AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

Baby Aliens

DATED : 30 JAN 23'

AUDIT SUMMARY

Project name – Baby Aliens

Date: 30 January , 2023

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

Audit Status: Passed (Contract is developed by Pinksale safu dev)

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:
a line by line code review has been performed by audit ace team.

2- BSC Test Network:
all tests were done on BSC Testnet network, each test has its transaction has attached to it. . You can check this tests in “**functionality tests**” section of the report.

3- Slither : Static Analysis

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

https://testnet.bscscan.com/token/0x95f6c0f3cab303b55429a32ea580c0f69e8fe747

Token Information

Token Name : BabyAliens

Token Symbol: BAP

Decimals: 18

Token Supply: 100,000,000,000

Token Address:
0xdD2565E0561A4Fea6256f767f658CCcF09e55Fb3

Checksum:
4c3ff1d73018dc5a5cdd9721f536546adea313f505a8
a5f83b0a2935a19c5a85

Deployer:
0xF34CE2b1d2F94a432cF5b6e5D0F67e45f2835d67

Owner:
0xF34CE2b1d2F94a432cF5b6e5D0F67e45f2835d67

TOKEN OVERVIEW

Fees:

Buy Fees: - 8%

Sell Fees: - 8%

Transfer Fees: - 0%

Fees Privilige: Owner

Ownership : Owned

Minting: No mint function

Max Tx Amount: No

Blacklist: No

Other Priviliges: setting max buy & sell amounts

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.

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VULNERABILITY CHECKLIST

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

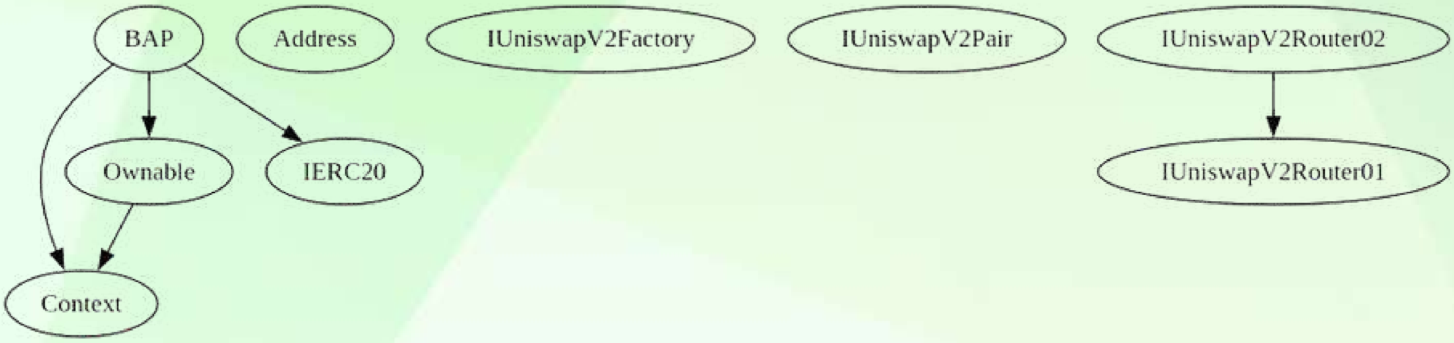
CLASSIFICATION OF RISK

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	0
◆ Gas Optimization / Suggestions	0

INHERITANCE TREE



POINTS TO NOTE

- Owner is not able to set sell taxes over 12% and buy taxes over 8%
- Owner is not able to blacklist an arbitrary wallet
- Owner is not able to set max buy/sell/transfer amounts
- Owner is not able to disable trades
- Owner is not able to mint new tokens

CONTRACT ASSESMENT

```
|  Contract  |        Type        |       Bases      |                  |                 |
|:----------:|:-------------------:|:----------------:|:----------------:|:---------------:|
|     └      |  **Function Name**  |  **Visibility**  |  **Mutability**  |  **Modifiers**  |
||||||
| **Context** | Implementation |  |||
| └ | _msgSender | Internal 🔒 |   | |
| └ | _msgData | Internal 🔒 |   | |
||||||
| **Ownable** | Implementation | Context |||
| └ | <Constructor> | Public ❗️ | 🛑  |NO❗️ |
| └ | owner | Public ❗️ |   |NO❗️ |
| └ | renounceOwnership | Public ❗️ | 🛑  | onlyOwner |
| └ | transferOwnership | Public ❗️ | 🛑  | onlyOwner |
||||||
| **IERC20** | Interface |  |||
| └ | totalSupply | External ❗️ |   |NO❗️ |
| └ | balanceOf | External ❗️ |   |NO❗️ |
| └ | transfer | External ❗️ | 🛑  |NO❗️ |
| └ | allowance | External ❗️ |   |NO❗️ |
| └ | approve | External ❗️ | 🛑  |NO❗️ |
| └ | transferFrom | External ❗️ | 🛑  |NO❗️ |
||||||
| **Address** | Library |  |||
| └ | isContract | Internal 🔒 |   | |
| └ | sendValue | Internal 🔒 | 🛑  | |
| └ | functionCall | Internal 🔒 | 🛑  | |
| └ | functionCall | Internal 🔒 | 🛑  | |
| └ | functionCallWithValue | Internal 🔒 | 🛑  | |
| └ | functionCallWithValue | Internal 🔒 | 🛑  | |
| └ | _functionCallWithValue | Private 🔐 | 🛑  | |
||||||
| **IUniswapV2Factory** | Interface |  |||
| └ | feeTo | External ❗️ |   |NO❗️ |
| └ | feeToSetter | External ❗️ |   |NO❗️ |
| └ | getPair | External ❗️ |   |NO❗️ |
| └ | allPairs | External ❗️ |   |NO❗️ |
| └ | allPairsLength | External ❗️ |   |NO❗️ |
| └ | createPair | External ❗️ | 🛑  |NO❗️ |
| └ | setFeeTo | External ❗️ | 🛑  |NO❗️ |
| └ | setFeeToSetter | External ❗️ | 🛑  |NO❗️ |
||||||
| **IUniswapV2Pair** | Interface |  |||
```

CONTRACT ASSESMENT

```
| └ | 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❗ |
| └ | burn | External ❗ | 🛑  |NO❗ |
| └ | swap | External ❗ | 🛑  |NO❗ |
| └ | skim | External ❗ | 🛑  |NO❗ |
| └ | sync | External ❗ | 🛑  |NO❗ |
| └ | initialize | 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❗ |
```

CONTRACT ASSESMENT

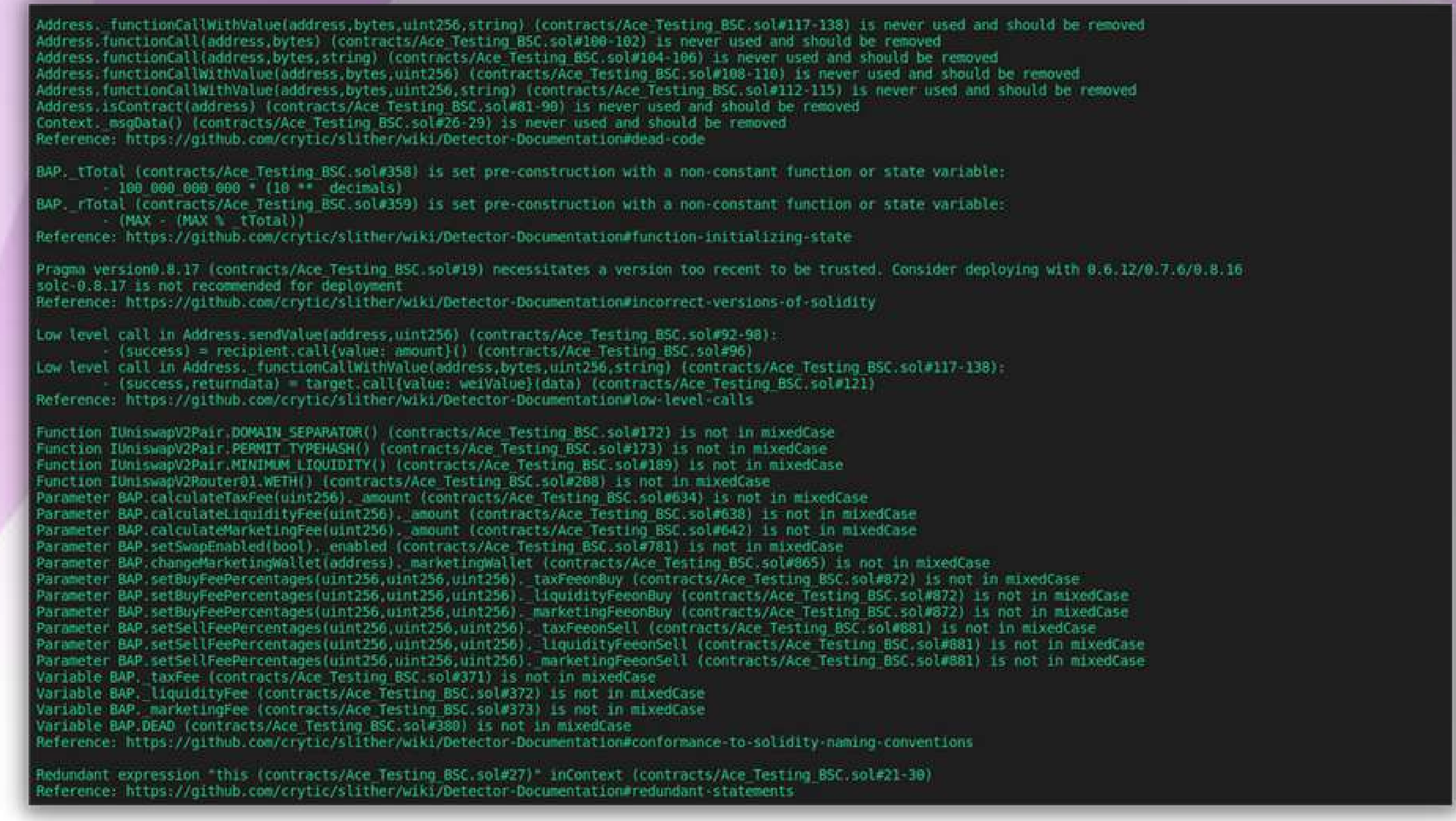
```
| └ | swapETHForExactTokens | External ❗ | 💵 |NO❗ |
| └ | quote | External ❗ |   |NO❗ |
| └ | getAmountOut | External ❗ |   |NO❗ |
| └ | getAmountIn | External ❗ |   |NO❗ |
| └ | getAmountsOut | External ❗ |   |NO❗ |
| └ | getAmountsIn | External ❗ |   |NO❗ |
||||||
| **IUniswapV2Router02** | Interface | IUniswapV2Router01 |||
| └ | removeLiquidityETHSupportingFeeOnTransferTokens | External ❗ | 🛑  |NO❗ |
| └ | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External ❗ | 🛑  |NO❗ |
| └ | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ❗ | 🛑  |NO❗ |
| └ | swapExactETHForTokensSupportingFeeOnTransferTokens | External ❗ | 💵 |NO❗ |
| └ | swapExactTokensForETHSupportingFeeOnTransferTokens | External ❗ | 🛑  |NO❗ |
||||||
| **BAP** | Implementation | Context, IERC20, Ownable |||
| └ | <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❗ |
| └ | isExcludedFromReward | Public ❗ |   |NO❗ |
| └ | totalReflectionDistributed | Public ❗ |   |NO❗ |
| └ | deliver | Public ❗ | 🛑  |NO❗ |
| └ | reflectionFromToken | Public ❗ |   |NO❗ |
| └ | tokenFromReflection | Public ❗ |   |NO❗ |
| └ | excludeFromReward | Public ❗ | 🛑  | onlyOwner |
| └ | includeInReward | External ❗ | 🛑  | onlyOwner |
| └ | <Receive Ether> | External ❗ | 💵 |NO❗ |
| └ | claimStuckTokens | External ❗ | 🛑  | onlyOwner |
| └ | _reflectFee | Private 🔐 | 🛑  | |
| └ | _getValues | Private 🔐 |   | |
| └ | _getTValues | Private 🔐 |   | |
| └ | _getRValues | Private 🔐 |   | |
| └ | _getRate | Private 🔐 |   | |
```

CONTRACT ASSESMENT

```
| └ | _getCurrentSupply | Private 🔐 |   | |
| └ | _takeLiquidity | Private 🔐 | 🛑  | |
| └ | _takeMarketing | Private 🔐 | 🛑  | |
| └ | calculateTaxFee | Private 🔐 |   | |
| └ | calculateLiquidityFee | Private 🔐 |   | |
| └ | calculateMarketingFee | Private 🔐 |   | |
| └ | removeAllFee | Private 🔐 | 🛑  | |
| └ | setBuyFee | Private 🔐 | 🛑  | |
| └ | setSellFee | Private 🔐 | 🛑  | |
| └ | isExcludedFromFee | Public ❗ |   |NO❗ |
| └ | _approve | Private 🔐 | 🛑  | |
| └ | _transfer | Private 🔐 | 🛑  | |
| └ | swapAndLiquify | Private 🔐 | 🛑  | |
| └ | swapAndSendMarketing | Private 🔐 | 🛑  | |
| └ | setSwapTokensAtAmount | External ❗ | 🛑  | onlyOwner |
| └ | setSwapEnabled | External ❗ | 🛑  | onlyOwner |
| └ | _tokenTransfer | Private 🔐 | 🛑  | |
| └ | _transferStandard | Private 🔐 | 🛑  | |
| └ | _transferToExcluded | Private 🔐 | 🛑  | |
| └ | _transferFromExcluded | Private 🔐 | 🛑  | |
| └ | _transferBothExcluded | Private 🔐 | 🛑  | |
| └ | excludeFromFees | External ❗ | 🛑  | onlyOwner |
| └ | changeMarketingWallet | External ❗ | 🛑  | onlyOwner |
| └ | setBuyFeePercentages | External ❗ | 🛑  | onlyOwner |
| └ | setSellFeePercentages | External ❗ | 🛑  | onlyOwner |

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

STATIC ANALYSIS



```
Address._functionCallWithValue(address,bytes,uint256,string) (contracts/Ace_Testing_BSC.sol#117-138) is never used and should be removed
Address.functionCall(address,bytes) (contracts/Ace_Testing_BSC.sol#100-102) is never used and should be removed
Address.functionCall(address,bytes,string) (contracts/Ace_Testing_BSC.sol#104-106) is never used and should be removed
Address.functionCallWithValue(address,bytes,uint256) (contracts/Ace_Testing_BSC.sol#108-110) is never used and should be removed
Address.functionCallWithValue(address,bytes,uint256,string) (contracts/Ace_Testing_BSC.sol#112-115) is never used and should be removed
Address.isContract(address) (contracts/Ace_Testing_BSC.sol#81-90) is never used and should be removed
Context._msgData() (contracts/Ace_Testing_BSC.sol#26-29) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

BAP._tTotal (contracts/Ace_Testing_BSC.sol#358) is set pre-construction with a non-constant function or state variable:
        - 100_000_000_000 * (10 ** _decimals)
BAP._rTotal (contracts/Ace_Testing_BSC.sol#359) is set pre-construction with a non-constant function or state variable:
        - (MAX - (MAX % _tTotal))
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#function-initializing-state

Pragma version0.8.17 (contracts/Ace_Testing_BSC.sol#19) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.17 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Low level call in Address.sendValue(address,uint256) (contracts/Ace_Testing_BSC.sol#92-98):
        - (success) = recipient.call{value: amount}() (contracts/Ace_Testing_BSC.sol#96)
Low level call in Address._functionCallWithValue(address,bytes,uint256,string) (contracts/Ace_Testing_BSC.sol#117-138):
        - (success,returndata) = target.call{value: weiValue}(data) (contracts/Ace_Testing_BSC.sol#121)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function IUniswapV2Pair.DOMAIN_SEPARATOR() (contracts/Ace_Testing_BSC.sol#172) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (contracts/Ace_Testing_BSC.sol#173) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (contracts/Ace_Testing_BSC.sol#189) is not in mixedCase
Function IUniswapV2Router01.WETH() (contracts/Ace_Testing_BSC.sol#208) is not in mixedCase
Parameter BAP.calculateTaxFee(uint256)._amount (contracts/Ace_Testing_BSC.sol#634) is not in mixedCase
Parameter BAP.calculateLiquidityFee(uint256)._amount (contracts/Ace_Testing_BSC.sol#638) is not in mixedCase
Parameter BAP.calculateMarketingFee(uint256)._amount (contracts/Ace_Testing_BSC.sol#642) is not in mixedCase
Parameter BAP.setSwapEnabled(bool)._enabled (contracts/Ace_Testing_BSC.sol#781) is not in mixedCase
Parameter BAP.changeMarketingWallet(address)._marketingWallet (contracts/Ace_Testing_BSC.sol#865) is not in mixedCase
Parameter BAP.setBuyFeePercentages(uint256,uint256,uint256)._taxFeeonBuy (contracts/Ace_Testing_BSC.sol#872) is not in mixedCase
Parameter BAP.setBuyFeePercentages(uint256,uint256,uint256)._liquidityFeeonBuy (contracts/Ace_Testing_BSC.sol#872) is not in mixedCase
Parameter BAP.setBuyFeePercentages(uint256,uint256,uint256)._marketingFeeonBuy (contracts/Ace_Testing_BSC.sol#872) is not in mixedCase
Parameter BAP.setSellFeePercentages(uint256,uint256,uint256)._taxFeeonSell (contracts/Ace_Testing_BSC.sol#881) is not in mixedCase
Parameter BAP.setSellFeePercentages(uint256,uint256,uint256)._liquidityFeeonSell (contracts/Ace_Testing_BSC.sol#881) is not in mixedCase
Parameter BAP.setSellFeePercentages(uint256,uint256,uint256)._marketingFeeonSell (contracts/Ace_Testing_BSC.sol#881) is not in mixedCase
Variable BAP._taxFee (contracts/Ace_Testing_BSC.sol#371) is not in mixedCase
Variable BAP._liquidityFee (contracts/Ace_Testing_BSC.sol#372) is not in mixedCase
Variable BAP._marketingFee (contracts/Ace_Testing_BSC.sol#373) is not in mixedCase
Variable BAP.DEAD (contracts/Ace_Testing_BSC.sol#380) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Redundant expression "this (contracts/Ace_Testing_BSC.sol#27)" inContext (contracts/Ace_Testing_BSC.sol#21-30)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#redundant-statements
```

Result => A static analysis of contract's source code has been performed using slither, no major issues were found

FUNCTIONAL TESTING

Router (PCS V2):
0xD99D1c33F9fC3444f8101754aBC46c52416550D1

0- Deploying (Passed):

https://testnet.bscscan.com/tx/0x528c78f4ee4bdbedc8ab9815f7b2680e17a4287af795e24edd7c33cebedc0b7a

1- Adding Liquidity (Passed):
liquidity added on Pancakeswap V2:

https://testnet.bscscan.com/tx/0x40b1649a19395452e1e04aa4cca36128e783bbc0a2e472b9749bf4beca1e284c

no issue were found on adding liquidity.

2- Excluding deployer’s wallet from taxes (to test taxes) (Passed):

https://testnet.bscscan.com/tx/0xc10652f51e0459f45a33dc31adf4c55a944f4c25bda207ae0936db7931117a38

3- Setting buy and sell fees (Passed):

https://testnet.bscscan.com/tx/0x1f3f8404485c65825d2ac773095deb7250c17b28633d7b37604ae6174e74d3c5

https://testnet.bscscan.com/tx/0x9a24afc5e67263d8c5111c2d0bdf047036a611dce8e568c57aa06c2cc56cdac1

FUNCTIONAL TESTING

4- Buying from a non-whitelisted wallet (Passed):

https://testnet.bscscan.com/tx/0x53674b43d37effbd3e8f4d38db069b186da40289c2a9595f7c212fd94aa5c04d

8% tax applied

5- Selling from a non-whitelisted wallet (Passed):

https://testnet.bscscan.com/tx/0xb0e3e8cf27684df16aed07752730957574d08c7f96117cf4bb6e3f6ec99fee94

12% static tax on sells

6- Internal Swap (Passed):

taxes were swapped to BNB and sent to staking and marketing wallets:

marketing:
https://testnet.bscscan.com/address/0x23a01037deeed9f2fd84400ae8a1d5f84a91ea16#internaltx

FUNCTIONAL TESTING

7- Auto-Liquidity (Passed):

dead wallet received LP generated tokens:

https://testnet.bscscan.com/token/0x0baa85fed8d9dc6a507e7e4543438e0e5827581b?a=0x000000000000000000000000000000000000dead

MANUAL TESTING

NO ISSUES WERE FOUND

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