | External ❗ | 🛑 | |NO❗ |
| └ | swapETHForExactTokens | External ❗ | 💵 | |NO❗ |
| └ | quote | External ❗ | | |NO❗ |
| └ | getAmountOut | External ❗ | | |NO❗ |
| └ | getAmountIn | External ❗ | | |NO❗ |
| └ | getAmountsOut | External ❗ | | |NO❗ |
| └ | getAmountsIn | External ❗ | | |NO❗ |
|||||||
| **IUniswapV2Router02** | Interface | IUniswapV2Router01 |||
| └ | removeLiquidityETHSupportingFeeOnTransferTokens | External ❗ | 🛑 | |NO❗ |
| └ | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External ❗ | 🛑 | |NO❗ |
| └ | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ❗ | 🛑 | |NO❗ |
| └ | swapExactETHForTokensSupportingFeeOnTransferTokens | External ❗ | 💵 | |NO❗ |
| └ | swapExactTokensForETHSupportingFeeOnTransferTokens | External ❗ | 🛑 | |NO❗ |
|||||||
| **IERC20Upgradeable** | Interface | | |||
| └ | totalSupply | External ❗ | | |NO❗ |
| └ | balanceOf | External ❗ | | |NO❗ |
| └ | transfer | External ❗ | 🛑 | |NO❗ |
| └ | allowance | External ❗ | | |NO❗ |

# CONTRACT ASSESMENT

| └ | approve | External ❗ | 🛑 |NO❗ |
| └ | transferFrom | External ❗ | 🛑 |NO❗ |
||||||
| **IERC20MetadataUpgradeable** | Interface | IERC20Upgradeable |||
| └ | name | External ❗ | |NO❗ |
| └ | symbol | External ❗ | |NO❗ |
| └ | decimals | External ❗ | |NO❗ |
||||||
| **Initializable** | Implementation | |||
||||||
| **ContextUpgradeable** | Implementation | Initializable |||
| └ | __Context_init | Internal 🔒 | 🛑 | initializer |
| └ | __Context_init_unchained | Internal 🔒 | 🛑 | initializer |
| └ | _msgSender | Internal 🔒 | | |
| └ | _msgData | Internal 🔒 | | |
||||||
| **ERC20Upgradeable** | Implementation | Initializable, ContextUpgradeable, IERC20Upgradeable, IERC20MetadataUpgradeable |||
| └ | __ERC20_init | Internal 🔒 | 🛑 | initializer |
| └ | __ERC20_init_unchained | Internal 🔒 | 🛑 | initializer |
| └ | name | Public ❗ | |NO❗ |
| └ | symbol | Public ❗ | |NO❗ |
| └ | decimals | Public ❗ | |NO❗ |
| └ | totalSupply | Public ❗ | |NO❗ |
| └ | balanceOf | Public ❗ | |NO❗ |
| └ | transfer | Public ❗ | 🛑 |NO❗ |
| └ | allowance | Public ❗ | |NO❗ |
| └ | approve | Public ❗ | 🛑 |NO❗ |
| └ | transferFrom | Public ❗ | 🛑 |NO❗ |
| └ | increaseAllowance | Public ❗ | 🛑 |NO❗ |
| └ | decreaseAllowance | Public ❗ | 🛑 |NO❗ |
| └ | _transfer | Internal 🔒 | 🛑 | |
| └ | _mint | Internal 🔒 | 🛑 | |
| └ | _burn | Internal 🔒 | 🛑 | |
| └ | _approve | Internal 🔒 | 🛑 | |
| └ | _beforeTokenTransfer | Internal 🔒 | 🛑 | |
| └ | _afterTokenTransfer | Internal 🔒 | 🛑 | |
||||||
| **OwnableUpgradeable** | Implementation | Initializable, ContextUpgradeable |||
| └ | __Ownable_init | Internal 🔒 | 🛑 | initializer |
| └ | __Ownable_init_unchained | Internal 🔒 | 🛑 | initializer |
| └ | owner | Public ❗ | |NO❗ |

# CONTRACT ASSESMENT

| └ | renounceOwnership | Public ❗ | 🛑 | onlyOwner |
| └ | transferOwnership | Public ❗ | 🛑 | onlyOwner |
| └ | _setOwner | Private 🔐 | 🛑 | |
|||||
| **IUniswapV2Pair** | Interface | |||
| └ | name | External ❗ | | NO❗ |
| └ | symbol | External ❗ | | NO❗ |
| └ | decimals | External ❗ | | NO❗ |
| └ | totalSupply | External ❗ | | NO❗ |
| └ | balanceOf | External ❗ | | NO❗ |
| └ | allowance | External ❗ | | NO❗ |
| └ | approve | External ❗ | 🛑 | NO❗ |
| └ | transfer | External ❗ | 🛑 | NO❗ |
| └ | transferFrom | External ❗ | 🛑 | NO❗ |
| └ | DOMAIN_SEPARATOR | External ❗ | | NO❗ |
| └ | PERMIT_TYPEHASH | External ❗ | | NO❗ |
| └ | nonces | External ❗ | | NO❗ |
| └ | permit | External ❗ | 🛑 | NO❗ |
| └ | MINIMUM_LIQUIDITY | External ❗ | | NO❗ |
| └ | factory | External ❗ | | NO❗ |
| └ | token0 | External ❗ | | NO❗ |
| └ | token1 | External ❗ | | NO❗ |
| └ | getReserves | External ❗ | | NO❗ |
| └ | price0CumulativeLast | External ❗ | | NO❗ |
| └ | price1CumulativeLast | External ❗ | | NO❗ |
| └ | kLast | External ❗ | | NO❗ |
| └ | mint | External ❗ | 🛑 | NO❗ |
| └ | burn | External ❗ | 🛑 | NO❗ |
| └ | swap | External ❗ | 🛑 | NO❗ |
| └ | skim | External ❗ | 🛑 | NO❗ |
| └ | sync | External ❗ | 🛑 | NO❗ |
| └ | initialize | External ❗ | 🛑 | NO❗ |
|||||
| **SafeMathInt** | Library | |||
| └ | mul | Internal 🔒 | | |
| └ | div | Internal 🔒 | | |
| └ | sub | Internal 🔒 | | |
| └ | add | Internal 🔒 | | |
| └ | abs | Internal 🔒 | | |
| └ | toUint256Safe | Internal 🔒 | | |
|||||

# CONTRACT ASSESMENT

| **SafeMathUint** | Library | |||
| └ | toInt256Safe | Internal 🔒 | | |
||||||
| **IterableMapping** | Library | |||
| └ | get | Internal 🔒 | | |
| └ | getIndexOfKey | Internal 🔒 | | |
| └ | getKeyAtIndex | Internal 🔒 | | |
| └ | size | Internal 🔒 | | |
| └ | set | Internal 🔒 | 🛑 | |
| └ | remove | Internal 🔒 | 🛑 | |
||||||
| **DividendPayingTokenInterface** | Interface | |||
| └ | dividendOf | External ❗ | |NO❗ |
| └ | withdrawDividend | External ❗ | 🛑 |NO❗ |
||||||
| **DividendPayingTokenOptionalInterface** | Interface | |||
| └ | withdrawableDividendOf | External ❗ | |NO❗ |
| └ | withdrawnDividendOf | External ❗ | |NO❗ |
| └ | accumulativeDividendOf | External ❗ | |NO❗ |
||||||
| **DividendPayingToken** | Implementation | ERC20Upgradeable, OwnableUpgradeable, DividendPayingTokenInterface, DividendPayingTokenOptionalInterface |||
| └ | __DividendPayingToken_init | Internal 🔒 | 🛑 | initializer |
| └ | distributeCAKEDividends | Public ❗ | 🛑 | onlyOwner |
| └ | withdrawDividend | Public ❗ | 🛑 |NO❗ |
| └ | _withdrawDividendOfUser | Internal 🔒 | 🛑 | |
| └ | dividendOf | Public ❗ | |NO❗ |
| └ | withdrawableDividendOf | Public ❗ | |NO❗ |
| └ | withdrawnDividendOf | Public ❗ | |NO❗ |
| └ | accumulativeDividendOf | Public ❗ | |NO❗ |
| └ | _transfer | Internal 🔒 | 🛑 | |
| └ | _mint | Internal 🔒 | 🛑 | |
| └ | _burn | Internal 🔒 | 🛑 | |
| └ | _setBalance | Internal 🔒 | 🛑 | |
||||||
| **BABYTOKENDividendTracker** | Implementation | OwnableUpgradeable, DividendPayingToken |||
| └ | initialize | External ❗ | 🛑 | initializer |
| └ | _transfer | Internal 🔒 | | |
| └ | withdrawDividend | Public ❗ | |NO❗ |
| └ | excludeFromDividends | External ❗ | 🛑 | onlyOwner |
| └ | isExcludedFromDividends | Public ❗ | |NO❗ |
| └ | updateClaimWait | External ❗ | 🛑 | onlyOwner |

# CONTRACT ASSESMENT

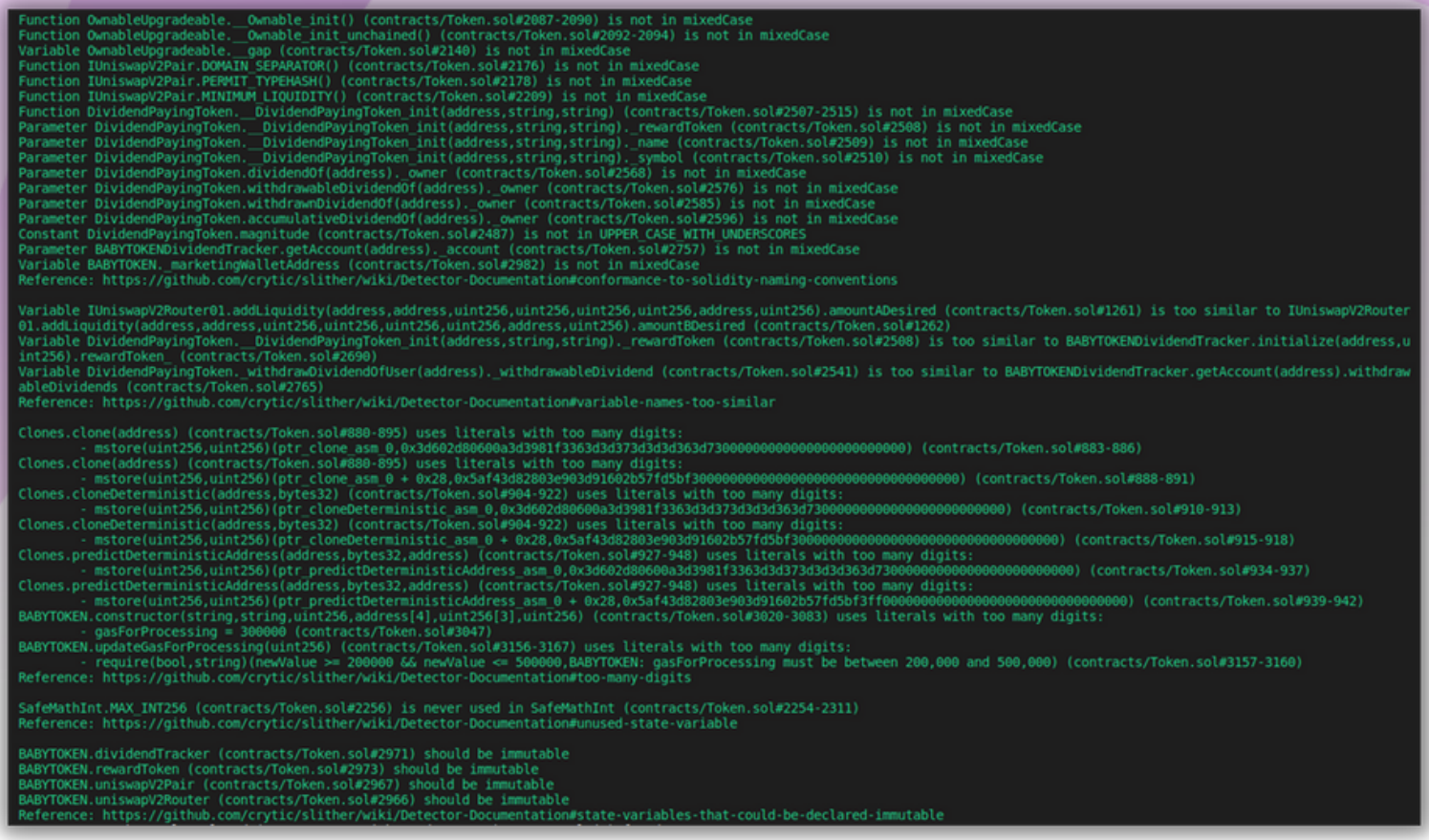
| └ | updateMinimumTokenBalanceForDividends | External ❗ | 🛑 | onlyOwner |
| └ | getLastProcessedIndex | External ❗ | | NO❗ |
| └ | getNumberOfTokenHolders | External ❗ | | NO❗ |
| └ | getAccount | Public ❗ | | NO❗ |
| └ | getAccountAtIndex | Public ❗ | | NO❗ |
| └ | canAutoClaim | Private 🔐 | | |
| └ | setBalance | External ❗ | 🛑 | onlyOwner |
| └ | process | Public ❗ | 🛑 | NO❗ |
| └ | processAccount | Public ❗ | 🛑 | onlyOwner |
| | | | | |
| **BaseToken** | Implementation | | | |
| | | | | |
| **BABYTOKEN** | Implementation | ERC20, Ownable, BaseToken | | |
| └ | <Constructor> | Public ❗ | 💵 | ERC20 |
| └ | <Receive Ether> | External ❗ | 💵 | NO❗ |
| └ | setSwapTokensAtAmount | External ❗ | 🛑 | onlyOwner |
| └ | excludeFromFees | External ❗ | 🛑 | onlyOwner |
| └ | excludeMultipleAccountsFromFees | External ❗ | 🛑 | onlyOwner |
| └ | setMarketingWallet | External ❗ | 🛑 | onlyOwner |
| └ | setTokenRewardsFee | External ❗ | 🛑 | onlyOwner |
| └ | setLiquiditFee | External ❗ | 🛑 | onlyOwner |
| └ | setMarketingFee | External ❗ | 🛑 | onlyOwner |
| └ | _setAutomatedMarketMakerPair | Private 🔐 | 🛑 | |
| └ | updateGasForProcessing | Public ❗ | 🛑 | onlyOwner |
| └ | updateClaimWait | External ❗ | 🛑 | onlyOwner |
| └ | getClaimWait | External ❗ | | NO❗ |
| └ | updateMinimumTokenBalanceForDividends | External ❗ | 🛑 | onlyOwner |
| └ | getMinimumTokenBalanceForDividends | External ❗ | | NO❗ |
| └ | getTotalDividendsDistributed | External ❗ | | NO❗ |
| └ | isExcludedFromFees | Public ❗ | | NO❗ |
| └ | withdrawableDividendOf | Public ❗ | | NO❗ |
| └ | dividendTokenBalanceOf | Public ❗ | | NO❗ |
| └ | excludeFromDividends | External ❗ | 🛑 | onlyOwner |
| └ | isExcludedFromDividends | Public ❗ | | NO❗ |
| └ | getAccountDividendsInfo | External ❗ | | NO❗ |
| └ | getAccountDividendsInfoAtIndex | External ❗ | | NO❗ |
| └ | processDividendTracker | External ❗ | 🛑 | NO❗ |
| └ | claim | External ❗ | 🛑 | NO❗ |
| └ | getLastProcessedIndex | External ❗ | | NO❗ |
| └ | getNumberOfDividendTokenHolders | External ❗ | | NO❗ |
| └ | _transfer | Internal 🔒 | 🛑 | |

# CONTRACT ASSESMENT

| └ | swapAndSendToFee | Private 🔐 | 🛑 | |
| └ | swapAndLiquify | Private 🔐 | 🛑 | |
| └ | swapTokensForEth | Private 🔐 | 🛑 | |
| └ | swapTokensForCake | Private 🔐 | 🛑 | |
| └ | addLiquidity | Private 🔐 | 🛑 | |
| └ | swapAndSendDividends | Private 🔐 | 🛑 | |

| Symbol | Meaning |
|:--------:|----------|
| 🛑 | Function can modify state |
| 💵 | Function is payable |

# STATIC ANALYSIS



```
Function OwnableUpgradeable.__Ownable_init() (contracts/Token.sol#2087-2090) is not in mixedCase
Function OwnableUpgradeable.__Ownable_init_unchained() (contracts/Token.sol#2092-2094) is not in mixedCase
Variable OwnableUpgradeable.__gap (contracts/Token.sol#2140) is not in mixedCase
Function IUniswapV2Pair.DOMAIN_SEPARATOR() (contracts/Token.sol#2176) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (contracts/Token.sol#2178) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (contracts/Token.sol#2209) is not in mixedCase
Function DividendPayingToken.__DividendPayingToken_init(address,string,string) (contracts/Token.sol#2507-2515) is not in mixedCase
Parameter DividendPayingToken.__DividendPayingToken_init(address,string,string)._rewardToken (contracts/Token.sol#2508) is not in mixedCase
Parameter DividendPayingToken.__DividendPayingToken_init(address,string,string)._name (contracts/Token.sol#2509) is not in mixedCase
Parameter DividendPayingToken.__DividendPayingToken_init(address,string,string)._symbol (contracts/Token.sol#2510) is not in mixedCase
Parameter DividendPayingToken.dividendOf(address)._owner (contracts/Token.sol#2568) is not in mixedCase
Parameter DividendPayingToken.withdrawableDividendOf(address)._owner (contracts/Token.sol#2576) is not in mixedCase
Parameter DividendPayingToken.withdrawnDividendOf(address)._owner (contracts/Token.sol#2585) is not in mixedCase
Parameter DividendPayingToken.accumulativeDividendOf(address)._owner (contracts/Token.sol#2596) is not in mixedCase
Constant DividendPayingToken.magnitude (contracts/Token.sol#2487) is not in UPPER_CASE_WITH_UNDERSCORES
Parameter BABYTOKENDividendTracker.getAccount(address)._account (contracts/Token.sol#2757) is not in mixedCase
Variable BABYTOKEN._marketingWalletAddress (contracts/Token.sol#2982) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Variable IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#1261) is too similar to IUniswapV2Router
01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#1262)
Variable DividendPayingToken.__DividendPayingToken_init(address,string,string)._rewardToken (contracts/Token.sol#2508) is too similar to BABYTOKENDividendTracker.initialize(address,u
int256).rewardToken_ (contracts/Token.sol#2690)
Variable DividendPayingToken._withdrawDividendOfUser(address)._withdrawableDividend (contracts/Token.sol#2541) is too similar to BABYTOKENDividendTracker.getAccount(address).withdraw
ableDividends (contracts/Token.sol#2765)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

Clones.clone(address) (contracts/Token.sol#880-895) uses literals with too many digits:
        - mstore(uint256,uint256)(ptr_clone_asm_0,0x3d602d80600a3d3981f3363d3d373d3d3d363d7300000000000000000000000) (contracts/Token.sol#883-886)
Clones.clone(address) (contracts/Token.sol#880-895) uses literals with too many digits:
        - mstore(uint256,uint256)(ptr_clone_asm_0 + 0x28,0x5af43d82803e903d91602b57fd5bf3000000000000000000000000000000000) (contracts/Token.sol#888-891)
Clones.cloneDeterministic(address,bytes32) (contracts/Token.sol#904-922) uses literals with too many digits:
        - mstore(uint256,uint256)(ptr_cloneDeterministic_asm_0,0x3d602d80600a3d3981f3363d3d373d3d3d363d7300000000000000000000000) (contracts/Token.sol#910-913)
Clones.cloneDeterministic(address,bytes32) (contracts/Token.sol#904-922) uses literals with too many digits:
        - mstore(uint256,uint256)(ptr_cloneDeterministic_asm_0 + 0x28,0x5af43d82803e903d91602b57fd5bf3000000000000000000000000000000000) (contracts/Token.sol#915-918)
Clones.predictDeterministicAddress(address,bytes32,address) (contracts/Token.sol#927-948) uses literals with too many digits:
        - mstore(uint256,uint256)(ptr_predictDeterministicAddress_asm_0,0x3d602d80600a3d3981f3363d3d373d3d3d363d7300000000000000000000000) (contracts/Token.sol#934-937)
Clones.predictDeterministicAddress(address,bytes32,address) (contracts/Token.sol#927-948) uses literals with too many digits:
        - mstore(uint256,uint256)(ptr_predictDeterministicAddress_asm_0 + 0x28,0x5af43d82803e903d91602b57fd5bf3ff0000000000000000000000000000000000) (contracts/Token.sol#939-942)
BABYTOKEN.constructor(string,string,uint256,address[4],uint256[3],uint256) (contracts/Token.sol#3020-3083) uses literals with too many digits:
        - gasForProcessing = 300000 (contracts/Token.sol#3047)
BABYTOKEN.updateGasForProcessing(uint256) (contracts/Token.sol#3156-3167) uses literals with too many digits:
        - require(bool,string)(newValue >= 200000 && newValue <= 500000,BABYTOKEN: gasForProcessing must be between 200,000 and 500,000) (contracts/Token.sol#3157-3160)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits

SafeMathInt.MAX_INT256 (contracts/Token.sol#2256) is never used in SafeMathInt (contracts/Token.sol#2254-2311)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable

BABYTOKEN.dividendTracker (contracts/Token.sol#2971) should be immutable
BABYTOKEN.rewardToken (contracts/Token.sol#2973) should be immutable
BABYTOKEN.uniswapV2Pair (contracts/Token.sol#2967) should be immutable
BABYTOKEN.uniswapV2Router (contracts/Token.sol#2966) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
```

**Result => A static analysis of contract's source code has been performed using slither,**

**No major issues were found in the output**

# FUNCTIONAL TESTING

**Router (PCS V2):**
0xD99D1c33F9fC3444f8101754aBC46c52416550D1

All the functionalities have been tested, no issues were found

**1- Adding liquidity (passed):**
https://testnet.bscscan.com/tx/0x38a1917661da7d7e321ad422799e23e3910cfc330b6b8e1c2aee941bf63b9615

**2- Buying when excluded (0% tax) (passed):**
https://testnet.bscscan.com/tx/0x7a11a88f56898ede5c755a818cb78025651bf441add628edf45f17e75d9f6598

**3- Selling when excluded (0% tax) (passed):**
https://testnet.bscscan.com/tx/0x2e3e2d75be52402cd9199fbccf452bf0d511a4e69f2a8fb66df6348efde6778b

**4- Transferring when excluded (0% tax) (passed):**
https://testnet.bscscan.com/tx/0xb26c4f1d9cd73ea4907080ec860c5ad7b36d9835d79bd5eb3125cd6bdfda8c83

# FUNCTIONAL TESTING

**5- Buying when not excluded from fees (25% tax) (passed):**
https://testnet.bscscan.com/tx/0xd1680de78c32da5d156474eff6fab11c6152132e194c1c333acca1222e9c4581

**6- Selling when not excluded from fees (25% tax) (passed):**
https://testnet.bscscan.com/tx/0x9245bf64d382d5f17e740338247eba549805847253c22b2259d99eea7c289194

**7- Transferring when not excluded from fees (25% tax) (passed):**
https://testnet.bscscan.com/tx/0x54070a16b9c7b56f447c511c5079827d448e326cc37052b33f42a08c761fccef

**8-Internal swap (passed):**
**marketing wallet received ETH**
https://testnet.bscscan.com/tx/0x9245bf64d382d5f17e740338247eba549805847253c22b2259d99eea7c289194

**9- Reflections (passed):**
as can seen in this transaction:
https://testnet.bscscan.com/tx/0x9245bf64d382d5f17e740338247eba549805847253c22b2259d99eea7c289194
distributor is sending BUSD to holders (auto distribution)

**10- Auto Liquidity (passed):**
https://testnet.bscscan.com/token/0x34e07586acbcd1046bb54102361c4187316711 56?a=0x000000000000000000000000000000000000dead

# MANUAL TESTING

## Low Risk Issue

IIssue: some ERC20 tokens may not return a boolean after transfer success

Type : **Logical**

Function: _withdrawDividendOfUser

Line: 2370 - 2380

Severity: Low

**Overview: Some ERC20 contracts may not support returning a boolean (true) if the transfer was successful**

```
function _withdrawDividendOfUser(
    address payable user
) internal returns (uint256) {
    uint256 _withdrawableDividend = withdrawableDividendOf(user);
    if ( withdrawableDividend > 0) {
        withdrawnDividends[user] = withdrawnDividends[user].add(
            _withdrawableDividend
        );
        emit DividendWithdrawn(user, _withdrawableDividend);
        bool success = IERC20(rewardToken).transfer( //@audit use safeTransfer to transfer tokens
            user,
            _withdrawableDividend
        );

        if (!success) {
            withdrawnDividends[user] = withdrawnDividends[user].sub(
                _withdrawableDividend
            );
            return 0;
        }
```

### Recommendations

use SafeERC20 to handle token transfers

# Social Media Overview

**Here are the Social Media Accounts of**

Skills 100

**https://t.me/s100_token**

**https://twitter.com/S100_token**


**https://skills100.net/**

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