



**SOLIDProof**  
*Bring trust into your projects*

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

MADE IN GERMANY

Fork of Cult.Dao  
<https://cultdao.io/>

**Audit**

**Security Assessment**  
**03. February, 2022**

**For**

**IncuDao**

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Version	Date	Description
1.0	15. July 2022	<ul style="list-style-type: none"><li>• Layout project</li><li>• Automated- /Manual-Security Testing</li><li>• Summary</li></ul>

## Network

Ethereum

## Website

<http://incu.isc.fun/#/>

## Telegram

<https://t.me/incudao>

## Twitter

<https://twitter.com/IncuDao>



## Description

INCUDAO is aiming to seek and fund decentralised projects who has the same vision towards to future web 3.0.

## Project Engagement

During the 14th of July 2022, **Incudao Team** engaged Solidproof.io to audit smart contracts that they created. The engagement was technical in nature 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

TBA

## Contract Link

**v1.0**

- Provided as files

# 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)
<b>Critical</b>	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.
<b>High</b>	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.
<b>Medium</b>	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.
<b>Low</b>	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.
<b>Informational</b>	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-upgradeable/access/OwnableUpgradeable.sol	3
@openzeppelin/contracts-upgradeable/proxy/utils/Initializable.sol	5
@openzeppelin/contracts-upgradeable/proxy/utils/UUPSUpgradeable.sol	5
@openzeppelin/contracts-upgradeable/security/PausableUpgradeable.sol	3
@openzeppelin/contracts-upgradeable/security/ReentrancyGuardUpgradeable.sol	1
@openzeppelin/contracts-upgradeable/token/ERC20/ERC20Upgradeable.sol	2
@openzeppelin/contracts-upgradeable/token/ERC20/IERC20Upgradeable.sol	1
@openzeppelin/contracts-upgradeable/token/ERC20/extensions/ERC20VotesCompUpgradeable.sol	1
@openzeppelin/contracts-upgradeable/token/ERC20/extensions/ERC20VotesUpgradeable.sol	2
@openzeppelin/contracts-upgradeable/token/ERC20/extensions/draft-ERC20PermitUpgradeable.sol	2
@openzeppelin/contracts-upgradeable/token/ERC20/utils/SafeERC20Upgradeable.sol	1
@openzeppelin/contracts-upgradeable/utils/math/SafeMathUpgradeable.sol	4



## Tested Contract Files

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

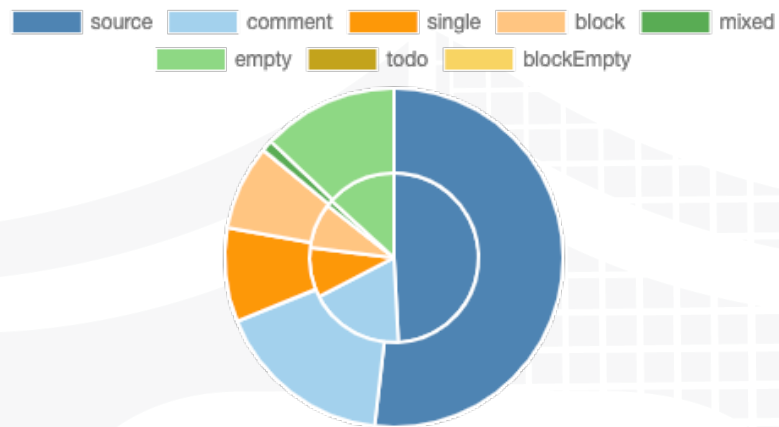
*A file with a different Hash has been modified, intentionally or otherwise, after the security review. A different Hash could be (but not necessarily) an indication of a changed condition or potential vulnerability that was not within the scope of this review.*

### v1.0

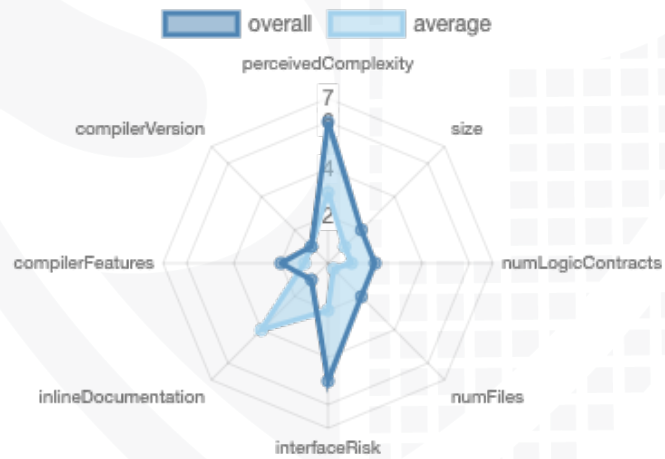
File Name	SHA-1 Hash
contracts/treasury.sol	9b3f86d9b500975e0302156f03ad45c67b5d98cf
contracts/GovernorBravoInterfaces.sol	2b6832c33717bdd5dc6e7248925083df2ed80932
contracts/Incu.sol	6f67cf98a69864d5fb3635c9f37903ab4fa740f3
contracts/timelock.sol	29ecb767a459651586a3308aebfddde1abcdb073
contracts/deCU.sol	39344631f3decf532f29edcf6d267211eb37fcd7
contracts/governance.sol	64c2ee84d326055d9ba97934604f0d2cf861eae0

# Metrics

## Source Lines v1.0



## Risk Level v1.0



## Capabilities

### Components

Version	Contracts	Libraries	Interfaces	Abstract
1.0	9	0	6	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.*

Version	Public	Payable
1.0	73	5

Version	External	Internal	Private	Pure	View
1.0	48	90	2	7	21

### State Variables

Version	Total	Public
1.0	58	57

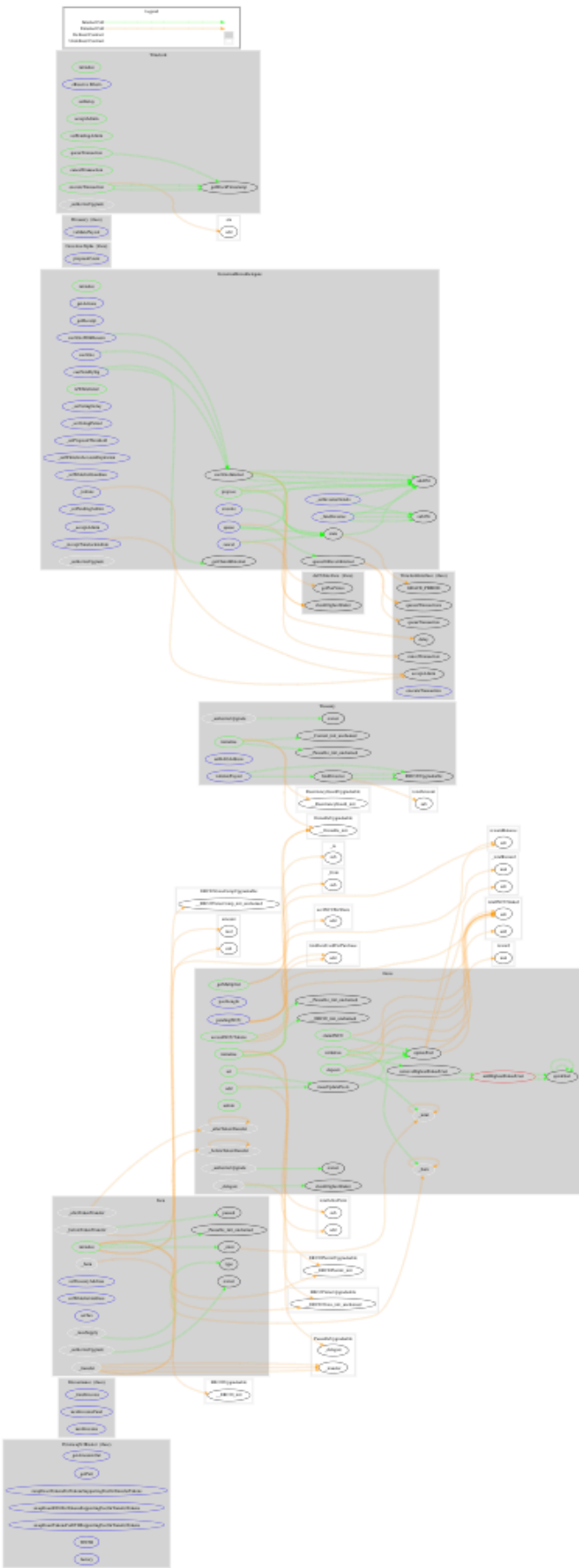
### Capabilities

Version	Solidity Versions observed	Experimental Features	Can Receive Funds	Uses Assembly	Has Destroyable Contracts
1.0	0.8.2	ABIEncoderV2	yes	yes (1 asm blocks)	

Version	Transfers ETH	Low-Level Calls	DelegateCall	Uses Hash Functions	EC Recover	New/Create/Create2
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# CallGraph v1.0



## 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. Correct implementation of Token standard
2. Deployer cannot mint any new tokens
3. Deployer cannot burn or lock user funds
4. Deployer cannot pause the contract
5. Overall checkup (Smart Contract Security)

### Correct implementation of Token standard

Function	Description	Exist	Tested	Verified
TotalSupply	provides information about the total token supply	✓	✓	✓
BalanceOf	provides account balance of the owner's account	✓	✓	✓
Transfer	executes transfers of a specified number of tokens to a specified address	✓	✓	✓
TransferFrom	executes transfers of a specified number of tokens from a specified address	✓	✓	✓
Approve	allow a spender to withdraw a set number of tokens from a specified account	✓	✓	✓
Allowance	returns a set number of tokens from a spender to the owner	✓	✓	✓

## Write functions of contract v1.0

▼ INCU	▼ DECU	▼ TIMELOCK	▼ TREASURY
approve	accessINCUTo...	acceptAdmin	initialize
decreaseAllow...	add	cancelTransact...	renounceOwn...
delegate	admin	executeTransa...	setDAOAddress
delegateBySig	approve	initialize	transferOwner...
increaseAllow...	claimINCU	queueTransact...	upgradeTo
initialize	decreaseAllow...	setDelay	upgradeToAnd...
permit	delegate	setPendingAd...	validatePayout
renounceOwn...	delegateBySig	upgradeTo	
setTax	deposit	upgradeToAnd...	
setTreasuryAd...	increaseAllow...		
setWhitelistA...	initialize		
transfer	massUpdateP...		
transferFrom	permit		
transferOwner...	renounceOwn...		
upgradeTo	set		
upgradeToAnd...	transfer		
	transferFrom		
	transferOwner...		
	updatePool		
	upgradeTo		
	upgradeToAnd...		
	withdraw		

GOVERNORBRAVODELEGATE
_acceptAdmin
_AcceptTimelockAdmin
_fundInvestee
_initiate
_setInvesteeDetails
_setPendingAdmin
_setProposalThreshold
_setVotingDelay
_setVotingPeriod
_setWhitelistAccountExpiration
_setWhitelistGuardian
cancel
castVote
castVoteBySig
castVoteWithReason
execute
initialize
propose
queue
upgradeTo
upgradeToAndCall



## Deployer cannot mint any new tokens

Name	Exist	Tested	Status
Deployer cannot mint	✓	✓	✓
Max / Total Supply	Can set while deploying		



## Deployer cannot burn or lock user funds

Name	Exist	Tested	Status
Deployer cannot lock	✓	✓	✗
Deployer cannot burn	✓	✓	✓

Comments:

### v1.0

- Deployer can lock user funds if address sender or receiver is not whitelisted address by setting tax amount to high value (e.g. 1000)

## Deployer cannot pause the contract

Name	Exist	Tested	Status
Deployer cannot pause	✓	✓	✗

Comments:

**v1.0**

- Contract can be paused



## Overall checkup (Smart Contract Security)

Tested	Verified
✓	✓


### Legend

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

# Modifiers and public functions

v1.0

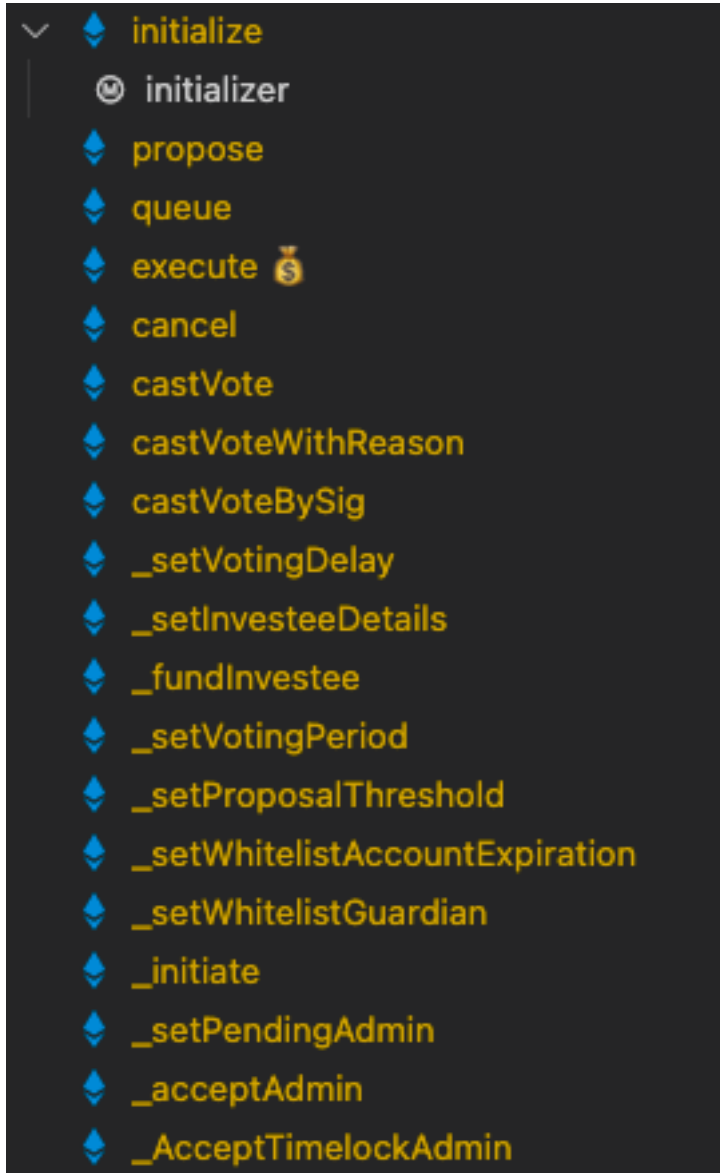
Incu

- initialize
  - initializer
- setTreasuryAddress
  - onlyOwner
- setWhitelistAddress
  - onlyOwner
- setTax
  - onlyOwner
- upgradeTo
  - onlyProxy
- upgradeToAndCall 
  - onlyProxy
- transfer
- approve
- transferFrom
- increaseAllowance
- decreaseAllowance
- permit
- delegate
- delegateBySig
- renounceOwnership
  - onlyOwner
- transferOwnership
  - onlyOwner

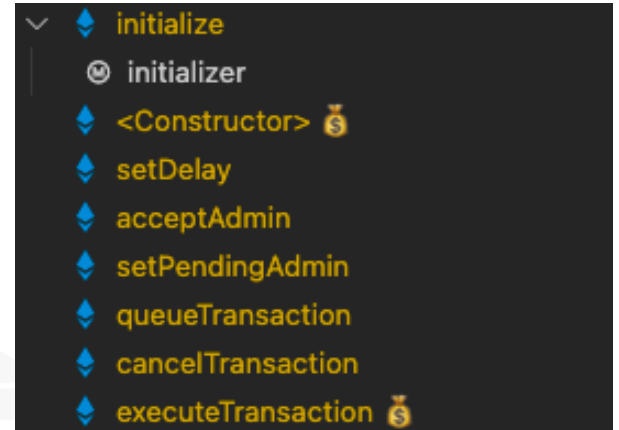
deCult

- initialize
  - initializer
- add
  - onlyOwner
- set
  - onlyOwner
- massUpdatePools
- updatePool
- deposit
- withdraw
- claimINCUI
- accessINCUTokens
- admin

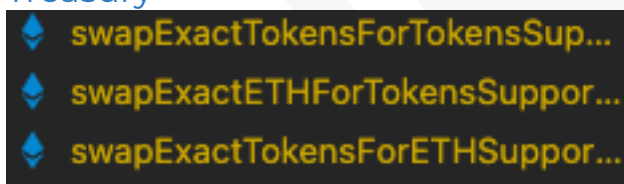
## Governance



## Timelock



## Treasury



## Comments














- Deployer can set following state variables without any limitations
  - Incu
    - tax
    - poolInfo[\_pid].allocPoint
- Deployer can enable/disable following state variables
  - Incu
    - whitelistedAddress[\_whitelist]

- Incu
  - Exclude old treasury address from whitelistedAddress while setting new treasury address
- deCult
  - While deposit contract will mint new tokens
  - While withdraw contract will burn tokens
  - accessCULTTokens function can only be called from the admin address
  - Only Admin can set new admin address
- Governance
  - Only admin address can call following functions
    - \_setVotingDelay
    - \_setInvesteeDetails
    - \_setVotingPeriod
    - \_setProposalThreshold
    - \_setWhitelistAccountExpiration
    - \_setWhitelistGuardian
    - \_initiate
    - \_setPendingAdmin
  - Only treasury address can call following functions
    - \_fundInfestee
  - Only whitelistGuardian address can call following functions
    - \_setWhitelistAccountExpiration
  - Only pendingAdmin can call following functions
    - \_acceptAdmin
    - \_AcceptTimelockAdmin
- Timelock
  - Only admin address can call following functions
    - queueTransaction
    - cancelTransaction
    - executeTransaction
  - Only contract itself can call following functions
    - setDelay
  - Only pendingAdmin can call following functions
    - acceptAdmin
  - If admin is initialized only contract itself can call setPendingAdmin otherwise admin has to call setPendingAdmin function
- Treasury
  - onlyAdmin can call following functions
    - setDAOAddress

**Please check if an OnlyOwner or similar restrictive modifier has been forgotten.**

# Source Units in Scope

## v1.0

Type	File	Logic Contracts	Interfaces	Lines	nLines	nSLOC	Comment Lines	Complex. Score	Capabilities
	contracts/treasury.sol	1	2	113	61	52	1	89	
	contracts/GovernorBravoInterfaces.sol	4	3	209	194	76	65	48	
	contracts/IncU.sol	1	1	113	90	74	1	67	_____
	contracts/timelock.sol	1	_____	126	126	92	3	87	
	contracts/deCU.sol	1	_____	435	405	286	89	222	
	contracts/governance.sol	1	_____	481	481	260	153	232	
	<b>Totals</b>	<b>9</b>	<b>6</b>	<b>1477</b>	<b>1357</b>	<b>840</b>	<b>312</b>	<b>745</b>	

### Legend

Attribute	Description
Lines	total lines of the source unit
nLines	normalized lines of the source unit (e.g. normalizes functions spanning multiple lines)
nSLOC	normalized 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

# AUDIT PASSED

## Critical issues

**No critical issues**

## High issues

**No high issues**

## Medium issues

**No medium issues**

## Low issues

**No low issues**

## Informational issues

**No informational issues**

## Audit Comments

We recommend you to use the special form of comments (NatSpec Format, Follow link for more information <https://docs.soliditylang.org/en/v0.5.10/natspec-format.html>) for your contracts to provide rich documentation for functions, return variables and more. This helps investors to make clear what that variables, functions etc. do.

### 15. July 2022:

- Read whole report for more information

## SWC Attacks

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

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

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

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

The logo features the words "SolidProof" in a white, elegant script font. The "P" is particularly large and stylized, with a long horizontal stroke that extends to the left. The background is a solid blue color with a faint, larger-scale grid pattern. Behind the text, there is a subtle, semi-transparent shield-like shape with a checkered pattern inside, suggesting a focus on security and verification.

SolidProof

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

A small horizontal bar representing the German flag, with black, red, and gold stripes.

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