

Secure Banking

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SecureBanking

Main Dashboard

Login

Username:

Password:

Login

Register

Username:

Password:

Register

Login & Register

- A user can register a new account and log in
- The user password is hashed using bcrypt

```
class User(db.Model):  
    id = db.Column(db.Integer, primary_key=True)  
    name = db.Column(db.String(64), nullable=False, unique=True)  
    password = db.Column(db.String(72), nullable=False)  
    role = db.Column(db.Integer, nullable=False)  
    balance=db.Column(db.Integer, nullable=False, default=0)
```

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Main Dashboard

Welcome, rich

Your Account Details:

Name: rich

User ID: 8

Balance: \$89600

Transfer Money

Withdraw Money

File a Ticket

Transfer Money

Destination ID:

Amount:

File a Ticket

Description:

Transaction ID:

Withdraw Money

Amount:

- After logging in, they have the option to transfer money between accounts, withdraw money, or file a ticket for a fraudulent transaction

- Transfer money transfer a chosen amount of funds to another user
- The user is identified based on their unique id

Transfer Money

Destination ID:

Amount:

Send Transfer

Every transaction is tracked inside the Transaction table, to which any user has access to, using the main dashboard

| | id 🔑 12 34 🚩 | sender 🚩 | sender_h 🚩 | receiver 🚩 | receiver_h 🚩 | amount 12 34 🚩 | status 12 34 🚩 | timestamp |
|---|--|---|---|--|---|---|--|---|
| | <input type="text" value="Search column"/> | <input type="text" value="Search column."/> | <input type="text" value="Search column..."/> | <input type="text" value="Search column.."/> | <input type="text" value="Search column..."/> | <input type="text" value="Search column..."/> | <input type="text" value="Search column"/> | <input type="text" value="Search column."/> |
| 1 | 1 | (8, 100000) | 8e2de041dcc4... | (1, 0) | 41316b35bc22... | 100 | 1 | NULL |
| 2 | 2 | (8, 99900) | 96f5d9bc7941... | (2, 0) | f146f50f117ce... | 300 | 1 | NULL |

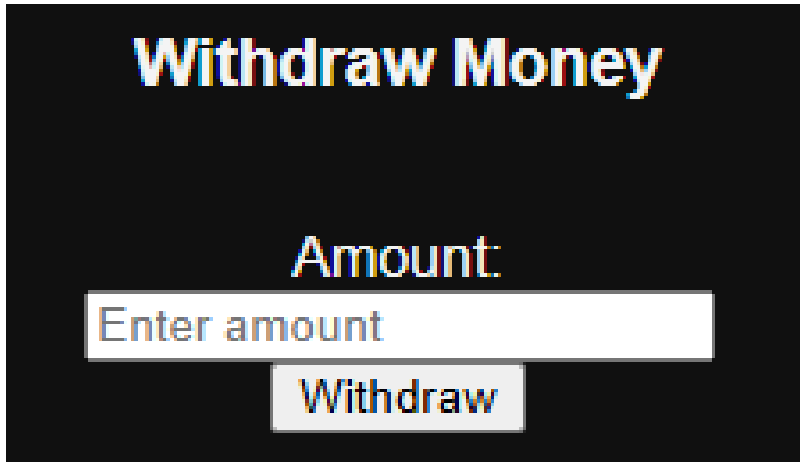
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My Dashboard

Transaction Records

| Transaction ID | Sender (Hash) | Receiver (Hash) | Amount | Status | Date |
|----------------|----------------------------------|----------------------------------|---------|-----------|------|
| 1 | 8e2de041dcc45940c3fb82fe50f9b9f1 | 41316b35bc226f3ddeca1ba7aed80b9a | \$100.0 | Completed | N/A |
| 2 | 96f5d9bc794157dbdd7bbe8011bd4192 | f146f50f117ce76f98af40cd9c242370 | \$300.0 | Completed | N/A |

- Withdraw money, has a similar functionality, it just subtracts the funds from the current user account



A screenshot of a web form titled "Withdraw Money" in a stylized, multi-colored font. Below the title, the word "Amount:" is displayed. Underneath, there is a white input field containing the placeholder text "Enter amount". At the bottom of the form is a grey button with the word "Withdraw" in white text.

```
class Transaction(db.Model):  
    id = db.Column(db.Integer, primary_key=True)  
    sender = db.Column(db.String(64), nullable=False)  
    sender_h = db.Column(db.String(16), nullable=False)  
    receiver = db.Column(db.String(64), nullable=False)  
    receiver_h = db.Column(db.String(16), nullable=False)  
    amount = db.Column(db.Float, nullable=False)  
    status = db.Column(db.Integer, nullable=False)  
    timestamp = db.Column(db.DateTime, default=db.func.current_timestamp())
```

In the main dashboard, the users can see only the hashed of the sender and receiver, keeping some privacy for the parties involved

- File a ticket takes in a Description and a fraudulent transaction id

File a Ticket

Description:

Transaction ID:

The bank admin manages all the tickets, and can view them in their special general dashboard

| Ticket ID | User ID | Transaction ID | Reason | Status |
|-----------|---------|----------------|------------------------|--------|
| 1 | 4 | 1 | This is a Test Ticket! | Open |

- The admin has 3 additional functionalities
- The view all users, view all transactions and refund transaction

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Main Dashboard

Welcome, Admin

Here you can manage users, transactions, and tickets.

[View All Users](#)[View All Transactions](#)[Refund Transaction](#)[Manage Tickets](#)

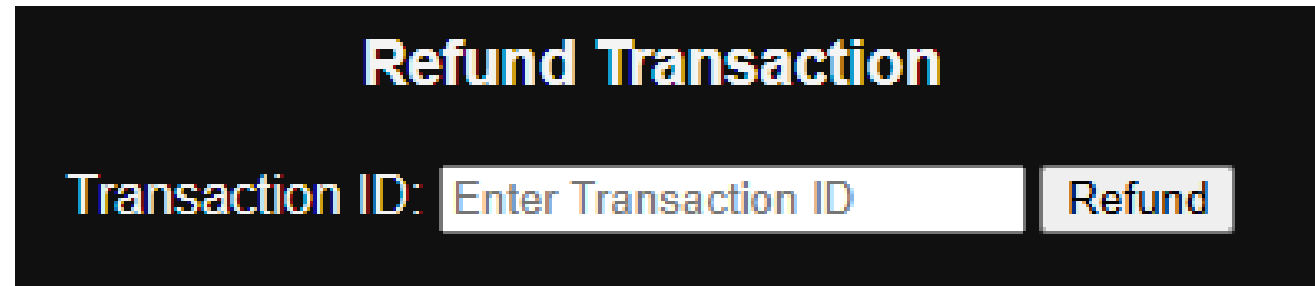
- The view all users displays all of the current user accounts

| User ID | Name | Role | Balance |
|---------|-------|-------|---------|
| 1 | admin | Admin | 100 |
| 2 | abcd | User | 300 |
| 3 | User1 | User | 0 |
| 4 | User2 | User | 0 |
| 5 | AAAA | User | 0 |
| 6 | 1234 | User | 0 |
| 7 | test | User | 0 |
| 8 | rich | User | 89600 |

- Similarly, view all tickets displays all of the transactions ever made, but the admin has more privileges, so they also see the sender and receiver unhashed

| Transaction ID | Sender | Receiver | Amount | Status | Timestamp |
|----------------|-------------|----------|--------|-----------|-----------|
| 1 | (8, 100000) | (1, 0) | 100 | Completed | null |
| 2 | (8, 99900) | (2, 0) | 300 | Completed | null |

- Lastly, the admin could refund a transaction.
- The transaction being refunded is not deleted from the Transaction table, instead a new transaction would be added as an entry to the table with the sender and receiver switched, and the status 'Refunded'



A dark-themed form titled "Refund Transaction" in yellow text. Below the title, the label "Transaction ID:" is followed by a text input field containing the placeholder "Enter Transaction ID". To the right of the input field is a button labeled "Refund".

This feature is currently under maintenance!

