

Task 9: Vulnerability Assessment Report - Vuln-Bank

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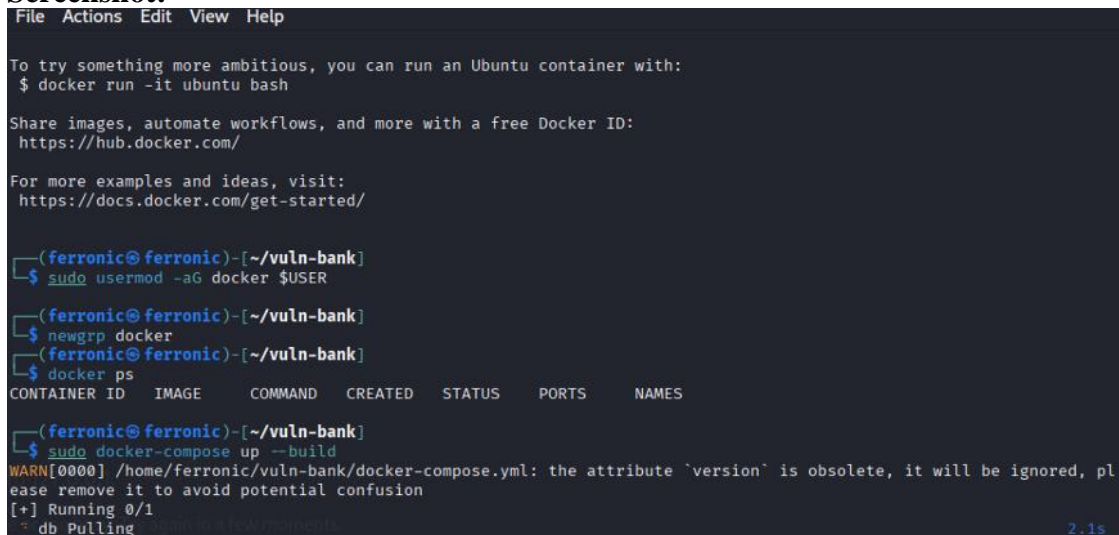
Overview

The Vuln-Bank web application is a deliberately insecure project designed to explore common website security flaws. This report details the evaluation process, where various components such as login, account management, and admin interfaces were analyzed to identify potential weaknesses.

Setup and Exploration

The application was deployed using Docker by cloning the repository from <https://github.com/Commando-X/vuln-bank.git> with the command `git clone https://github.com/Commando-X/vuln-bank.git && cd vuln-bank && docker-compose up --build -d`. Post-setup, the local site was accessed to initiate testing.

- **Screenshot:**



```
File Actions Edit View Help

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

(ferronic@ferronic)-[~/vuln-bank]
$ sudo usermod -aG docker $USER

(ferronic@ferronic)-[~/vuln-bank]
$ newgrp docker
(ferronic@ferronic)-[~/vuln-bank]
$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
(ferronic@ferronic)-[~/vuln-bank]
$ sudo docker-compose up --build
WARN[0000] /home/ferronic/vuln-bank/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 0/1
 ~ db Pulling                                2.1s
```

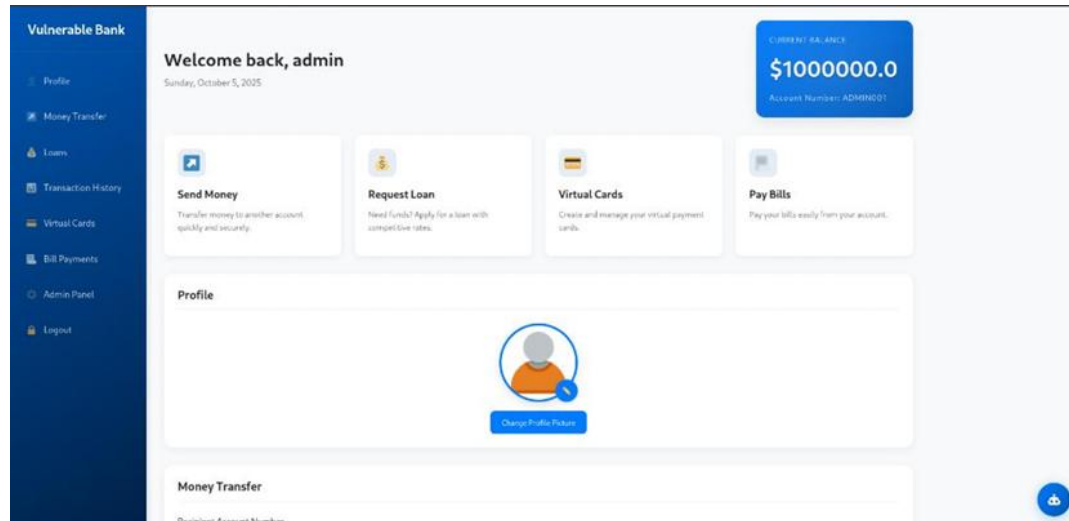
Key Findings

During testing, it was observed that the app fails to validate user inputs adequately, exposing it to malicious actions that could compromise account data.

1. **Login Bypass (SQL Injection)**

- **Issue:** The login accepts inputs like ' OR 1=1 --, bypassing authentication.
- **Impact:** Unauthorized access to admin accounts is possible.

○ **Screenshot:**



2. **Account Modification via Browser**

- **Issue:** Users can alter fields like "is_admin" or "balance" using developer tools.
- **Impact:** Attackers can escalate privileges or inflate balances.

3. **Unsecured Admin Panel**

- **Issue:** Admin pages lack robust access controls.
- **Impact:** Unauthorized users can manipulate sensitive data.

Implications

In a real-world scenario, attackers could exploit these vulnerabilities to:

- Gain admin access without credentials
- Manipulate financial balances
- Manage user accounts
- Access confidential user data

Final Thoughts

Vuln-Bank exhibits critical security gaps that must be addressed before any real-world use. This exercise has been instrumental in understanding how poor coding practices can expose web applications to exploitation.

Admin Control Panel



System Administrator

User Management

ID	Username	Account Number	Balance	Admin	Actions
1	admin	ADMIN001	\$1000000.00	True	<button>Delete</button>
2	test	9400230218	\$1000.00	False	<button>Delete</button>

Vulnerable Bank

Profile

Money Transfer

Loans

Transaction History

Virtual Cards

Bill Payments

Logout

Welcome back, test

Sunday, October 5, 2025

CURRENT BALANCE

\$11000.0

Account Number: 9400230218



Send Money

Transfer money to another account quickly and securely.



Request Loan

Need funds? Apply for a loan with competitive rates.



Virtual Cards

Create and manage your virtual payment cards.



Pay Bills

Pay your bills weekly from your account.

Profile



Change Profile Picture