



# Project Dreams Smart Contract Audit Report

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# AUDITED DETAILS

## Audited Project

| Project name   | Token ticker | Blockchain |
|----------------|--------------|------------|
| Project Dreams | PRO          | BSC        |

## Addresses

|                           |  |
|---------------------------|--|
| Contract address          | 0x83e575d69397541Cf89f80758eeE63bdA8345Bf6 |
| Contract deployer address | 0xaD7f4232371416FdFD8f7E5D1C43E2B90CdB50cA |

## Project Website

|   |
|---|
| <a href="https://projectdreams.net/">https://projectdreams.net/</a> |
|---|

## Codebase

|   |
|---|
| <a href="https://bscscan.com/address/0x83e575d69397541Cf89f80758eeE63bdA8345Bf6#code">https://bscscan.com/address/0x83e575d69397541Cf89f80758eeE63bdA8345Bf6#code</a> |
|---|

# SUMMARY

Project Dreams Token (\$PRO) is an auto liquidity and auto BUSD rewarding BEP20 token. A percent of all buys and sells will auto-generate liquidity and also send BUSD rewards to Project Dreams token holders.

## **|** Contract Summary

### **Documentation Quality**

The amount of documentation in this project is GOOD.

- The technical description is provided.

### **Code Quality**

The Overall quality of the code is GOOD

- The official Solidity style guide is followed.

### **Test Coverage**

Test coverage of the project is 100% ( Through Codebase )

## **|** Audit Findings Summary

- SWC-101 | Arithmetic operation discovered on lines 23, 32, 42, 43, 51, 58, 63, 67, 71, 75, 79, 85, 92, 99, 266, 269, 353, 354, 359, 401, 402, 421, 469, 575, 581, 655, 701, 718 and 749.
- SWC-101 | Compiler-rewritable " - 1" discovered on lines 401 and 402.
- SWC-103 | A floating pragma is set on line 12, The current pragma Solidity directive is ""^0.8.0"".
- SWC-108 | State variable visibility is not set on lines 244, 252, 253, 254, 256, 257, 258, 271, 273, 411, 413, 414, 415, 421, 424, 425, 427, 428, 429, 431, 432, 433, 434, 435, 436, 441, 442, 450, 451, 452, 453, 456, 457, 458, 459, 460, 461, 463, 466 and 470. It is best practice to set the visibility of state variables explicitly to public or private.
- SWC-110 | Out of bounds array access on lines 316, 317, 347, 348, 401, 402, 613, 614, 680 and 681.
- SWC-120 | Potential use of "block.number" as source of randomness on lines 575, 655, 673, 697 and 713.

## CONCLUSION

This report has been prepared for Project Dreams to discover issues and vulnerabilities in the source code of the Project Dreams project as well as any contract dependencies that were not part of an officially recognized library.

The security assessment resulted in findings that ranged from critical to informational.

Most issues found were low severity and any critical issue such as High Vulnerability was not found. Except for all other issues that were of negligible importance and mostly referred to coding standards and inefficiencies such as an arithmetic operation, a floating pragma, state variable visibility, and the use of "block.number" as a source of randomness.

# AUDIT RESULT

| Article                           | Category           | Description   | Result      |
|-----------------------------------|--------------------|---|-------------|
| Default Visibility                | SWC-100<br>SWC-108 | Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously. | ISSUE FOUND |
| Integer Overflow and Underflow    | SWC-101            | If unchecked math is used, all math operations should be safe from overflows and underflows.                          | ISSUE FOUND |
| 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.          | ISSUE FOUND |
| 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        |
| Check-Effect Interaction          | SWC-107            | Check-Effect-Interaction pattern should be followed if the code performs ANY external 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 Caller | SWC-112            | Delegatecalls should only be allowed to trusted addresses.  | PASS        |
| DoS (Denial of Service)           | SWC-113<br>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.   | PASS        |
| Block values as a proxy for time | SWC-116                       | Block numbers should not be used for time calculations.   | PASS        |
| Signature Unique Id              | SWC-117<br>SWC-121<br>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                       | Random values should never be generated from Chain Attributes or be predictable.  | 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          | Mon Jan 30 2023 02:35:23 GMT+0000 (Coordinated Universal Time) |
| Finished         | Mon Jan 30 2023 02:35:32 GMT+0000 (Coordinated Universal Time) |
| Mode             | Standard   |
| Main Source File | pro.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

LINE 71

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
70  function mul(uint256 a, uint256 b) internal pure returns (uint256) {  
71  return a * b;  
72  }
```

## SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 75

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
74  function div(uint256 a, uint256 b) internal pure returns (uint256) {  
75  return a / b;  
76  }  
77  |
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 85

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
84   require(b <= a, errorMessage);  
85   return a - b;  
86   }  
87   }
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 92

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
91   require(b > 0, errorMessage);  
92   return a / b;  
93   }  
94   }
```

# SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 99

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
98  require(b > 0, errorMessage);  
99  return a % b;  
100 }  
101 }
```



## SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 266

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
265 uint256 public dividendsPerShare;  
266 uint256 public dividendsPerShareAccuracyFactor = 10 ** 36;  
267 uint256 public minPeriod = 1 hours;  
268 |
```

## SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 269

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
268 uint256 public minPeriod = 1 hours;  
269 uint256 public minDistribution = 1 * (10 ** 18);  
270 uint256 currentIndex;  
271 |
```

## SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 269

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
268 uint256 public minPeriod = 1 hours;  
269 uint256 public minDistribution = 1 * (10 ** 18);  
270 uint256 currentIndex;  
271 |
```

## SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 353

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
352 gasLeft = gasleft();  
353 currentIndex++;  
354 iterations++;  
355 }  
356 |
```

## SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 354

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
353     currentIndex++;  
354     iterations++;  
355 }  
356 }
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 359

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
358     function shouldDistribute(address shareholder) internal view returns (bool) {  
359         return shareholderClaims[shareholder] + minPeriod < block.timestamp  
360         && getUnpaidEarnings(shareholder) > minDistribution;  
361     }
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 401

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
400  function removeShareholder(address shareholder) internal {  
401      shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-  
1];  
402      shareholderIndexes[shareholders[shareholders.length-1]] =  
shareholderIndexes[shareholder];  
403      shareholders.pop();
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 402

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
401  shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-1];  
402  shareholderIndexes[shareholders[shareholders.length-1]] =  
shareholderIndexes[shareholder];  
403  shareholders.pop();  
404  }
```



# SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 421

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
420  uint8 constant _decimals = 18;
421  uint256 _totalSupply = 1_000_000_000_000_000 * (10 ** _decimals);
422  uint256 public _maxTxAmount = _totalSupply.div(100); // 1%
423  |
```

# SWC-101 | ARITHMETIC OPERATION "\*\*" DISCOVERED

LINE 421

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
420  uint8 constant _decimals = 18;
421  uint256 _totalSupply = 1_000_000_000_000_000 * (10 ** _decimals);
422  uint256 public _maxTxAmount = _totalSupply.div(100); // 1%
423  |
```

## SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 469

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
468  bool public swapEnabled = true;
469  uint256 public swapThreshold = _totalSupply / 2000; // 0.005%
470  bool inSwap;
471  modifier swapping() { inSwap = true; _; inSwap = false; }
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 575

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
574 function getTotalFee(bool selling) public view returns (uint256) {  
575     if(launchedAt + 1 >= block.number){ return feeDenominator.sub(1); }  
576     if(selling){ return getMultipliedFee(); }  
577     return totalFee;
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 581

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
580 function getMultipliedFee() public view returns (uint256) {  
581   if (launchedAtTimestamp + 1 days > block.timestamp) {  
582     return totalFee.mul(18000).div(feeDenominator);  
583   } else if (buybackMultiplierTriggeredAt.add(buybackMultiplierLength) >  
block.timestamp) {
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 655

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
654    && autoBuybackEnabled
655    && autoBuybackBlockLast + autoBuybackBlockPeriod <= block.number // After N blocks
from last buyback
656    && address(this).balance >= autoBuybackAmount;
657    }
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 701

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
700  function setBuybackMultiplierSettings(uint256 numerator, uint256 denominator,  
701  uint256 length) external authorized {  
702  require(numerator / denominator <= 2 && numerator > denominator);  
703  buybackMultiplierNumerator = numerator;  
704  buybackMultiplierDenominator = denominator;
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 718

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
717     function setTxLimit(uint256 amount) external authorized {  
718         require(amount >= _totalSupply / 1000);  
719         _maxTxAmount = amount;  
720     }
```



## SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 749

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
748     require(totalFee <= 2500, "Total fees must be less than or equal to 25%");
749     require(totalFee < feeDenominator/4);
750   }
751   |
```

# SWC-101 | COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED

LINE 401

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
400 function removeShareholder(address shareholder) internal {  
401     shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-  
1];  
402     shareholderIndexes[shareholders[shareholders.length-1]] =  
shareholderIndexes[shareholder];  
403     shareholders.pop();
```

# SWC-101 | COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED

LINE 402

## low SEVERITY

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

## Source File

- pro.sol

## Locations

```
401  shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-1];
402  shareholderIndexes[shareholders[shareholders.length-1]] = shareholderIndexes[shareholder];
403  shareholders.pop();
404  }
```

## SWC-103 | A FLOATING PRAGMA IS SET

LINE 11

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- pro.sol

### Locations

```
10 //SPDX-License-Identifier: MIT
11 pragma solidity ^0.8.0;
12 |
13 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 244

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "\_token" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
243 using SafeMath for uint256;
244 address _token;
245 struct Share {
246 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 252

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "BUSD" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
251     }  
252     IBEP20 BUSD = IBEP20(0xe9e7CEA3DedcA5984780Bafc599bD69ADd087D56);  
253     address WBNB = 0xbb4CdB9CBd36B01bD1cBaEBF2De08d9173bc095c;  
254     IDEXRouter router;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 253

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "WBNB" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
252 IBEP20 BUSD = IBEP20(0xe9e7CEA3DedcA5984780Bafc599bD69ADd087D56);  
253 address WBNB = 0xbb4CdB9CBd36B01bD1cBaEBF2De08d9173bc095c;  
254 IDEXRouter router;  
255 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 254

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "router" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
253     address WBNB = 0xbb4CdB9CBd36B01bD1cBaE2F2De08d9173bc095c;  
254     IDEXRouter router;  
255     address[] shareholders;  
256     |
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 256

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "shareholders" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
255  IDEXRouter router;  
256  address[] shareholders;  
257  mapping (address => uint256) shareholderIndexes;  
258  mapping (address => uint256) shareholderClaims;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 257

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "shareholderIndexes" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
256 address[] shareholders;  
257 mapping (address => uint256) shareholderIndexes;  
258 mapping (address => uint256) shareholderClaims;  
259 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 258

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "shareholderClaims" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
257 mapping (address => uint256) shareholderIndexes;  
258 mapping (address => uint256) shareholderClaims;  
259 mapping (address => Share) public shares;  
260 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 271

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "currentIndex" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
270  uint256 public minDistribution = 1 * (10 ** 18);  
271  uint256 currentIndex;  
272  bool initialized;  
273  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 273

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "initialized" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
272  uint256 currentIndex;  
273  bool initialized;  
274  modifier initialization() {  
275      require(!initialized);
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 411

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "BUSD" is internal. Other possible visibility settings are public and private.

## Source File

- pro.sol

## Locations

```
410     uint256 public constant MASK = type(uint128).max;
411     address BUSD = 0xe9e7CEA3DedcA5984780BafC599bD69ADd087D56;
412     address public WBNB = 0xbb4CdB9CBd36B01bD1cBaEaF2De08d9173bc095c;
413     address DEAD = 0x00000000000000000000000000000000dEaD;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 413

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "DEAD" is internal. Other possible visibility settings are public and private.

## Source File

- pro.sol

## Locations

```
412 address public WBNB = 0xbb4CdB9CBd36B01bd1cBaE8F2De08d9173bc095c;
413 address DEAD = 0x0000000000000000000000000000000000eAd;
414 address ZERO = 0x0000000000000000000000000000000000000000;
415 address DEAD_NON_CHECKSUM = 0x0000000000000000000000000000000000eAd;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 414

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "ZERO" is internal. Other possible visibility settings are public and private.

## Source File

- pro.sol

## Locations

```
413     address DEAD = 0x00000000000000000000000000000000dEaD;
414     address ZERO = 0x000000000000000000000000000000000000;
415     address DEAD_NON_CHECKSUM = 0x00000000000000000000000000000000dEaD;
416     |
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 415

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "\_totalSupply" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
414  uint8 constant _decimals = 18;
415  uint256 _totalSupply = 1_000_000_000_000_000 * (10 ** _decimals);
416  uint256 public _maxTxAmount = _totalSupply.div(100); // 1%
417  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 424

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "\_balances" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
423  uint256 public _maxTxAmount = _totalSupply.div(100); // 1%
424  mapping (address => uint256) _balances;
425  mapping (address => mapping (address => uint256)) _allowances;
426  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 425

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "\_allowances" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
424 mapping (address => uint256) _balances;  
425 mapping (address => mapping (address => uint256)) _allowances;  
426 mapping (address => bool) isFeeExempt;  
427 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 427

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "isFeeExempt" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
426 mapping (address => mapping (address => uint256)) _allowances;  
427 mapping (address => bool) isFeeExempt;  
428 mapping (address => bool) isTxLimitExempt;  
429 mapping (address => bool) isDividendExempt;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 428

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "isTxLimitExempt" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
427 mapping (address => bool) isFeeExempt;  
428 mapping (address => bool) isTxLimitExempt;  
429 mapping (address => bool) isDividendExempt;  
430 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 429

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "isDividendExempt" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
428 mapping (address => bool) isTxLimitExempt;  
429 mapping (address => bool) isDividendExempt;  
430 uint256 liquidityFee = 200;  
431 |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 431

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "liquidityFee" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
430 mapping (address => bool) isDividendExempt;  
431 uint256 liquidityFee = 200;  
432 uint256 buybackFee = 100;  
433 uint256 reflectionFee = 100;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 432

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "buybackFee" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
431  uint256 liquidityFee = 200;  
432  uint256 buybackFee = 100;  
433  uint256 reflectionFee = 100;  
434  uint256 marketingFee = 200;
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 433

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "reflectionFee" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
432  uint256 buybackFee = 100;  
433  uint256 reflectionFee = 100;  
434  uint256 marketingFee = 200;  
435  uint256 totalFee = 600;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 434

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "marketingFee" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
433  uint256 reflectionFee = 100;  
434  uint256 marketingFee = 200;  
435  uint256 totalFee = 600;  
436  uint256 feeDenominator = 10000;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 435

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "totalFee" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
434  uint256 marketingFee = 200;  
435  uint256 totalFee = 600;  
436  uint256 feeDenominator = 10000;  
437  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 436

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "feeDenominator" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
435     uint256 totalFee = 600;  
436     uint256 feeDenominator = 10000;  
437     address public autoLiquidityReceiver;  
438     |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 441

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "targetLiquidity" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
440     address public marketingFeeReceiver;  
441     uint256 targetLiquidity = 25;  
442     uint256 targetLiquidityDenominator = 100;  
443     |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 450

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "buybackMultiplierNumerator" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
449 uint256 public launchedAtTimestamp;  
450 uint256 buybackMultiplierNumerator = 200;  
451 uint256 buybackMultiplierDenominator = 100;  
452 uint256 buybackMultiplierTriggeredAt;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 451

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "buybackMultiplierDenominator" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
450  uint256 buybackMultiplierNumerator = 200;  
451  uint256 buybackMultiplierDenominator = 100;  
452  uint256 buybackMultiplierTriggeredAt;  
453  uint256 buybackMultiplierLength = 30 minutes;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 452

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "buybackMultiplierTriggeredAt" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
451  uint256 buybackMultiplierDenominator = 100;  
452  uint256 buybackMultiplierTriggeredAt;  
453  uint256 buybackMultiplierLength = 30 minutes;  
454  |
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 453

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "buybackMultiplierLength" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
452  uint256 buybackMultiplierTriggeredAt;  
453  uint256 buybackMultiplierLength = 30 minutes;  
454  bool public autoBuybackEnabled = false;  
455  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 456

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "buyBacker" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
455  bool public autoBuybackEnabled = false;
456  mapping (address => bool) buyBacker;
457  uint256 autoBuybackCap;
458  uint256 autoBuybackAccumulator;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 457

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "autoBuybackCap" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
456 mapping (address => bool) buyBacker;  
457 uint256 autoBuybackCap;  
458 uint256 autoBuybackAccumulator;  
459 uint256 autoBuybackAmount;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 458

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "autoBuybackAccumulator" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
457  uint256 autoBuybackCap;  
458  uint256 autoBuybackAccumulator;  
459  uint256 autoBuybackAmount;  
460  uint256 autoBuybackBlockPeriod;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 459

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "autoBuybackAmount" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
458  uint256 autoBuybackAccumulator;  
459  uint256 autoBuybackAmount;  
460  uint256 autoBuybackBlockPeriod;  
461  uint256 autoBuybackBlockLast;
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 460

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "autoBuybackBlockPeriod" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
459  uint256 autoBuybackAmount;  
460  uint256 autoBuybackBlockPeriod;  
461  uint256 autoBuybackBlockLast;  
462  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 461

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "autoBuybackBlockLast" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
460  uint256 autoBuybackBlockPeriod;  
461  uint256 autoBuybackBlockLast;  
462  DividendDistributor distributor;  
463  |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 463

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "distributor" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
462  uint256 autoBuybackBlockLast;  
463  DividendDistributor distributor;  
464  address public distributorAddress;  
465  |
```



## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 466

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "distributorGas" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
465     address public distributorAddress;  
466     uint256 distributorGas = 500000;  
467     bool public swapEnabled = true;  
468     |
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET

LINE 470

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwap" is internal. Other possible visibility settings are public and private.

### Source File

- pro.sol

### Locations

```
469  uint256 public swapThreshold = _totalSupply / 2000; // 0.005%
470  bool inSwap;
471  modifier swapping() { inSwap = true; _; inSwap = false; }
472  |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 316

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
315 address[] memory path = new address[](2);  
316 path[0] = WBNB;  
317 path[1] = address(BUSD);  
318 |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 317

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
316 path[0] = WBNB;  
317 path[1] = address(BUSD);  
318 router.swapExactETHForTokensSupportingFeeOnTransferTokens{value: msg.value}(  
319 |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 347

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
346     }  
347     if(shouldDistribute(shareholders[currentIndex])){  
348         distributeDividend(shareholders[currentIndex]);  
349     }
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 348

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
347   if(shouldDistribute(shareholders[currentIndex])){  
348       distributeDividend(shareholders[currentIndex]);  
349   }  
350   |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 401

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
400  function removeShareholder(address shareholder) internal {  
401  shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-  
1];  
402  shareholderIndexes[shareholders[shareholders.length-1]] =  
shareholderIndexes[shareholder];  
403  shareholders.pop();
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 402

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
401  shareholders[shareholderIndexes[shareholder]] = shareholders[shareholders.length-1];  
402  shareholderIndexes[shareholders[shareholders.length-1]] =  
shareholderIndexes[shareholder];  
403  shareholders.pop();  
404  }
```



## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 613

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
612 address[] memory path = new address[](2);
613 path[0] = address(this);
614 path[1] = WBNB;
615 uint256 balanceBefore = address(this).balance;
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 614

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
613   path[0] = address(this);  
614   path[1] = WBNB;  
615   uint256 balanceBefore = address(this).balance;  
616   |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 680

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
679  address[] memory path = new address[](2);  
680  path[0] = WBNB;  
681  path[1] = address(this);  
682  |
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 681

### low SEVERITY

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

### Source File

- pro.sol

### Locations

```
680  path[0] = WBNB;  
681  path[1] = address(this);  
682  router.swapExactETHForTokensSupportingFeeOnTransferTokens{value: amount}(  
683  |
```

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

LINE 575

## 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

- pro.sol

## Locations

```
574 function getTotalFee(bool selling) public view returns (uint256) {  
575     if(launchedAt + 1 >= block.number){ return feeDenominator.sub(1); }  
576     if(selling){ return getMultipliedFee(); }  
577     return totalFee;
```

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

LINE 655

## 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

- pro.sol

## Locations

```
654    && autoBuybackEnabled
655    && autoBuybackBlockLast + autoBuybackBlockPeriod <= block.number // After N blocks
from last buyback
656    && address(this).balance >= autoBuybackAmount;
657 }
```

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

LINE 673

## 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

- pro.sol

## Locations

```
672 buyTokens(autoBuybackAmount, DEAD);  
673 autoBuybackBlockLast = block.number;  
674 autoBuybackAccumulator = autoBuybackAccumulator.add(autoBuybackAmount);  
675 if(autoBuybackAccumulator > autoBuybackCap){ autoBuybackEnabled = false; }
```

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

LINE 697

## 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

- pro.sol

## Locations

```
696 autoBuybackBlockPeriod = _period;
697 autoBuybackBlockLast = block.number;
698 }
699 |
```



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

LINE 713

## 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

- pro.sol

## Locations

```
712   require(launchedAt == 0, "Already launched boi");
713   launchedAt = block.number;
714   launchedAtTimestamp = block.timestamp;
715 }
```

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