



SOLIDProof

Bring trust into your projects

**Blockchain Security | Smart Contract Audits | KYC
Development | Marketing**

MADE IN GERMANY

Frens Audit

**Security Assessment
03. July, 2023**

For



SolidProof_io



@solidproof_io

Disclaimer	3
Description	5
Project Engagement	5
Logo	5
Contract Link	5
Methodology	7
Used Code from other Frameworks/Smart Contracts (direct imports)	8
Tested Contract Files	9
Source Lines	10
Risk Level	10
Capabilities	11
Inheritance Graph	12
CallGraph	13
Scope of Work/Verify Claims	14
Modifiers and public functions	19
Source Units in Scope	20
Critical issues	21
High issues	21
Medium issues	21
Low issues	21
Informational issues	21
Audit Comments	22
SWC Attacks	23

Disclaimer

SolidProof.io reports are not, nor should be considered, an “endorsement” or “disapproval” of any particular project or team. These reports are not, nor should be considered, an indication of the economics or value of any “product” or “asset” created by any team. SolidProof.io do not cover testing or auditing the integration with external contract or services (such as Uniswap, Uniswap, PancakeSwap etc’...)

SolidProof.io Audits do not provide any warranty or guarantee regarding the absolute bug- free nature of the technology analyzed, nor do they provide any indication of the technology proprietors. SolidProof Audits should not be used in any way to make decisions around investment or involvement with any particular project. These reports in no way provide investment advice, nor should be leveraged as investment advice of any sort.

SolidProof.io Reports represent an extensive auditing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology. Blockchain technology and cryptographic assets present a high level of ongoing risk. SolidProof’s position is that each company and individual are responsible for their own due diligence and continuous security. SolidProof in no way claims any guarantee of the security or functionality of the technology we agree to analyze.

Version	Date	Description
1.0	23. June 2023	<ul style="list-style-type: none">• Layout project• Automated- /Manual-Security Testing• Summary
1.1	03. July 2023	<ul style="list-style-type: none">• Reaudit and Extended Scope

Note - This Audit report comprises a security analysis of the **Frens** smart contracts. This analysis did not include functional testing (or unit testing) of the contract’s logic.

Network

Ethereum

Website

www.frenstoken.io

Telegram

<https://t.me/frenstokenio>

Twitter

<https://twitter.com/frenstokenio>

Discord

<https://discord.gg/B3b6Rnwg>



Description

We believe that Pepe the Frog is indeed the greatest meme of all time, and why shouldn't he be? He is so damn cool! But what about the super awesome, fun and wise frens of his? Our project is entirely dedicated to the whole bunch, all four of them and to those who we believe can bring a new life to the meme community!

Project Engagement

During the Date 21 June 2023, **Frens Team** engaged Solidproof.io to audit smart contracts that they created. The engagement was technical and focused on identifying security flaws in the design and implementation of the contracts. They provided Solidproof.io with access to their code repository and whitepaper.

Logo



Contract Link

v1.0

- <https://goerli.etherscan.io/address/0xA6035698aD0045A7C1F7065dB4B688370B299830#code>

v1.1

Presale - <https://goerli.etherscan.io/address/0x7cB0f0e8751851FC6827fEbD03428e5B41b0B50f#code>

Token - <https://goerli.etherscan.io/address/0xb02bb1996E96C780af33F54abCc6c2C534199cCc#code>

Note for Investors: We only Audited a presale and a token contract for **Frens**. However, If the project has other contracts (for example, a staking contract etc), and they were not provided to us in the audit scope, then we cannot comment on its security, and we are not responsible for it in any way.

Vulnerability & Risk Level

Risk represents the probability that a certain source-threat will exploit vulnerability, and the impact of that event on the organization or system. Risk Level is computed based on CVSS version 3.0.

Level	Value	Vulnerability	Risk (Required Action)
Critical	9 - 10	A vulnerability that can disrupt the contract functioning in a number of scenarios, or creates a risk that the contract may be broken.	Immediate action to reduce risk level.
High	7 – 8.9	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.	Implementation of corrective actions as soon as possible.
Medium	4 – 6.9	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.	Implementation of corrective actions in a certain period.
Low	2 – 3.9	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.	Implementation of certain corrective actions or accepting the risk.
Informational	0 – 1.9	A vulnerability that have informational character but is not effecting any of the code.	An observation that does not determine a level of risk

Auditing Strategy and Techniques Applied

Throughout the review process, care was taken to evaluate the repository for security-related issues, code quality, and adherence to specification and best practices. To do so, reviewed line-by-line by our team of expert pentesters and smart contract developers, documenting any issues as there were discovered.

Methodology

The auditing process follows a routine series of steps:

1. Code review that includes the following:
 - i) Review of the specifications, sources, and instructions provided to SolidProof to make sure we understand the size, scope, and functionality of the smart contract.
 - ii) Manual review of code, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
 - iii) Comparison to specification, which is the process of checking whether the code does what the specifications, sources, and instructions provided to SolidProof describe.
2. Testing and automated analysis that includes the following:
 - i) Test coverage analysis, which is the process of determining whether the test cases are actually covering the code and how much code is exercised when we run those test cases.
 - ii) Symbolic execution, which is analysing a program to determine what inputs causes each part of a program to execute.
3. Best practices review, which is a review of the smart contracts to improve efficiency, effectiveness, clarify, maintainability, security, and control based on the established industry and academic practices, recommendations, and research.
4. Specific, itemized, actionable recommendations to help you take steps to secure your smart contracts.

Used Code from other Frameworks/Smart Contracts (direct imports)

Imported packages:

Dependency / Import Path	Count
@openzeppelin/contracts/access/Ownable.sol	2
@openzeppelin/contracts/token/ERC20/ERC20.sol	1
@openzeppelin/contracts/token/ERC20/utils/SafeERC20.sol	1

Tested Contract Files

This audit covered the following files listed below with a SHA-1 Hash.

A file with a different Hash has been modified, intentionally or otherwise, after the security review. A different Hash could be (but not necessarily) an indication of a changed condition or potential vulnerability that was not within the scope of this review.

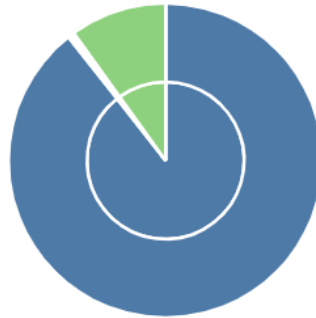
v1.1

File Name	SHA-1 Hash
contracts/ Presale.sol	187c20c3f29d35e42ae3390c4f219e76bc85c6fb
contracts/Frens.sol	cad60b33ba08ce3a330f4bfe09e577ec8b8e0355

Metrics

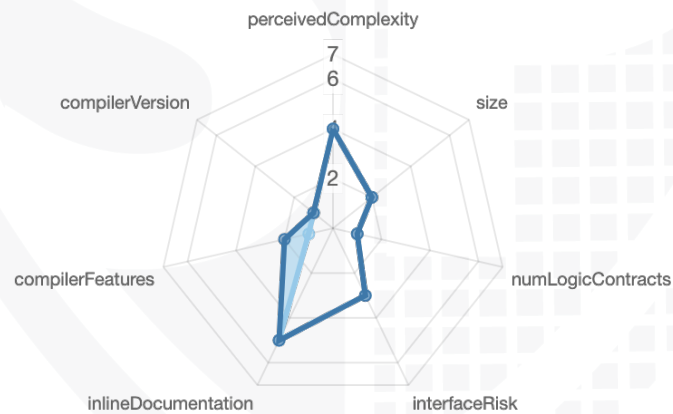
Source Lines v1.0

source comment single block mixed
empty todo blockEmpty



Risk Level v1.0

overall average




Capabilities

Components

 Contracts	 Libraries	 Interfaces	 Abstract
2	0	0	0

Exposed Functions

This section lists functions that are explicitly declared public or payable. Please note that getter methods for public stateVars are not included.












 Public	 Payable
8	0

External	Internal	Private	Pure	View
7	9	0	0	1

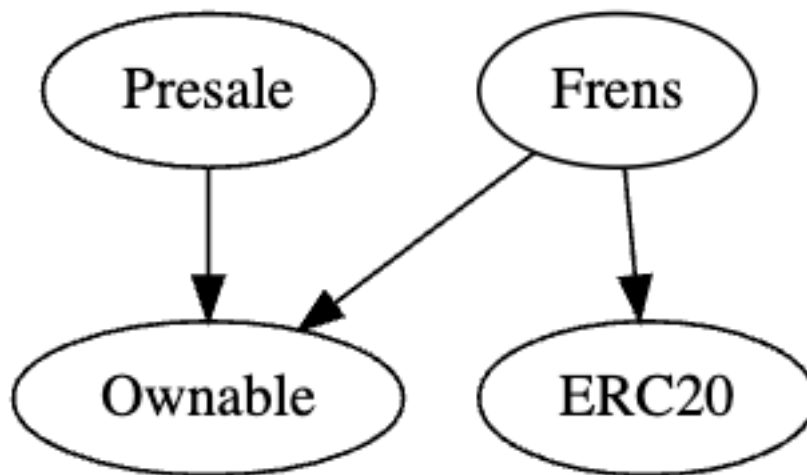
StateVariables

Total	 Public
18	17

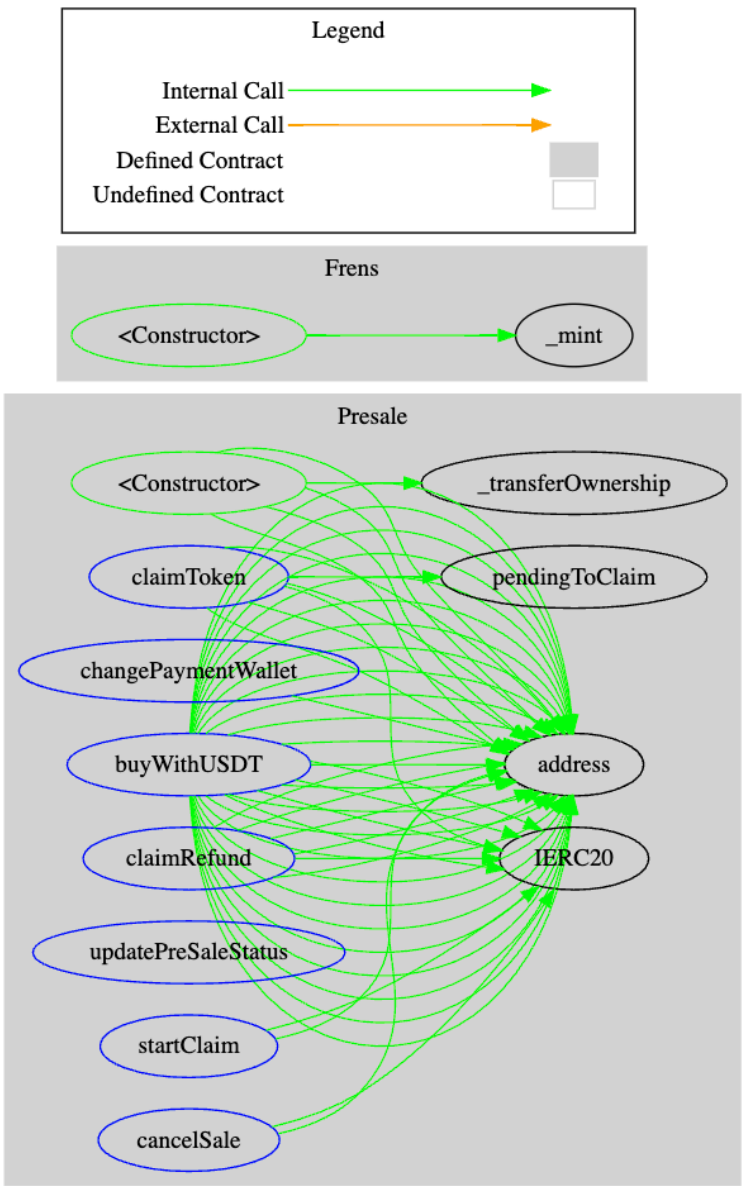
Capabilities

Solidity Versions observed	 Experimental Features	 Can Receive Funds	 Uses Assembly	 Has Destroyable Contracts	
0.8.2					
 Transfers ETH	 Low-Level Calls	 DelegateCall	 Uses Hash Functions	 ECRrecover	 New/Create/Create2
 TryCatch	Σ Unchecked				

Inheritance Graph v1.1



CallGraph v1.1



Scope of Work/Verify Claims

The above token Team provided us with the files that needs to be tested (Github, Bscscan, Etherscan, files, etc.). The scope of the audit is the main contract (usual the same name as team appended with .sol).

We will verify the following claims:

1. Is contract an upgradeable
2. Deployer cannot lock user funds
3. Deployer cannot pause the contract
4. Deployer cannot set fees
5. Deployer cannot blacklist/antisnipe addresses
6. Overall checkup (Smart Contract Security)



Is contract an upgradeable

Name	
Is contract an upgradeable?	No



Deployer cannot lock user funds

Name	Exist	Tested	Status
Deployer cannot lock	✓	✓	✓

Comments:

v1.1

- The owner can't lock funds



Deployer cannot pause the contract

Name	Exist	Tested	Status
Deployer can pause	✓	✓	✗

Comments:

v1.1

- The owner can pause the presale at any time contract



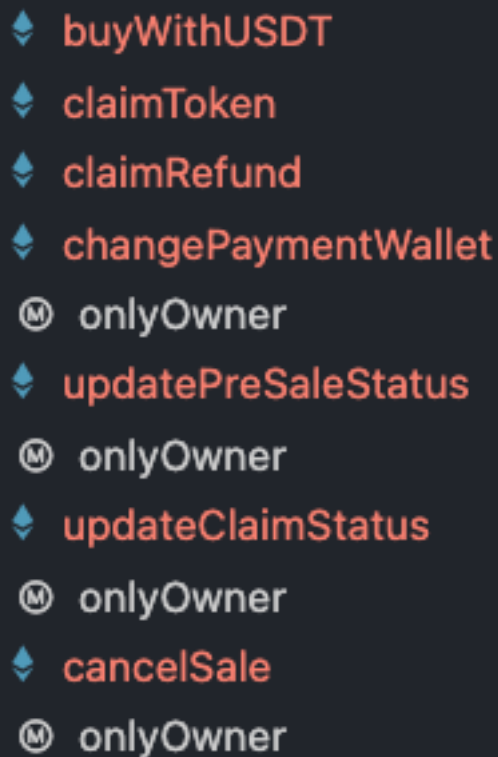
Overall checkup (Smart Contract Security)

Tested	Verified
✓	✓

Legend

Attribute	Symbol
Verified / Checked	✓
Partly Verified	⚠
Unverified / Not checked	✗
Not available	—

Modifiers and public functions v1.1



- ◆ buyWithUSDT
- ◆ claimToken
- ◆ claimRefund
- ◆ changePaymentWallet
- Ⓜ onlyOwner
- ◆ updatePreSaleStatus
- Ⓜ onlyOwner
- ◆ updateClaimStatus
- Ⓜ onlyOwner
- ◆ cancelSale
- Ⓜ onlyOwner

Ownership Privileges

- Change Payment wallet address
- Start and Stop presale at anytime
- Enable the claim function but cannot disable it. Moreover, it is possible to start the claim and resume the presale after the claim has started.
- Cancel Sale

Note for Investors - This is a **Private Presale** that is being held on the token's website itself. It is highly risky as we audited a testnet version and the final contract may differ from what we audited. Please do your own research before investing. Moreover, keep in mind that in order to start the claim in the contract, the owner has to manually send tokens to the presale contract. This is very risky as it solely relies on the discretion of the owner, if the owner decides not to add tokens then there will be no claim.

- Beware of this.

Source Units in Scope v1.1

File	Logic Contracts	Interfaces	Lines	nLines	nSLOC	Comment Lines	Complex. Score
contracts/Presale.sol	1	————	292	292	261	1	137
contracts/Frens.sol	1	————	12	12	8	1	7
Totals	2	————	304	304	269	2	144

Legend

Attribute	Description
Lines	total lines of the source unit
nLines	normalised lines of the source unit (e.g. normalises functions spanning multiple lines)
nSLOC	normalised source lines of code (only source-code lines; no comments, no blank lines)
Comment Lines	lines containing single or block comments
Complexity Score	a custom complexity score derived from code statements that are known to introduce code complexity (branches, loops, calls, external interfaces, ...)

Audit Results

Critical issues

No critical issues

High issues

No high issues

Medium issues

Medium Issue Fixed

Issue	File	Type	Line	Description	Status
#1	Presale.sol	Owner can lock claim	See description	The owner is able to enable/disable the claim functionality in the presale contract which means if the owner decides to disable the claim status then no investor will be able to claim the tokens that they have bought	Fixed

Low issues

Issue	File	Type	Line	Description	Status
#1	Presale.sol	Missing Events Arithmetic	284	Emit an event for critical parameter changes	Open

Informational issues

Issue	File	Type	Line	Description	Status
#1	Presale.sol	State variables that could be declared constant (constable-states)	17, 18	Add the `constant` attributes to state variables that never change	Open
#2	Presale.sol	NatSpec documentation missing	—	If you started to comment your code, also comment all other functions, variables etc.	Open

Audit Comments

We recommend you use the particular form of comments (NatSpec Format, Follow the link for more information <https://docs.soliditylang.org/en/latest/natspec-format.html>) for your contracts to provide rich documentation for functions, return variables and more. This helps investors to make clear what that variable, functions etc., do.

03. July 2023:

- Unit tests with 95% code coverage were not provided to SolidProof so we cannot ensure complete functional correctness of the code's logic.
- We recommend **Frens** team conduct unit and fuzz tests thoroughly to rule out the possibility of unwanted logical and calculation errors.
- There is still an owner (The owner still has not renounced ownership)
- The claim and refund function still relies over the discretion of the owner.
- Read the whole report and modifiers section for more information

SWC Attacks

ID	Title	Relationships	Status
SW C-1 36	Unencrypted Private Data On-Chain	CWE-767: Access to Critical Private Variable via Public Method	PASSED
SW C-1 35	Code With No Effects	CWE-1164: Irrelevant Code	PASSED
SW C-1 34	Message call with hardcoded gas amount	CWE-655: Improper Initialization	PASSED
SW C-1 33	Hash Collisions With Multiple Variable Length Arguments	CWE-294: Authentication Bypass by Capture-replay	PASSED
SW C-1 32	Unexpected Ether balance	CWE-667: Improper Locking	PASSED
SW C-1 31	Presence of unused variables	CWE-1164: Irrelevant Code	PASSED
SW C-1 30	Right-To-Left-Override control character (U+202E)	CWE-451: User Interface (UI) Misrepresentation of Critical Information	PASSED
SW C-1 29	Typographical Error	CWE-480: Use of Incorrect Operator	PASSED
SW C-1 28	DoS With Block Gas Limit	CWE-400: Uncontrolled Resource Consumption	PASSED

SW C-1 27	Arbitrary Jump with Function Type Variable	CWE-695: Use of Low-Level Functionality	PASSED
SW C-1 25	Incorrect Inheritance Order	CWE-696: Incorrect Behavior Order	PASSED
SW C-1 24	Write to Arbitrary Storage Location	CWE-123: Write-what-where Condition	PASSED
SW C-1 23	Requirement Violation	CWE-573: Improper Following of Specification by Caller	PASSED
SW C-1 22	Lack of Proper Signature Verification	CWE-345: Insufficient Verification of Data Authenticity	PASSED
SW C-1 21	Missing Protection against Signature Replay Attacks	CWE-347: Improper Verification of Cryptographic Signature	PASSED
SW C-1 20	Weak Sources of Randomness from Chain Attributes	CWE-330: Use of Insufficiently Random Values	PASSED
SW C-11 9	Shadowing State Variables	CWE-710: Improper Adherence to Coding Standards	PASSED
SW C-11 8	Incorrect Constructor Name	CWE-665: Improper Initialization	PASSED
SW C-11 7	Signature Malleability	CWE-347: Improper Verification of Cryptographic Signature	PASSED

SW C-11 6	Timestamp Dependence	CWE-829: Inclusion of Functionality from Untrusted Control Sphere	PASSED
SW C-11 5	Authorization through tx.origin	CWE-477: Use of Obsolete Function	PASSED
SW C-11 4	Transaction Order Dependence	CWE-362: Concurrent Execution using Shared Resource with Improper Synchronization ('Race Condition')	PASSED
SW C-11 3	DoS with Failed Call	CWE-703: Improper Check or Handling of Exceptional Conditions	PASSED
SW C-11 2	Delegatecall to Untrusted Callee	CWE-829: Inclusion of Functionality from Untrusted Control Sphere	PASSED
SW C-11 1	Use of Deprecated Solidity Functions	CWE-477: Use of Obsolete Function	PASSED
SW C-11 0	Assert Violation	CWE-670: Always-Incorrect Control Flow Implementation	PASSED
SW C-1 09	Uninitialized Storage Pointer	CWE-824: Access of Uninitialized Pointer	PASSED
SW C-1 08	State Variable Default Visibility	CWE-710: Improper Adherence to Coding Standards	PASSED
SW C-1 07	Reentrancy	CWE-841: Improper Enforcement of Behavioral Workflow	PASSED
SW C-1 06	Unprotected SELFDESTRUCT Instruction	CWE-284: Improper Access Control	PASSED

SW C-1 05	Unprotected Ether Withdrawal	CWE-284: Improper Access Control	PASSED
SW C-1 04	Unchecked Call Return Value	CWE-252: Unchecked Return Value	PASSED
SW C-1 03	Floating Pragma	CWE-664: Improper Control of a Resource Through its Lifetime	PASSED
SW C-1 02	Outdated Compiler Version	CWE-937: Using Components with Known Vulnerabilities	PASSED
SW C-1 01	Integer Overflow and Underflow	CWE-682: Incorrect Calculation	PASSED
SW C-1 00	Function Default Visibility	CWE-710: Improper Adherence to Coding Standards	PASSED

*Solid
Proofed*

**Blockchain Security | Smart Contract Audits | KYC
Development | Marketing**


MADE IN GERMANY