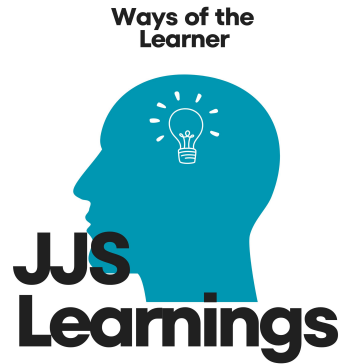


Protocol Audit Report

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Version 1.0

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Protocol Summary

PasswordStore is a protocol designed to manage user passwords securely. It allows users to create, change, and retrieve their passwords while ensuring that only the user who created the password has access to it.

Disclaimer

The team makes all effort to find as many vulnerabilities in the code in the given time period, but holds no responsibilities for the findings provided in this document. A security audit by the team is not an endorsement of the underlying business or product. The audit was time-boxed and the review of the code was solely on the security aspects of the Solidity implementation of the contracts.

Risk Classification

		Impact		
Likelihood	High	High	Medium	Low
	Medium	H/M	M	M/L
	Low	M	M/L	L

We use the CodeHawks severity matrix to determine severity. See the documentation for more details.

Audit Details

The findings described in this document correspond with the following commit hash:

7d55682ddc4301a7b13ae9413095feffd9924566

Scope

```
./src/  
#— PasswordStore.sol
```

Roles

- Owner: The user who can set the password and read the password.
- Outsiders: No one else should be able to set or read the password.

Executive Summary

Description of how the audit went

Issues found

Severity	Number of issues found
High	2
Medium	0
Low	0
Info	1
Total	3

[H-2] Missing Access Control for Setting Passwords: Any Address Can Set a New Password

Description: The PasswordStore::setPassword function is marked as external, yet the NatSpec comment asserts that it should only be accessible by the owner. However, there are no checks to confirm the caller's identity.

Details

Code

```
/*
 * @notice This function allows only the owner to set a new password.
 * @param newPassword The new password to set.
 */
function setPassword(string memory newPassword) external {
  @> // @audit - There are no access controls
    s_password = newPassword;
    emit SetNetPassword();
}
```

Impact: Without proper access controls, anyone can change the password, potentially locking out the legitimate owner.

Proof of Concept: A simple fuzz test demonstrates that non-owner addresses can set a new password.

Details

Test Code

```
function test_anyone_can_set_password(address randomAddress) public {
    vm.assume(randomAddress != owner);
    vm.prank(randomAddress);
    string memory attackPassword = "attackPassword";
    passwordStore.setPassword(attackPassword);

    vm.prank(owner);
    assertEq(passwordStore.getPassword(), attackPassword);
}
```

Recommended Mitigation: Implement access control logic to ensure that only the owner can call the PasswordStore::setPassword function.

Access Control Code Example

```
if (msg.sender != s_owner){
    revert PasswordStore__NotOwner();
}
```

Medium

None ## Low None ## Informational ### [I-1] The PasswordStore::getPassword natspac indicates a paramater the doesn't exist, causing the natspac to be incorrect

Description: The PasswordStore::getPassword function signature is getPassword() while the natspac says it should be getPassword(string).

```
/*
    * @notice This allows only the owner to retrieve the password.
    * @param newPassword The new password to set.
    */
function getPassword() external view returns (string memory)
{
    if (msg.sender != s_owner) {
        revert PasswordStore__NotOwner();
    }
    return s_password;
}
```

Impact: The natspac is incorrect.

Recommended Mitigation: Remove the incorrect natspac line.

– * @param newPassword The new password to set.

Gas

None