

# Smart Contract Audit

**FOR** 

# Degen Donalds

**DATED: 8 APR 23'** 



# **AUDIT SUMMARY**

Project name - Degen Donalds

Date: 8 April, 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	0	0
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0



# **USED TOOLS**

## Tools:

- **1.Manual Review:** The code has undergone a line-by-line review by the Ace team.
- 2.BSC Test Network: All tests were conducted on the BSC Test network, and each test has a corresponding transaction attached to it. These tests can be found in the "Functional Tests" section of the report.
- **3.Slither:** The code has undergone static analysis using Slither.



# **Token Information**

Name: Degen Donalds

Symbol: MDD

Decimals: 18

Netowrk: BSC

Token Type: BEP20

#### **Owner:**

0xe4477a54140f22D588Efa6C7C93A87826a4C887A (at time of writing the audit)

#### Deployer:

0xe4477a54140f22D588Efa6C7C93A87826a4C887A

#### **Token Address:**

0xBba7924bd14168A09D5B9A69d0731Fc42A25dA7b



# **Token Information**

Fees:

Buy Fees: up to 25%

Sell Fees: up to 25%

Transfer Fees: up to 25%

Fees Privilige: Owner

Ownership: Owned

Minting: None

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Priviliges: Changing fee - including and excluding form fee - changing distribution settings (min tokens to be eligible, cool down 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-byline 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**





# **CLASSIFICATION OF RISK**

### Severity

- Critical
- High-Risk
- Medium-Risk
- Low-Risk
- Gas Optimization/Suggestion

## **Description**

These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.

A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.

A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.

A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.

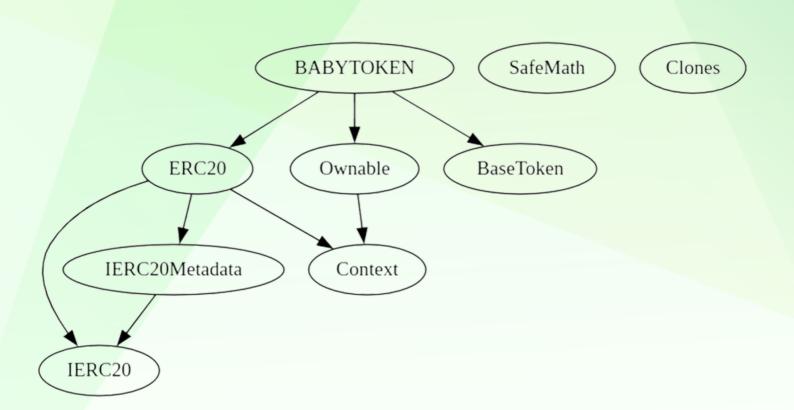
A vulnerability that has an informational character but is not affecting any of the code.

# **Findings**

Severity	Found
◆ Critical	0
◆ High-Risk	0
◆ Medium-Risk	0
♦ Low-Risk	0
<ul><li>Gas Optimization /</li><li>Suggestions</li></ul>	0



# **INHERITANCE TREE**





## **POINTS TO NOTE**

- Owner is able to change buy/sell/transfer fees but sum of fees can not exceed 25%
- 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 |
               Type
        **Function Name** | **Visibility** | **Mutability** | **Modifiers** |
| **IERC20** | Interface | |||
 L | totalSupply | External | NO | |
 L | balanceOf | External | | NO | |
 L | transfer | External | | NO | |
 L | allowance | External | | NO | |
 | approve | External | | | NO | |
 **IERC20Metadata** | Interface | IERC20 |||
 L | name | External | | NO | |
 L | symbol | External | | NO | |
| L | decimals | External | | NO | |
| **Context** | Implementation | |||
| L | msgSender | Internal 🔒 | | |
 L | msgData | Internal 🔒 | | |
| **ERC20** | Implementation | Context, IERC20, IERC20Metadata || |
 L | <Constructor> | Public | | | NO | |
 L | name | Public | | | NO | |
 L | symbol | Public | | NO | |
 L | decimals | Public | | | NO |
 L | totalSupply | Public | | NO | |
 L | balanceOf | Public | | NO | |
 L | transfer | Public | | | NO | |
 L | allowance | Public | | NO | |
 L | approve | Public | | | NO |
 L | transferFrom | Public | | | NO | |
 L | increaseAllowance | Public | | | NO | |
 L | decreaseAllowance | Public | | | NO | |
 └ | transfer | Internal 🔒 | 🛑 | |
 └ | mint | Internal 🔒 | 🛑 | |
 └ | burn | Internal 🔓 | 🛑 | |
| L | approve | Internal 🔒 | 🛑 | |
 └ | beforeTokenTransfer | Internal 🔒 | ● | |
 └ | afterTokenTransfer | Internal 🔒 | ● | |
| **Ownable** | Implementation | Context |||
| L | < Constructor > | Public | | | | | | | | | | | |
```



```
owner | Public | NO | |
 L | transferOwnership | Public | | | onlyOwner |
 L | setOwner | Private 🔐 | 🛑 | |
**SafeMath** | Library | |||
 L | tryAdd | Internal | | | |
 L | trySub | Internal 🔒 | | |
 L | tryMul | Internal 🔒 | | |
 └ | tryDiv | Internal 🔒 | | |
 L | tryMod | Internal 🔒 | | |
 L | add | Internal 🔒 | ||
 L | sub | Internal | | | |
 └ | mul | Internal 🔒 | ||
 └ | div | Internal 🔒 | ||
 L | sub | Internal | | | |
 └ | div | Internal 🔒 | | |
 └ | mod | Internal 🔒 | | |
 **Clones** | Library | |||
 L | clone | Internal 🔒 | 🛑 | |
 └ | cloneDeterministic | Internal 🔒 | 🛑 | |
 L | predictDeterministicAddress | Internal | | | |
 | | predictDeterministicAddress | Internal | | | |
**Address** | Library | |||
 L | isContract | Internal 🔒 | | |
 L | sendValue | Internal 🔒 | 🛑 | |
 └ | functionCall | Internal 🔒 | 🛑 | |
 └ | functionCall | Internal 🔒 | 🛑 | |
 L | functionCallWithValue | Internal | | | | | |
 └ | functionCallWithValue | Internal 🔒 | ● | |
 L | functionStaticCall | Internal | | | |
 └ | functionStaticCall | Internal 🔒 | | |
 L | functionDelegateCall | Internal 🔒 | 0
 └ | functionDelegateCall | Internal 🔓 | ● | |
 └ | verifyCallResult | Internal 🔒 | | |
| **IUniswapV2Factory** | Interface | ||| |
| L | feeTo | External | | NO | |
| L | feeToSetter | External | | NO | |
```



```
| getPair | External | NO | |
L | 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 | | | | | | | | | | | | | |
| removeLiquidity | External | | | | | | | | | | | | | |
| removeLiquidityETHWithPermit | External | |
L | swapExactTokensForTokens | External | | | NO |
L | swapTokensForExactTokens | External | | | NO |
L | swapExactETHForTokens | External | NO |
L | swapExactTokensForETH | External | |
L | swapETHForExactTokens | External | | SD | NO | |
L | quote | External | | | NO | |
L | getAmountOut | External | | NO | |
L | getAmountIn | External | | | NO | |
| getAmountsOut | External | NO | |
L | getAmountsIn | External | | | NO | |
**IUniswapV2Router02** | Interface | IUniswapV2Router01 |||
***IERC20Upgradeable** | Interface | |||
L | totalSupply | External | | | NO | |
L | balanceOf | External | | NO | |
L | transfer | External | | | NO | |
L | allowance | External | | NO | |
L | approve | External | | NO | |
L | transferFrom | External | | | NO | |
```



```
**IERC20MetadataUpgradeable** | Interface | IERC20Upgradeable |||
 L | name | External | | | NO | |
L | symbol | External | | NO | |
| L | decimals | External | | | NO | |
| **Initializable** | Implementation | |||
**ContextUpgradeable** | Implementation | Initializable |||
 Context init | Internal 🔒 | 🛑 | initializer |
 □ msgSender | Internal • | | |
 L | msgData | Internal 🔒 | | |
**ERC20Upgradeable** | Implementation | Initializable, ContextUpgradeable, IERC20Upgradeable,
IERC20MetadataUpgradeable |||
 L | ERC20 init | Internal 🔒 | ● | initializer |
 L | ERC20 init unchained | Internal 1 | ● | initializer |
 L | name | Public | | | NO | |
 L | symbol | Public | | | NO | |
 L | decimals | Public | | NO | |
 L | totalSupply | Public | | NO | |
 L | balanceOf | Public | | NO | |
 L | transfer | Public | | | NO | |
 L | allowance | Public | | NO | |
 L | approve | Public ! | | NO! |
 L | transferFrom | Public | | | NO | |
 L | increaseAllowance | Public | | | NO | |
 L | transfer | Internal 🔒 | 🛑 | |
 L|_mint | Internal 🔒 | 🛑 ||
 L | burn | Internal 🔒 | ● | |
| L | approve | Internal | | | | |
 └ | beforeTokenTransfer | Internal 🔒 | ● | |
 └ | afterTokenTransfer | Internal 🔒 | ● | |
**OwnableUpgradeable** | Implementation | Initializable, ContextUpgradeable |||
 L | _Ownable_init | Internal 🔒 | ● | initializer |
 L | owner | Public | | NO ! |
 L | renounceOwnership | Public | | • | onlyOwner |
 L | transferOwnership | Public | | | onlyOwner |
```



```
| L | setOwner | Private | | | | |
**IUniswapV2Pair** | Interface | |||
| L | name | External | | NO | |
 | decimals | External | | NO | |
 L | totalSupply | External | | | NO | |
 | balanceOf | External | NO | | | |
 | allowance | External | NO |
 | approve | External | | | NO | |
 L | transfer | External | | | NO |
 L | transferFrom | External | | | NO | |
 L | DOMAIN SEPARATOR | External | | | NO | |
 L | PERMIT TYPEHASH | External | | | NO | |
 I nonces | External | NO | |
 L | permit | External | | NO | |
 L | MINIMUM LIQUIDITY | External | | | NO | |
 L | factory | External | | NO | |
 L | token0 | External | | NO | |
 L | token1 | External | | NO | |
 L | getReserves | External | | NO | |
 L | price0CumulativeLast | External | | NO | |
 | price1CumulativeLast | External | NO | |
 L | kLast | External | | NO | |
 L | burn | External | | NO | |
 L | swap | External | | NO | |
 └ | skim | External ! | ● |NO! |
 L | sync | External | | NO | |
 | initialize | External | | | NO | |
| **SafeMathInt** | Library | |||
L|mul|Internal 🔒 | ||
 └ | div | Internal 🔒 | ||
 └ | sub | Internal 🔒 | | |
| L | add | Internal 🔒 | | |
| L | abs | Internal 🔒 | | |
| └ | toUint256Safe | Internal 🔒 | ||
| **SafeMathUint** | Library | |||
| L | toInt256Safe | Internal 🔒 | | |
```



```
<mark>| **IterableMapping** | Li</mark>brary | |||
 L | get | Internal | | |
 L | getIndexOfKey | Internal 🔒 | ||
 └ | getKeyAtIndex | Internal 🔒 | ||
 L | size | Internal | | | |
L | set | Internal ↑ | ● ||
 L | remove | Internal 🔒 | 🛑 | |
**DividendPayingTokenInterface** | Interface | ||
| L | dividendOf | External | | NO | |
 withdrawDividend | External | | NO | |
| withdrawableDividendOf | External | | NO | |
 L | withdrawnDividendOf | External | | NO | |
 L | accumulativeDividendOf | External | | | NO | |
**DividendPayingToken** | Implementation | ERC20Upgradeable, OwnableUpgradeable,
DividendPayingTokenInterface, DividendPayingTokenOptionalInterface |||
 L | DividendPayingToken init | Internal 🔒 | ● | initializer |
 L | distributeCAKEDividends | Public | | • | onlyOwner |
 | withdrawDividend | Public | | | NO | |
 L | dividendOf | Public | | NO | |
 | withdrawableDividendOf | Public | NO |
 L | withdrawnDividendOf | Public | | NO |
 L | transfer | Internal 🔒 | 🛑 | |
 **BABYTOKENDividendTracker** | Implementation | OwnableUpgradeable, DividendPayingToken ||
L | transfer | Internal | | | |
L | withdrawDividend | Public | | NO | |
 L | excludeFromDividends | External | | | onlyOwner |
 L | isExcludedFromDividends | Public | | NO | |
 L | updateMinimumTokenBalanceForDividends | External | | • | onlyOwner |
 L | getLastProcessedIndex | External | | NO | |
 L | getNumberOfTokenHolders | External | NO | |
```



```
L | getAccount | Public | | NO ! |
 | getAccountAtIndex | Public | | NO | |
L | canAutoClaim | Private 🔐 | ||
 | setBalance | External | onlyOwner |
 | process | Public | | | NO | |
 processAccount | Public | onlyOwner |
**BaseToken** | Implementation | |||
**BABYTOKEN** | Implementation | ERC20, Ownable, BaseToken ||
 Constructor> | Public | | ERC20 |
 | | <Receive Ether> | External | | | | | | | | | | | |
 L | excludeFromFees | External | | • | onlyOwner |
 L | excludeMultipleAccountsFromFees | External | | | onlyOwner |
 L | setMarketingWallet | External | | onlyOwner |
 L | setMarketingFee | External | | | onlyOwner |
 └ | setAutomatedMarketMakerPair | Private 🔐 | ● ||
 L | updateGasForProcessing | Public | | onlyOwner |
 L | getClaimWait | External | | NO | |
 L | updateMinimumTokenBalanceForDividends | External | | | onlyOwner |
 L | getMinimumTokenBalanceForDividends | External | | NO | |
L | getTotalDividendsDistributed | External | | NO | |
 L | isExcludedFromFees | Public | | NO | |
 | withdrawableDividendOf | Public | NO | |
 L | dividendTokenBalanceOf | Public | | NO | |
 L | excludeFromDividends | External | | | onlyOwner |
L | isExcludedFromDividends | Public | | NO | |
 L | getAccountDividendsInfo | External | | NO | |
L | getAccountDividendsInfoAtIndex | External | | NO | |
 L | processDividendTracker | External | | | NO | |
 L | claim | External | | | NO | |
L | getLastProcessedIndex | External | | | NO | |
 L | getNumberOfDividendTokenHolders | External | | NO | |
 L | transfer | Internal 🔒 | 🛑 | |
 L | swapAndSendToFee | Private | | | | | | |
 L | swapAndLiquify | Private 🔐 | 🌑 | |
 L | swapTokensForEth | Private 🔐 | 🛑 | |
```





## STATIC ANALYSIS

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

No issues found



# **FUNCTIONAL TESTING**

#### Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

#### 1- Adding liquidity (passed):

https://testnet.bscscan.com/tx/0xa746bfff20a26713775feed3e14 ec85d7d974c36c122e901ad27de026d2677d7

#### 2- Buying when excluded (0% tax) (passed):

https://testnet.bscscan.com/tx/0x8b5860cb7d205231a4c9c6bb6f 6db1ca4f2a0a223710539d7c52140bdce9993b

#### 3- Selling when excluded (0% tax) (passed):

https://testnet.bscscan.com/tx/0x4623e9d9d4a5901895a024efedf66d65473303177f8b1a7eb609d1b7d700ce22

4- Transferring when excluded from fees (0% tax) (passed):

https://testnet.bscscan.com/tx/0x1a2b32dae563093f8cafacdb970ed38e9e9aba334a216a55b948bcf9020942e3

- 5- Buying when not excluded from fees (up to 25% tax) (passed): https://testnet.bscscan.com/tx/0x1dba829783bae865780db3252be787f4090d553d13084d7ad5116904bc27c923
- 6- Selling when not excluded from fees (up to 25% tax) (passed): https://testnet.bscscan.com/tx/0x613b1182bb9d3540069f084e4ef ac4802c6389c1c0288c6c91ef45518bf344ef
- 7- Transferring when not excluded from fees (up to 25% tax) (passed):

https://testnet.bscscan.com/tx/0x29477f76f9190d05d1e20720fa14bee4495db35cbcde36ceffb89296dbaf9f61



# **FUNCTIONAL TESTING**

#### 8- Internal swap (passed):

#### marketing wallet received BUSD

https://testnet.bscscan.com/address/0xa2da001d772453f7a1d520 148663462ebcbd79b4#tokentxns

#### 9- Reflections (passed):

as seen in this transaction:

https://testnet.bscscan.com/address/0xe7af7dc357ec9a5cbc5af5c17b7c3a59d721d8c7#tokentxns

distributor is sending BUSD to holders (auto distribution)

#### 10- Auto Liquidity (passed):

https://testnet.bscscan.com/token/0xe7af7dc357ec9a5cbc5af5c17b7c3a59d721d8c7?



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