auditace.tech

AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

GHCrowdFund

DATED : 5 Feb, 2024

AUDIT SUMMARY

Project name – GHCrowdFund

Date: 5 Feb, 2024

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	1
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/0x6c84fc477c39884685d9af962cb07afc786597a1#code

Token Information

Token Name : GHCrowdFund

Token Symbol: GHCrowdFund

Decimals: -

Token Supply: -

Network: -

Token Type: -

Token Address: -

Checksum:
A2032c616934aeb47e6039f76b20d2h5

Owner:
-
(at time of writing the audit)

Deployer: -

TOKEN OVERVIEW

Fees:

Buy Fee: 0%

Sell Fee: 0%

Transfer Fee: 0%

Fees Privilege: Owner

Ownership: Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

AUDIT METHODOLOGY

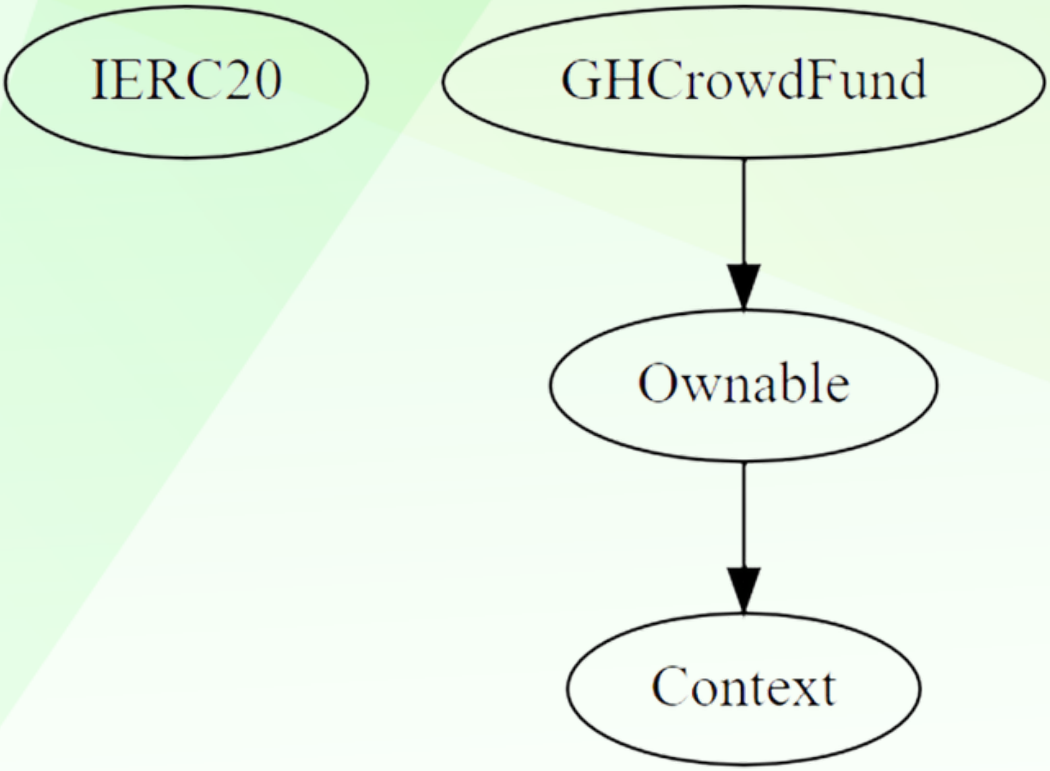
The auditing process will follow a routine as special considerations by Auditace:

- 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

- 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

INHERITANCE TREE



STATIC ANALYSIS

A static analysis of the code was performed using Slither.

No issues were found.

```
INFO:Detectors:
Reentrancy in GHCrowdFund.pledge(uint256) (GHCrowdFund.sol#265-289):
        External calls:
        - token.transferFrom(msg.sender,address(this),_amount) (GHCrowdFund.sol#276)
        State variables written after the call(s):
        - pledged += _amount (GHCrowdFund.sol#284)
        GHCrowdFund.pledged (GHCrowdFund.sol#196) can be used in cross function reentrancies:
        - GHCrowdFund.claim() (GHCrowdFund.sol#292-304)
        - GHCrowdFund.launch(uint256,uint256,uint32,uint32,uint256,uint256) (GHCrowdFund.sol#234-252)
        - GHCrowdFund.pledge(uint256) (GHCrowdFund.sol#265-289)
        - GHCrowdFund.pledged (GHCrowdFund.sol#196)
        - GHCrowdFund.refund() (GHCrowdFund.sol#307-320)
        - GHCrowdFund.refundTo(address) (GHCrowdFund.sol#323-336)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-1
INFO:Detectors:
Reentrancy in GHCrowdFund.pledge(uint256) (GHCrowdFund.sol#265-289):
        External calls:
        - token.transferFrom(msg.sender,address(this),_amount) (GHCrowdFund.sol#276)
        State variables written after the call(s):
        - pledgeList.push(msg.sender) (GHCrowdFund.sol#280)
        - pledgedAmount[msg.sender] += _amount (GHCrowdFund.sol#285)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-2
```

```
INFO:Detectors:
Context._msgData() (GHCrowdFund.sol#102-104) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code
INFO:Detectors:
Pragma version^0.8.7 (GHCrowdFund.sol#6) allows old versions
solc-0.8.22 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity
INFO:Detectors:
Parameter GHCrowdFund.launch(uint256,uint256,uint32,uint32,uint256,uint256)._softCap (GHCrowdFund.sol#234) is not in mixedCase
Parameter GHCrowdFund.launch(uint256,uint256,uint32,uint32,uint256,uint256)._hardCap (GHCrowdFund.sol#234) is not in mixedCase
Parameter GHCrowdFund.launch(uint256,uint256,uint32,uint32,uint256,uint256)._startAt (GHCrowdFund.sol#234) is not in mixedCase
Parameter GHCrowdFund.launch(uint256,uint256,uint32,uint32,uint256,uint256)._endAt (GHCrowdFund.sol#234) is not in mixedCase
Parameter GHCrowdFund.launch(uint256,uint256,uint32,uint32,uint256,uint256)._minAmount (GHCrowdFund.sol#234) is not in mixedCase
Parameter GHCrowdFund.launch(uint256,uint256,uint32,uint32,uint256,uint256)._maxAmount (GHCrowdFund.sol#234) is not in mixedCase
Parameter GHCrowdFund.pledge(uint256)._amount (GHCrowdFund.sol#265) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions
INFO:Slither:GHCrowdFund.sol analyzed (4 contracts with 93 detectors), 26 result(s) found
```

FUNCTIONAL TESTING

1-Launch (passed):

https://testnet.bscscan.com/tx/0x552a86faccdfa557e90a7f76b105a7719cf1b83cf0770fd44517c779187a3eaa

2- Cancel (passed):

https://testnet.bscscan.com/tx/0x7ad02e931e879a3f3316225aa80676d0a320a9002a0044a436b6b3b1ae758b56

POINTS TO NOTE

- The owner can transfer ownership.
- The owner can renounce ownership.
- The owner can launch.
- The owner can cancel.
- The owner can claim.
- The owner can refundTo.

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	1

MANUAL TESTING

Optimization

Severity: Informational

Function: Remove unused code.

Status: Open

Overview:

Unused variables are allowed in Solidity, and they do. not pose a direct security issue. It is the best practice. though to avoid them.

```
function _msgData() internal view virtual returns (bytes calldata) {
        return msg.data;
    }
```

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