AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

BabyApeCoin

DATED : 09 November 23'

MANUAL TESTING

Centralization – Owner can blacklist wallets.
Severity: High
function: blacklist
Status: Open

Overview:

The owner can blacklist wallets from transferring tokens for an indefinite period of time
which is not recommended. Which can lock the user's token.

```
function blacklist(address account, bool isBlacklisted)
external onlyOwner {
    blacklisted[account] = isBlacklisted;

    emit BlacklistUpdated(account, isBlacklisted);
 }
```

Suggestion:

There should be a locking period so that the wallet cannot be locked for an indefinite
Period of time.

AUDIT SUMMARY

Project name – BabyApeCoin

Date: 09 November 2023

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

Audit Status: Failed

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	1	0	2	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 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.

Testnet version:
The tests were performed using the contract deployed on the BSC Testnet, which can be found at the following address:
https://testnet.bscscan.com/address/0x2e57b29f5e141b1b546fe0023de7f90e592a6a45#code

Token Information

Token Address: -
0xF80FcfaD81bFC386CE5E6515267D4a2001aFE02c

Name: BabyApeCoin

Symbol: BABYAPE

Decimals: 18

Network: ETH

Token Type: ERC20

Owner: - 0xdda9111d3E9ad58e6f74BCa014998A62cB36178b

Deployer: -
0xdda9111d3E9ad58e6f74BCa014998A62cB36178b

Token Supply: 100000000

Checksum: e1d0e4f3ac5d6777fbd4657945e19e43

Testnet version:
The tests were performed using the contract deployed on the Binance smart chain Testnet, which can be found at the following address:
https://testnet.bscscan.com/address/0x2e57b29f5e141b1b546fe0023de7f90e592a6a45#code

TOKEN OVERVIEW

buy fee: 1%

Sell fee: 1%

transfer fee: 0%

Fee Privilege: Owner

Ownership: Owned

Minting: None

Max wallet: Yes

Max Trx: Yes

Blacklist: No

Other Privileges:

- Initial distribution of the tokens
- Modifying fees
- Enabling trades
-bulk exempts fee
-Modify amm, router,

Liquidity is doing to owner wallet

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.

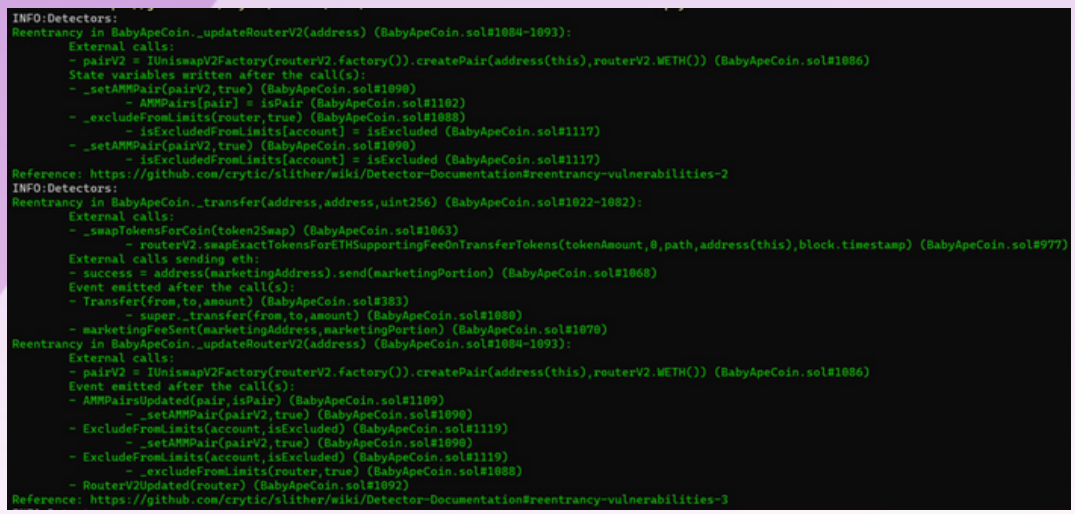
Findings

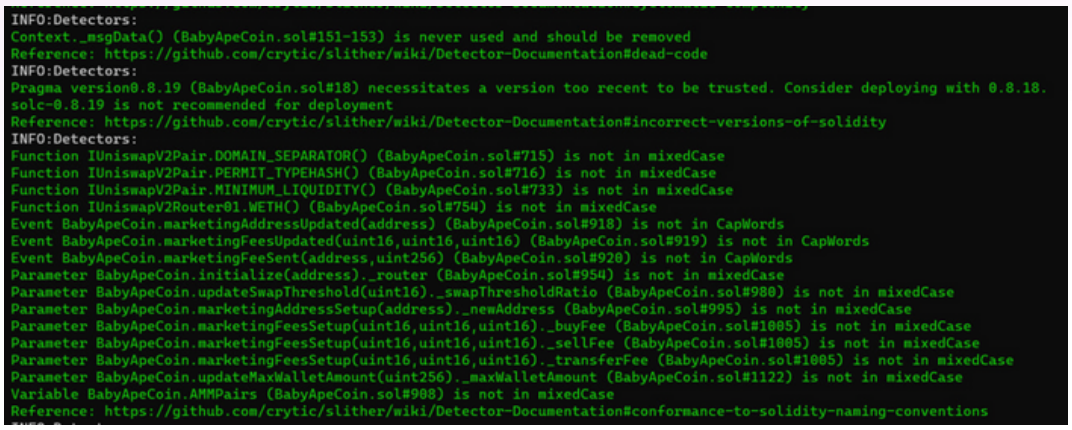
Severity	Found
Critical	0
High-Risk	1
Medium-Risk	0
Low-Risk	2
Gas Optimization / Suggestions	0

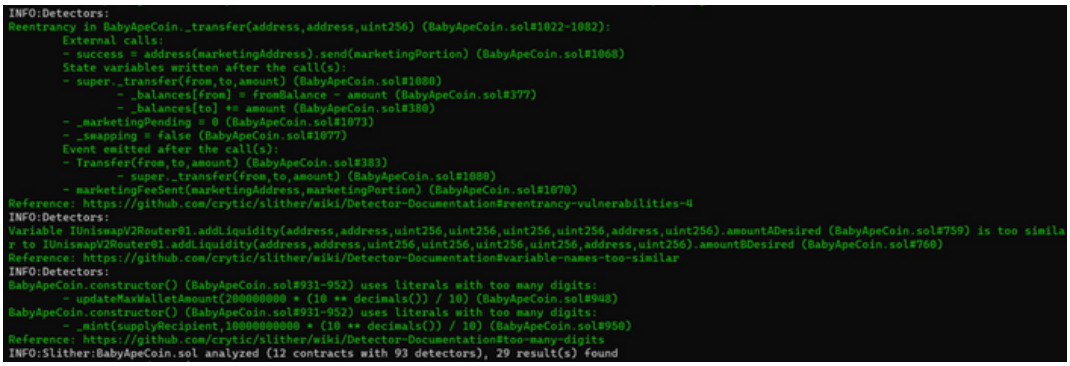
POINTS TO NOTE

- Owner can renounce the ownership.
- Owner can transfer the ownership.
- Owner can exclude wallets from fees.
- Owner can enable trading.
- Owner can pause trading.
- Owner can blacklist wallets.
- Owner can set update threshold.
- Owner Can set taxes upto 25%.
- Owner can set AMMpair.

STATIC ANALYSIS







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

No major issues were found in the output

FUNCTIONAL TESTING

1- Approve (passed):

https://testnet.bscscan.com/tx/0x4f6e66277c5e25870375f773090f11b696b85528c1d76662245a9a87d17470f6

2- Increase Allowance (passed):

https://testnet.bscscan.com/tx/0x483434bd41a9aaf70533545e2db7961105a9bea47f93b61d0bc7e1953250f745

3- Decrease Allowance (passed):

https://testnet.bscscan.com/tx/0x35e7551225512f1401192edb36714372ee81cd4595ca086a629c3475592e433d

4- Burn From(passed):

https://testnet.bscscan.com/tx/0x71cacfadd9fba906be3bf417f1c3d3ed06be50f9e390318cfec2a28be7aa6f64

5- Burn (passed):

https://testnet.bscscan.com/tx/0xfdc3a7a0b9226e16a077c2a012e19e83ef97c7c3f15db578c37e26e8e96dd999

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```

Suggestion:

There should be a locking period so that the wallet cannot be locked for an indefinite
Period of time.

MANUAL TESTING

Centralization – Missing Zero Address
Severity: Low
function: excludeFromLimits
Status: Open

Overview:
functions can take a zero address as a parameter (0x00000...). If a function parameter of address type is not properly validated by checking for zero addresses, there could be serious consequences for the contract's functionality.

```
function excludeFromLimits(address account, bool isExcluded) external onlyOwner {
    _excludeFromLimits(account, isExcluded);
  }
```

Suggestion:
It is suggested that the address should not be zero or dead.

MANUAL TESTING

Severity: Low

subject: Missing Events

Status: Open

Overview:

They serve as a mechanism for emitting and recording data onto the blockchain, making it transparent and easily accessible.

```
function setAMMPair(address pair, bool isPair) external onlyOwner {
    require(pair != pairV2, "DefaultRouter: Cannot remove initial pair from list");

    _setAMMPair(pair, isPair);
  }
```

Suggestion:

Add an event to these important functions where address updation is happening. This can also be marked as an indexed event for better off-chain tracking.

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