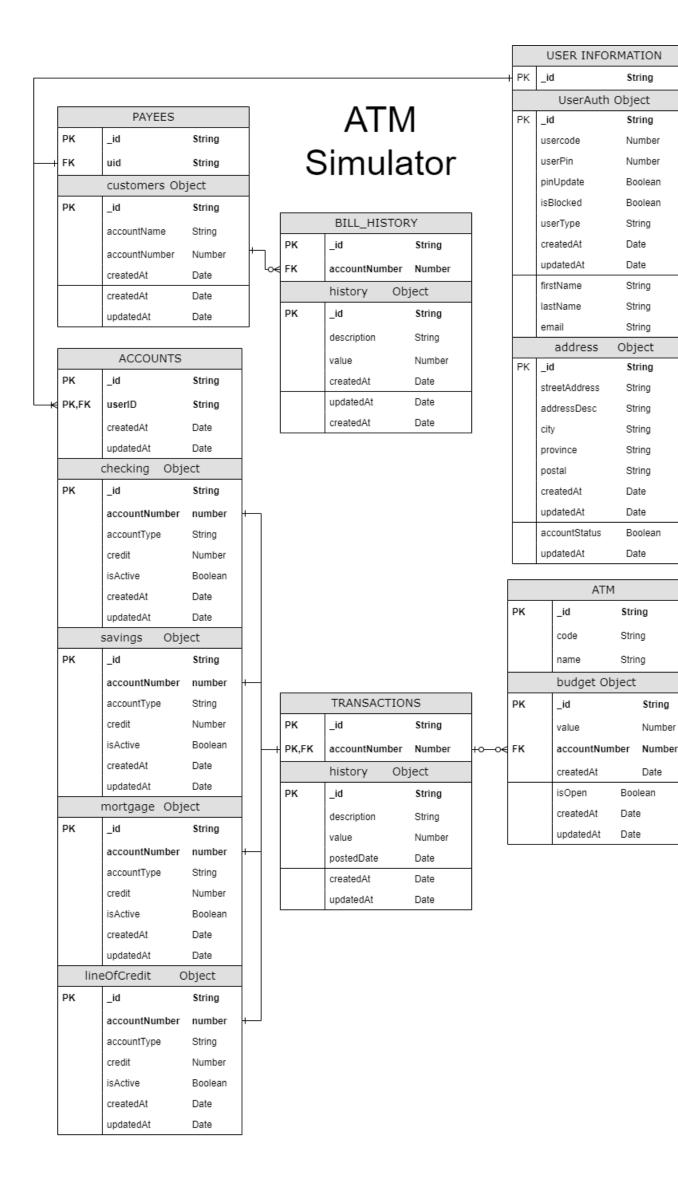


## ATM Simulator System

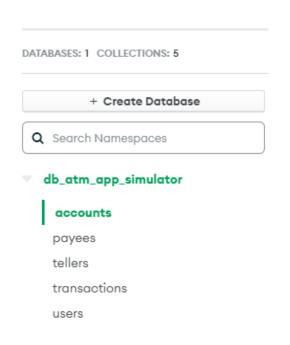
AHRJAY INVIERNO: 635301151

### Starting the Application

- 1. Please run the application in VSCode.
- 2. Please run Nodejs and then run the angular app.



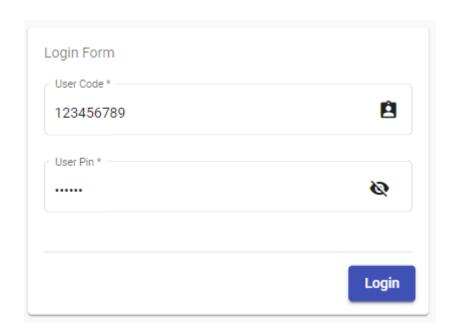
#### Database



The database table is as follows:

- Accounts Holds accounts of clients.
  - Account Types
    - Chequing
    - Savings
    - Mortgage
    - Line of credit
- Transactions Holds transactions of each accounts.
- Users Holds registered user on the system.
- Tellers Holds ATM setup \*Admins only
- Payees Holds registered customers for pay bills.

### Login Form



Admin Credential

User code: 123456789

User Pin: 123456

User codes will be randomly created when creating a new

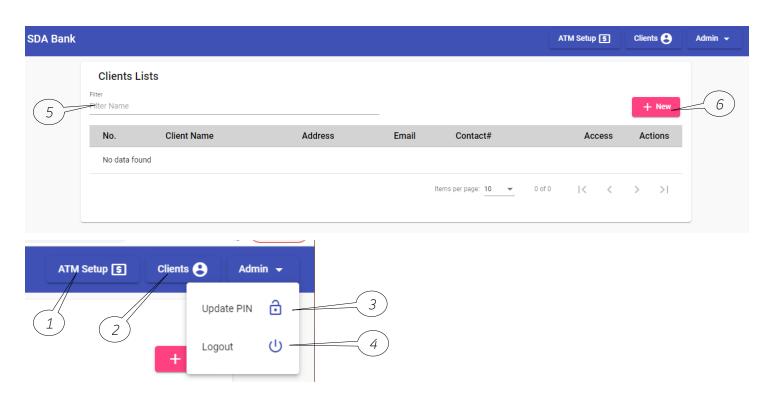
user.

#### Admin Dashboard

Dashboard will be empty for now as we don't have users created yet.

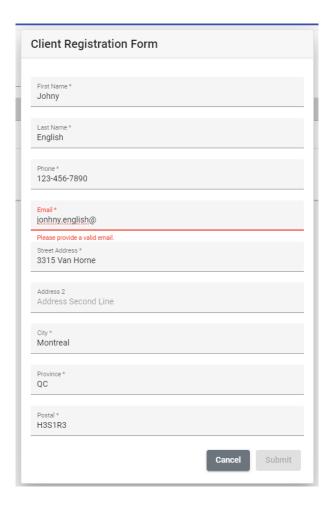
There are six main menu on the screen.

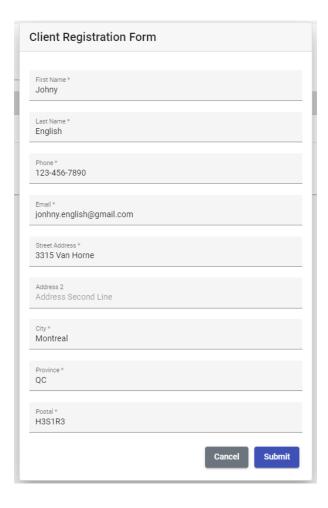
- 1. ATM Setup Use to setup our ATM application.
- 2. Clients Use to maintain users.
- 3. Update PIN Use to update PIN
- 4. Logout Logout in the system
- 5. Filter Use for searching users.
- 6. + New Creates/Enroll user.



#### **User Creation**

The user form will accept strings and/or numbers and will only allow the user to continue if all fields are correct.





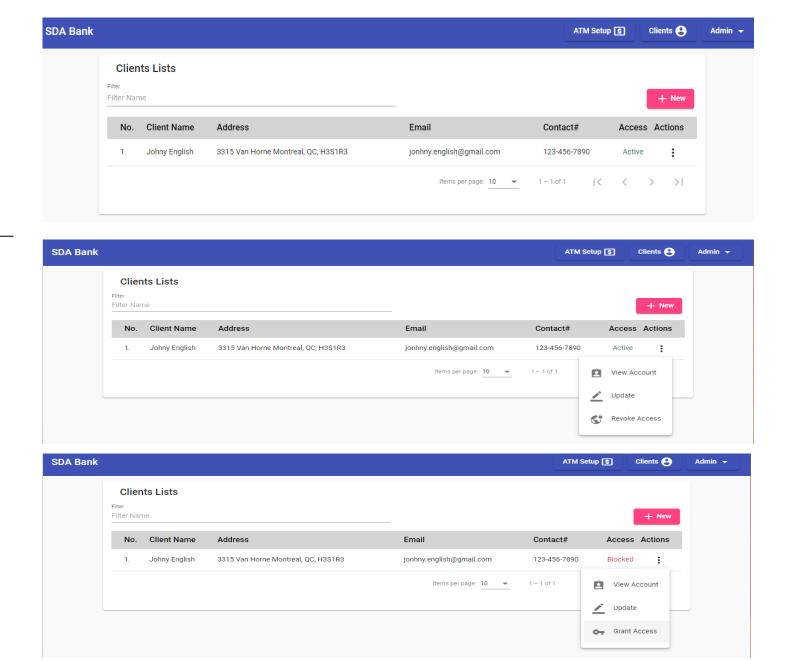
#### Created User

The created user will instantly appear on the screen.

The user will have access in the system automatically.

#### User Menu:

- View Account Manage user accounts.
- Update Updates user information.
- Revoke Access Revokes system access to user.
- **Grant Access** Grant system access to user.



#### Created User

- For now, User Code and User PIN will be viewed in the window console. Original plan is to send an email to the user with welcome notice and attached user code & user pin.
- The user can login using the following code.

• User Code: 165344688614

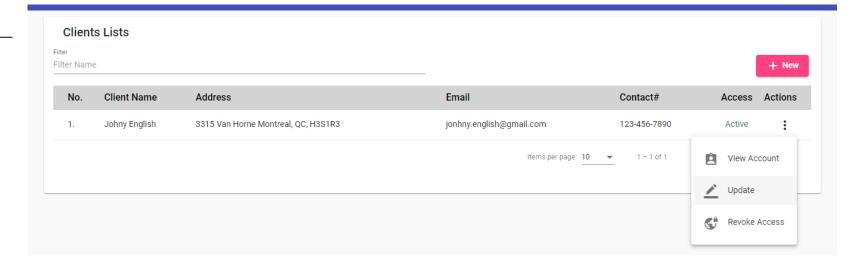
User PIN: 123456

```
"userAuth": {
    "userCode": 1653446888614,
   "userPin": 123456,
   "pinUpdate": true,
   "userType": "001",
   "isBlocked": false,
   "isEnabled": true,
   "attemps": 0,
    "_id": "628d9ad0d67774f433351272",
   "createdAt": "2022-05-25T02:56:16.165Z",
   "updatedAt": "2022-05-25T02:56:16.165Z"
"firstName": "Johny",
"lastName": "English",
"phoneNumber": "123-456-7890",
"address": {
   "streetAddress": "3315 Van Horne",
   "addressDesc": "",
   "city": "Montreal",
   "province": "QC",
   "postal": "H3S1R3",
   "_id": "628d9ad0d67774f433351273",
   "createdAt": "2022-05-25T02:56:16.165Z",
   "updatedAt": "2022-05-25T02:56:16.165Z"
"email": "jonhny.english@gmail.com",
"accountStatus": true,
"_id": "628d9ad0d67774f433351271",
"createdAt": "2022-05-25T02:56:16.165Z",
"updatedAt": "2022-05-25T02:56:16.165Z",
"__v": 0
```

Line 1, Column 1

## Update User Information

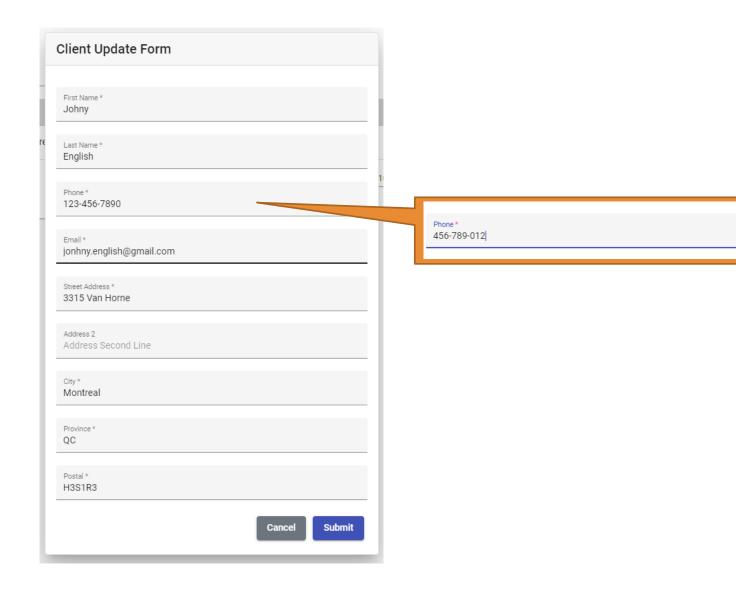
To update the user information the user must select a user then use the actions menu > update as shown in image.



## Update User Information

You will be presented into a form.

We will modify the user phone number.



## Update User Information

You will be presented into a form.

We will modify the user phone number.

On the top right is the data before the update and at the bottom you can see the updated record.



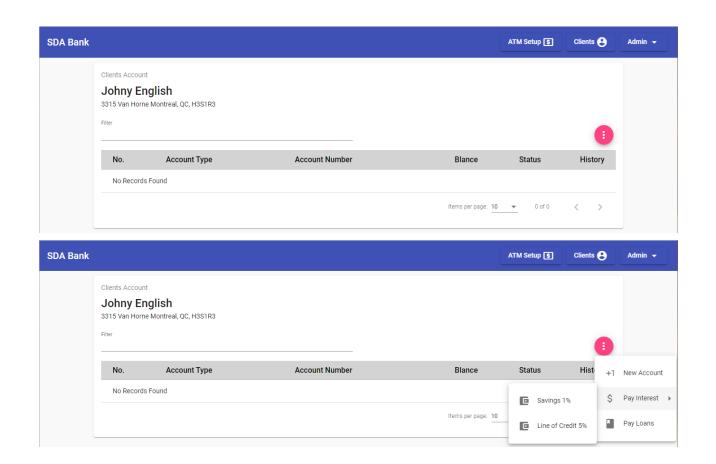


#### View Account

The view account will show user information and accounts.

User account has four menu.

- New Account Open new account for user.
- Pay Loans Pay any loans of user.
- Pay Interest
  - Savings Increase savings account by 1%.
  - Line of Credit Increase Line of Credit account by 5%.



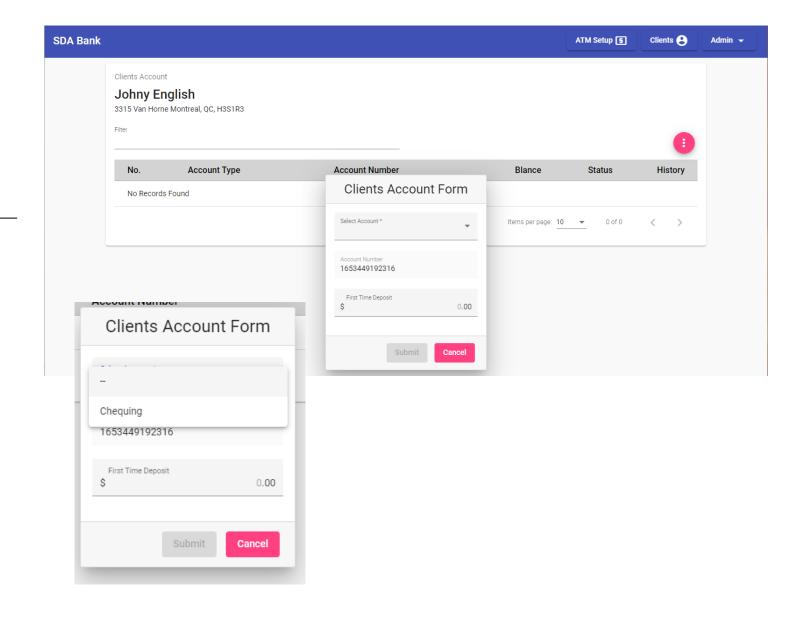
## Creating new Account

To be able to create other accounts, the user must first have a Chequing account.

The Account dropdown selection will only show 1 menu for now.

Account number is generated automatically.

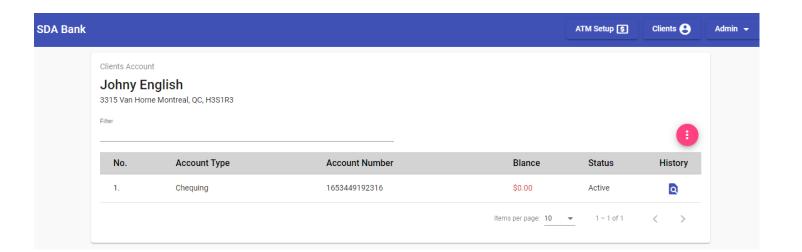
First time deposit is not required.



## Creating New Account

When an account is successfully created, it will automatically appear in the account list.

The history menu will show any transactions made for the selected account.



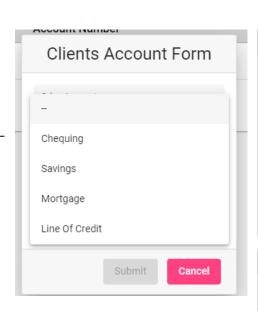
## Creating New Account

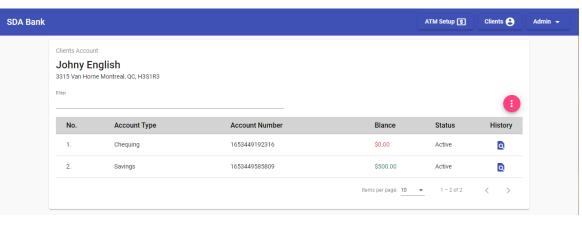
When an account is successfully created, it will automatically appear in the account list.

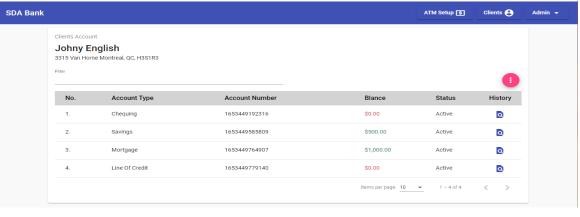
The history menu will show any transactions made for the selected account.

When creating another account, the account creation will now show other accounts.

For this user we will create multiple accounts.



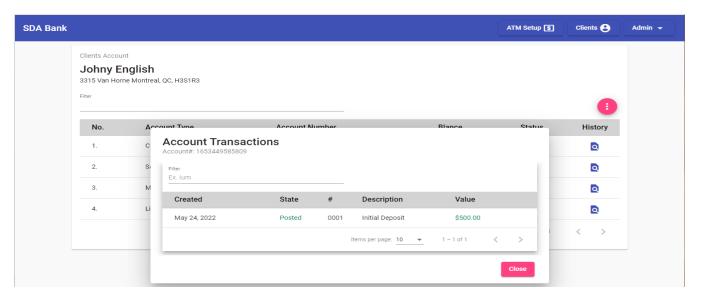


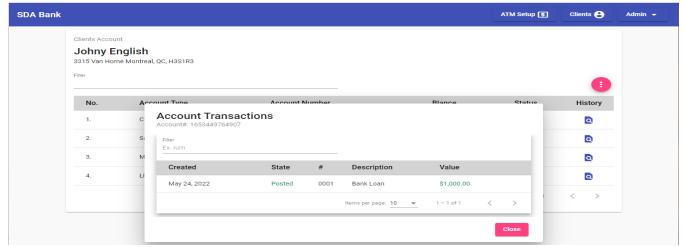


#### Account Transactions

Account transaction will appear posted automatically.

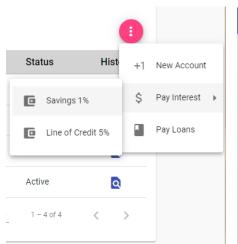
I am showing the savings & mortgage transactions when I initially created the accounts.

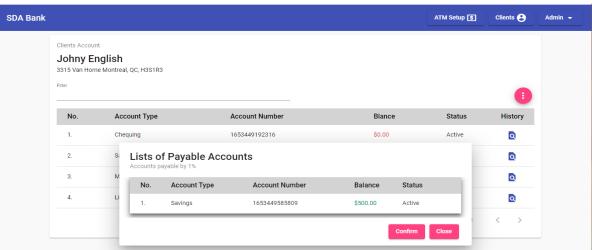


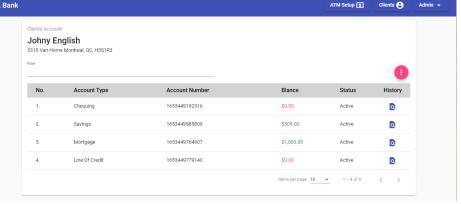


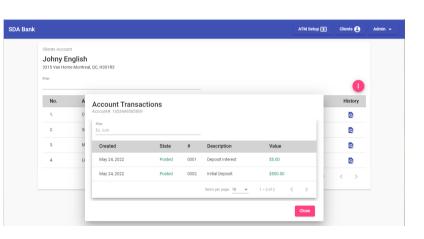
# Paying 1% interest to all Savings Accounts

Clicking the <u>Pay Interest</u> > <u>Savings 1%</u> will show available accounts to pay 1% interest for the selected us some only.







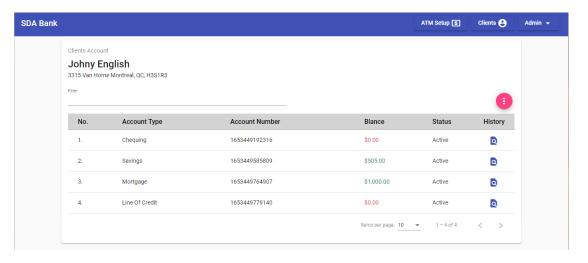


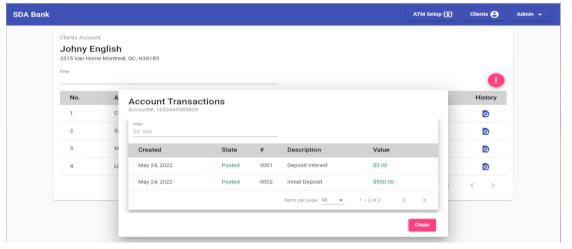
# Paying 1% interest to all Savings Accounts

The image above confirms that the transaction is successful.

The image below shows history that the account is indeed paid 1% interest.

\* We will do the Line of Credit later in the slide, since we are unable to charge if the account has zero balance.

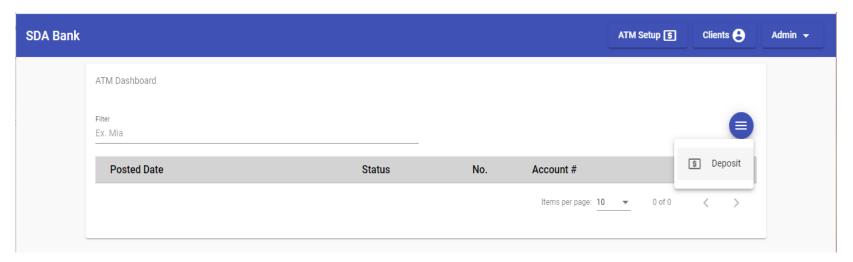


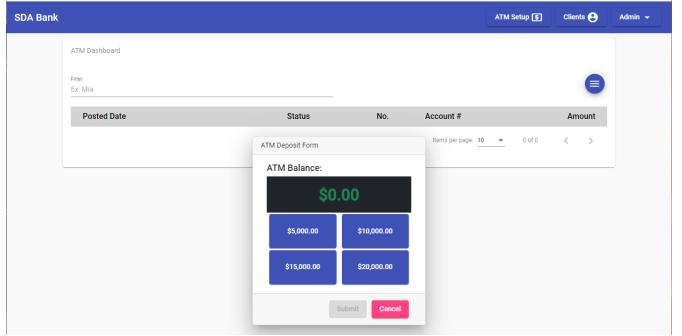


#### ATM Setup

The deposit form will only allow specified amount as follows:

- \$5,000.00
- \$10,000.00
- \$15,000.00
- \$20,000.00

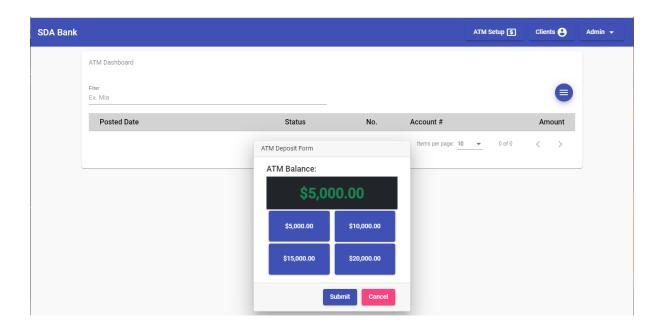


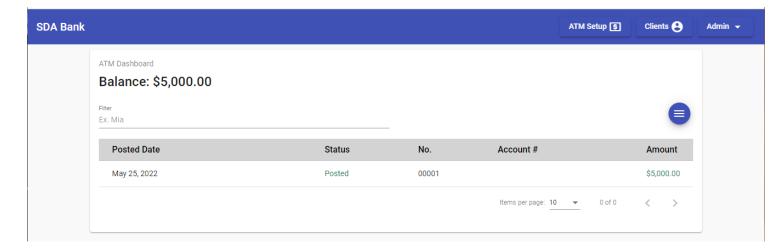


#### Deposit ATM Balance

We will deposit an initial amount of \$5,000.00 for our ongoing testing.

When a deposit is successfully posted it will show in our history table instantly.





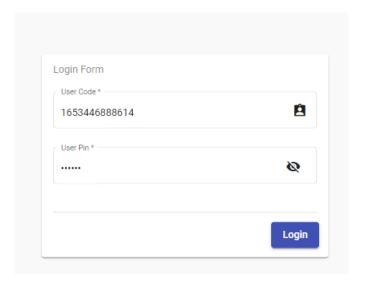
We will use a client that we created.

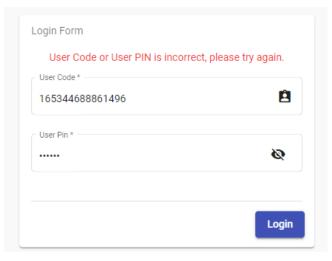
User Code: 1653446888614

User PIN: 123456

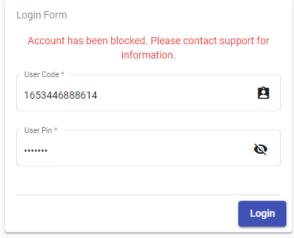
Errors will be displayed whenever a user tries to login with invalid credentials.

Users will be locked out if he tries to login with incorrect PIN three times.





Error message with incorrect User Code or PIN



Error message that was locked out after retying three times.

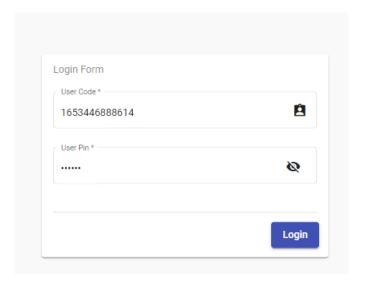
We will use a client that we created.

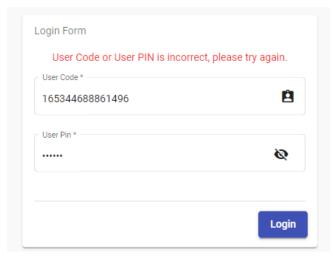
User Code: 1653446888614

User PIN: 123456

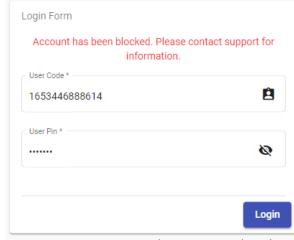
Errors will be displayed whenever a user tries to login with invalid credentials.

Users will be locked out if he tries to login with incorrect PIN three times.





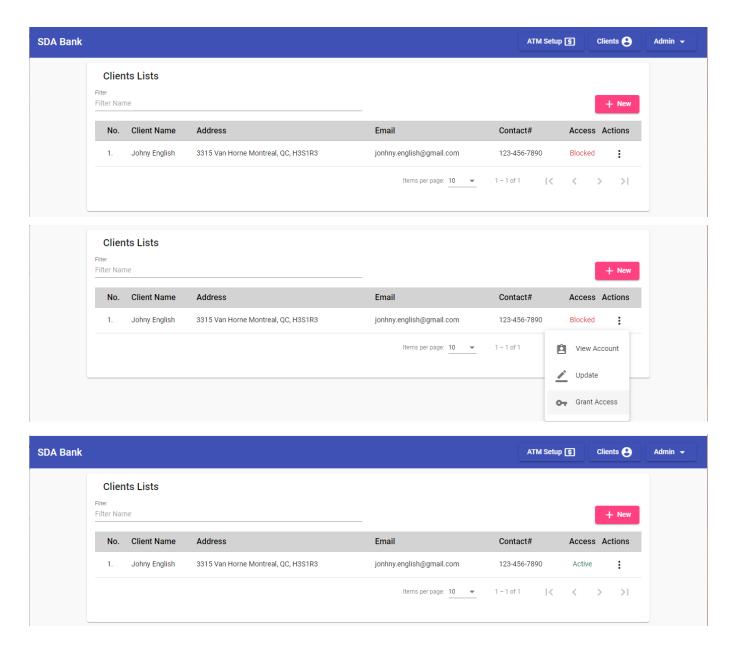
Error message with incorrect User Code or PIN



Error message that was locked out after retying three times.

After we login as
Administrator again we
confirmed that the user has
been locked out by the
system.

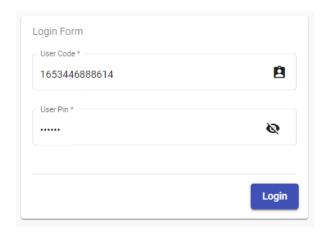
We will unblock the user and pretend to give him a temporary password.

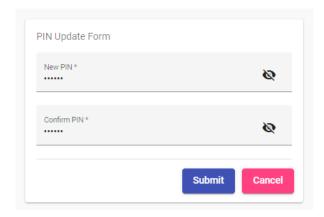


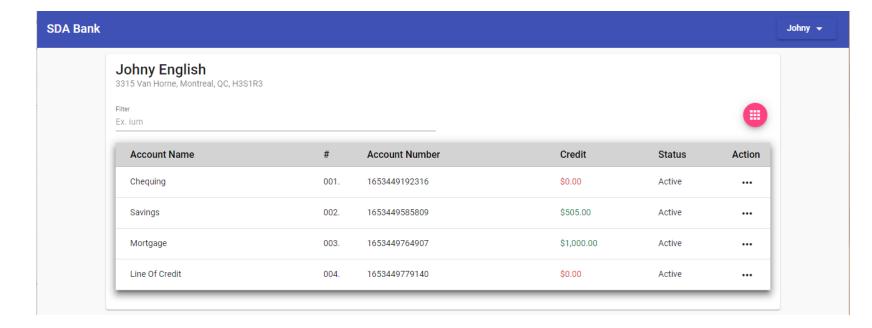
After successfully login the system will ask the user to update his PIN.

We will use the same PIN "123456"

Jonhy will be redirected to his own account dashboard.



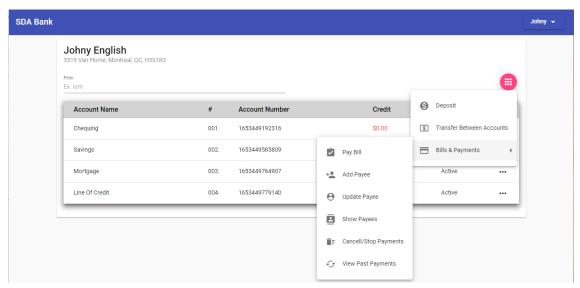




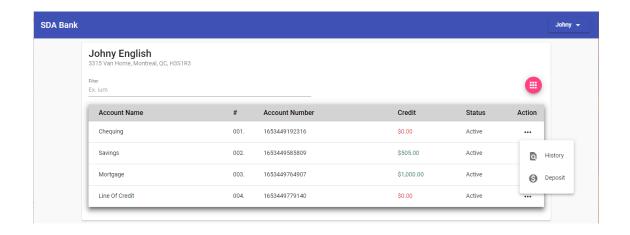
#### Clients Account Dashboard

#### Menus:

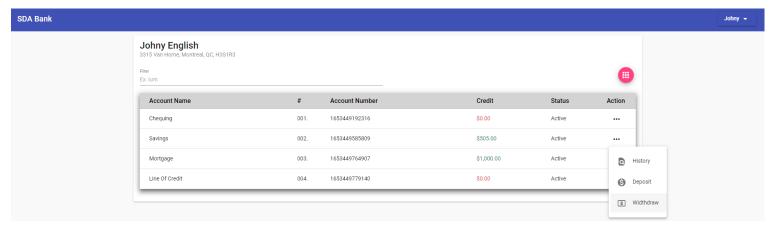
- Deposit Handles deposit transaction to selected account.
- Transfer Handles transfer transaction to a selected account.
- Bill & Payments
  - Pay Bill
  - Add Payee Register a payee.
- History Shows transaction history to a selected account



Other menu under Bill & Payment is not working for and will be develop for future purposes.



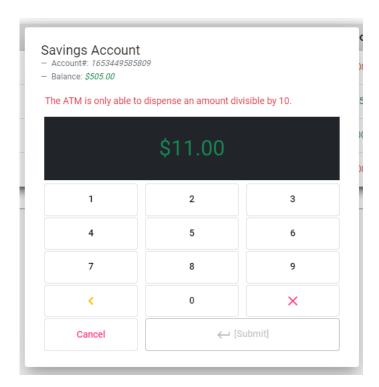
After clicking the "Withdraw" button you will see a form as shown below.

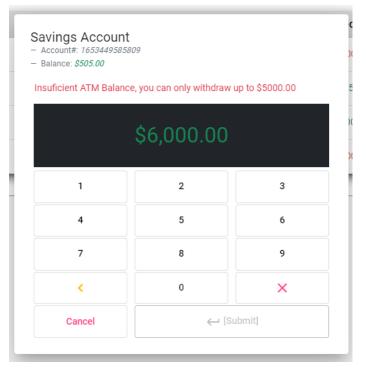


The system will only show the "Withdraw" menu if the Savings or Chequing account have a positive balance.



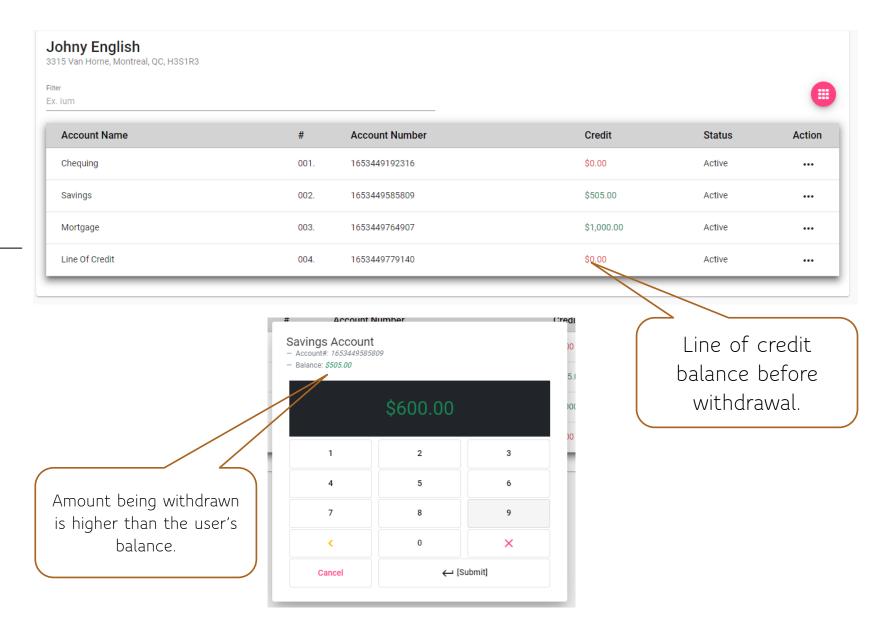
Here is the sample error message if the system is not satisfied with the user input.



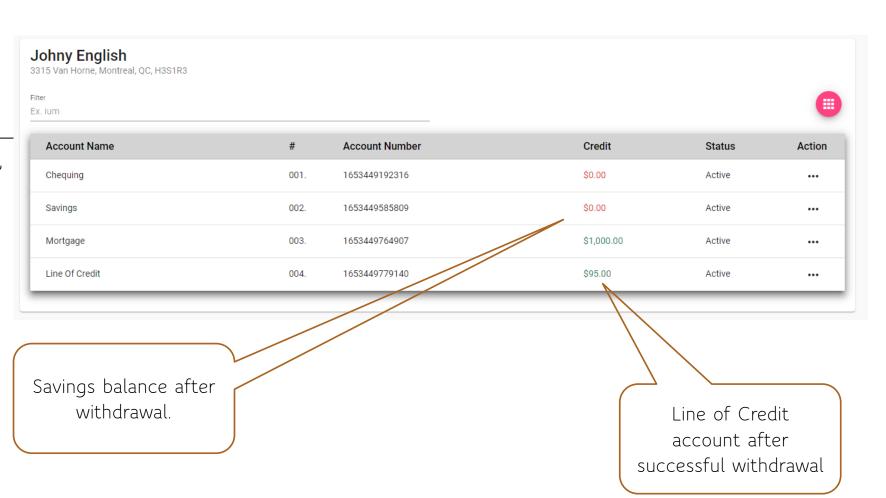


The system will allow users to withdraw an amount that is over his maintaining balance if the user have line of credit account.

The split amount will be automatically allotted between the two accounts.

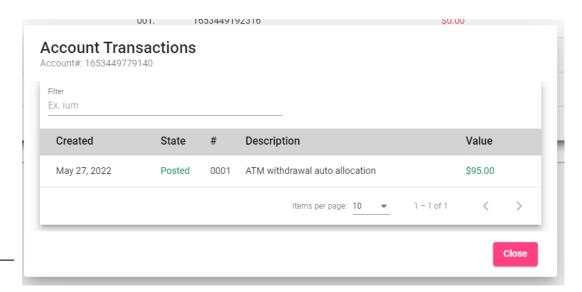


After successful transaction, the system will post each transaction in the account history on each account.

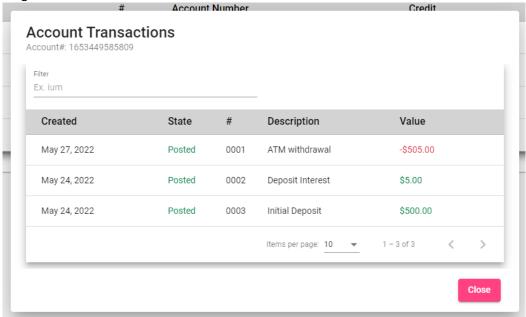


#### Withdrawal History

In the account history we can see each transaction is successfully posted.



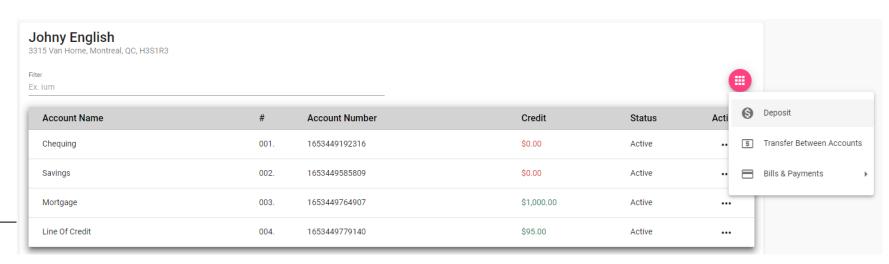
Line of Credit account history

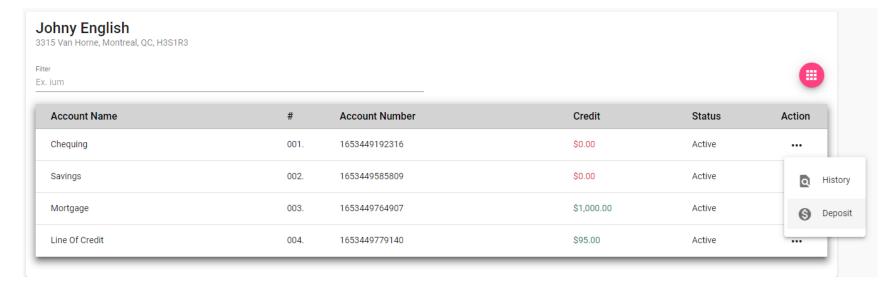


Savings account history

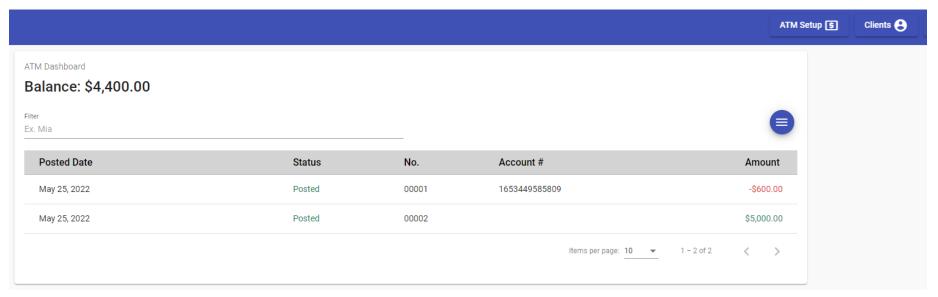
There were two ways of depositing an amount on the system.

- Clicking the menu button
   deposit.
- 2. Choose and account then deposit.



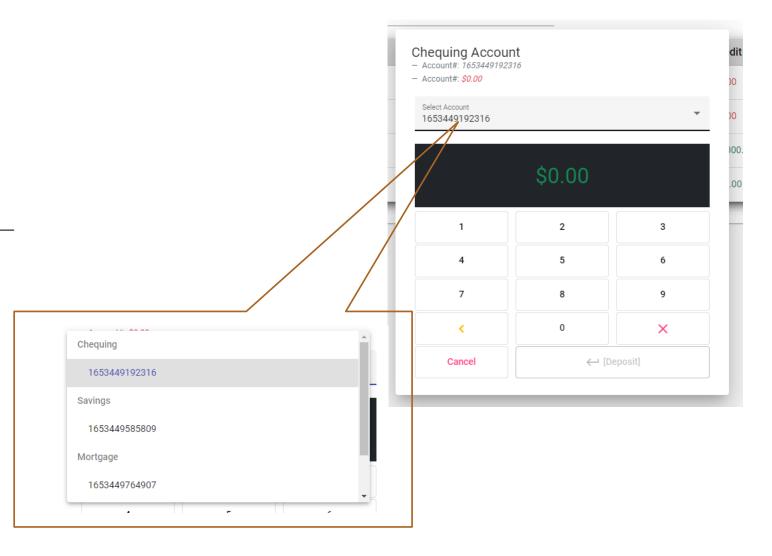


The ATM balance is also updated.

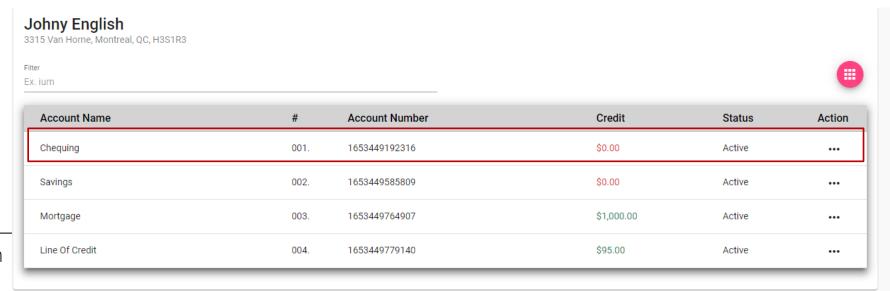


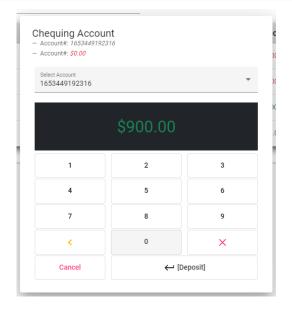
If the user choose option #1, he will be prompted by a form that lets him choose which account he would like to make the transaction.

\*Mortgage Account & Line of Credit account will reverse the amount being deposited.



We will choose to deposit in Chequing account.

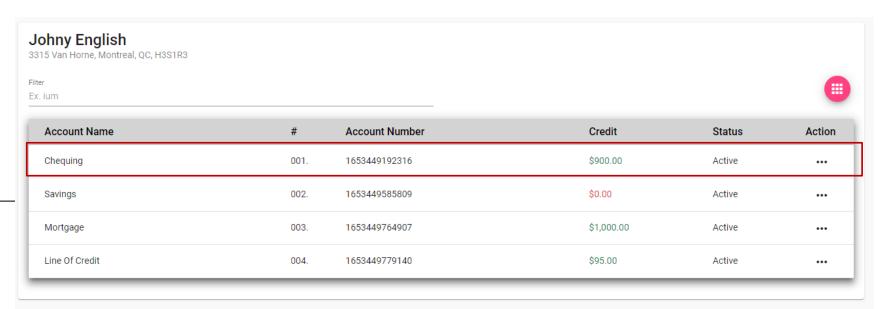


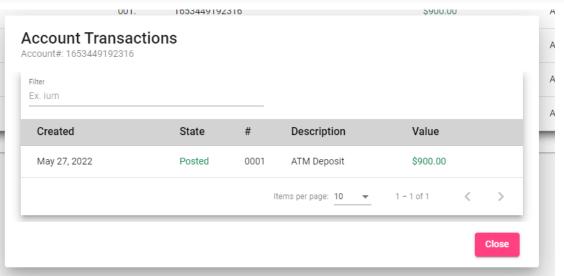


We will choose to deposit in Chequing account.

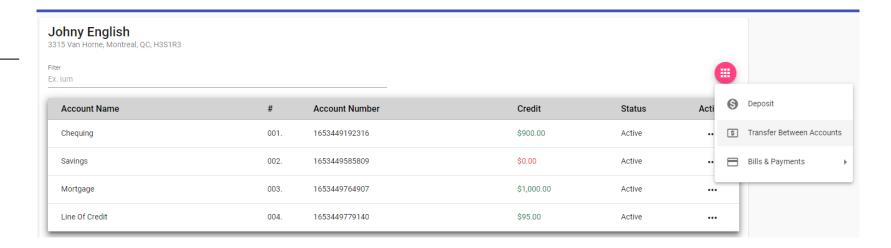
We can validate the transaction by viewing the account history.

\* Account deposits will increase the available credit of the selected account. The ATM balance will stay the same.





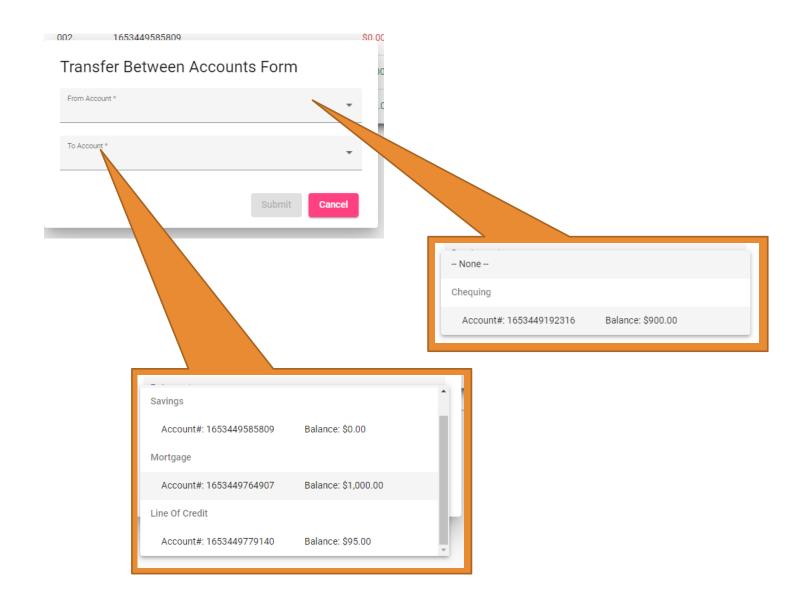
Account transfers will be done by clicking the menu button > transfer between my account.



The user will be presented to a form which he can choose an account to begin the transaction.

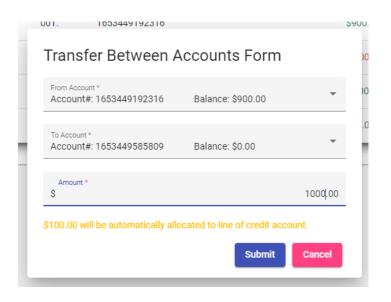
The "From Account" will only show accounts that has positive balance.

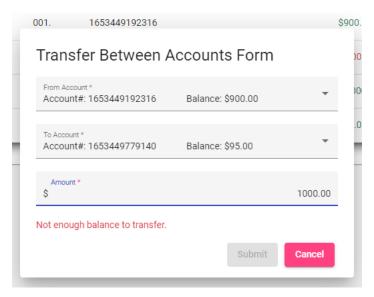
After selecting an account, the "To Account" selector will show accounts that you can transact.

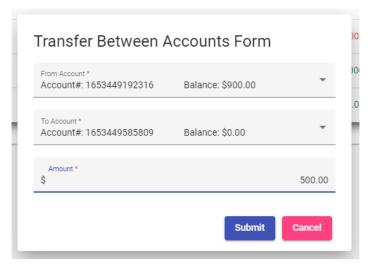


After selecting an account to transact the system will ask for transfer amount.

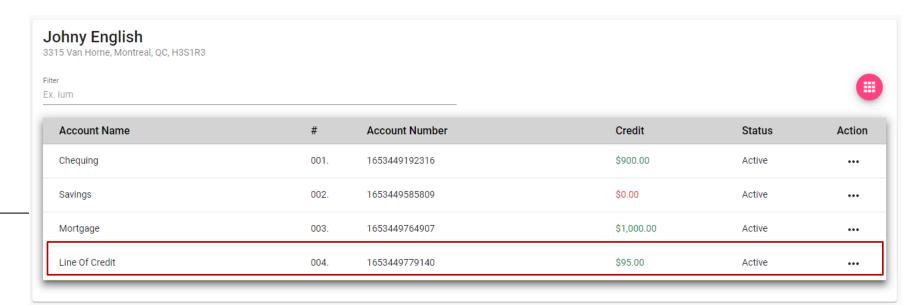
\* If the user has a line of credit, the split amount will be posted to each accounts.

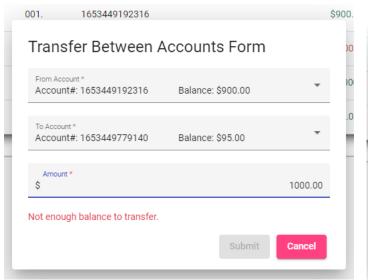


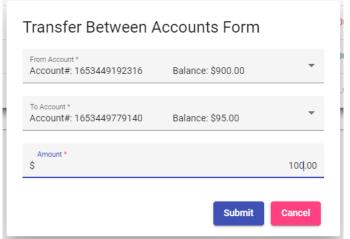




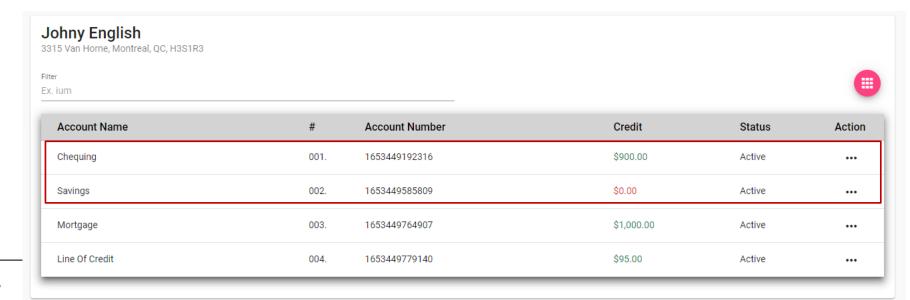
If the user wish to transfer from Chequing/Savings to Line of Credit account, the system will only allow a transfer if the user has enough balance.

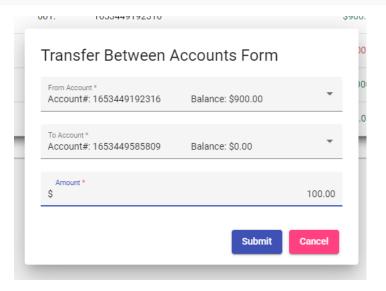






From Chequing to Savings account balance transfer.





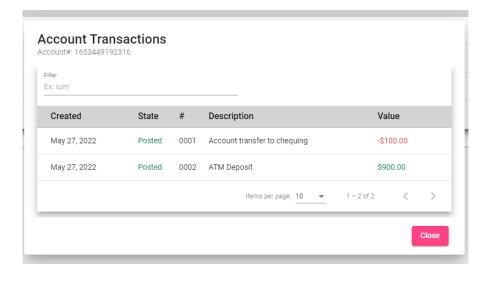
After successfully transferred an amount, we can verify it in the transaction history.

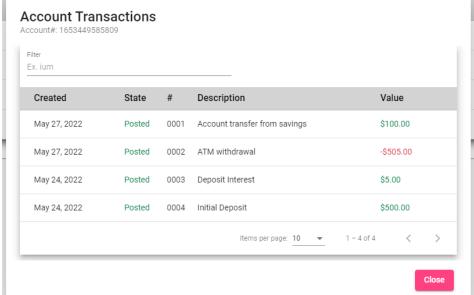
# Johny English 3315 Van Horne, Montreal, QC, H3S1R3 Filter

Ex. ium

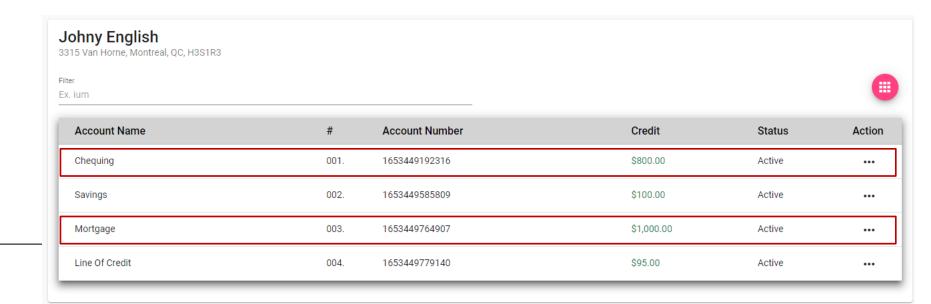


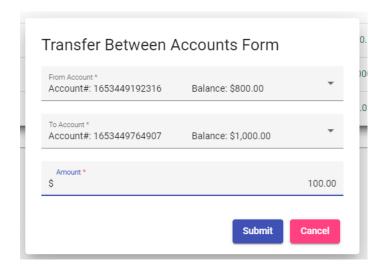
Account Name	#	Account Number	Credit	Status	Action
Chequing	001.	1653449192316	\$800.00	Active	•••
Savings	002.	1653449585809	\$100.00	Active	•••
Mortgage	003.	1653449764907	\$1,000.00	Active	
Line Of Credit	004.	1653449779140	\$95.00	Active	•••





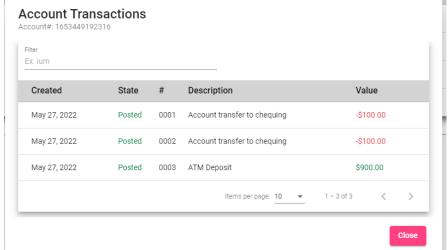
Chequing to Mortgage Transaction.

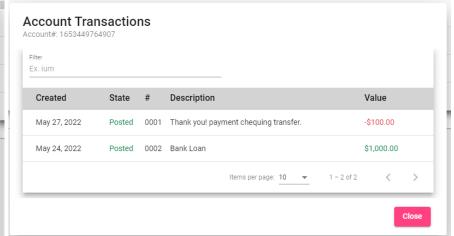




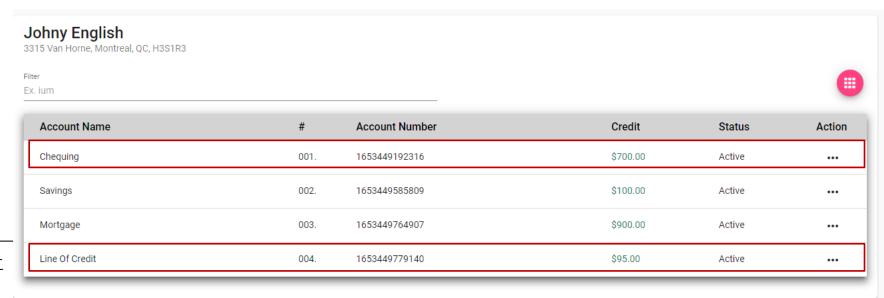
Again, we can confirm the Transaction by viewing the account history.

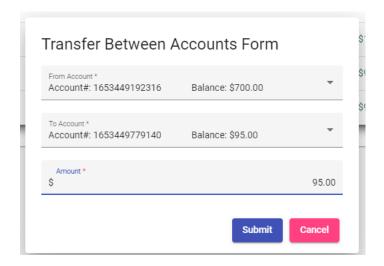
**Johny English** 3315 Van Horne, Montreal, QC, H3S1R3 Filter Ex. ium Account Name **Account Number** Credit Status Action 001. 1653449192316 \$700.00 Active Chequing ••• 1653449585809 \$100.00 Savings 002. Active ••• 003. 1653449764907 \$900.00 Active Mortgage ••• Line Of Credit 004. 1653449779140 \$95.00 Active •••



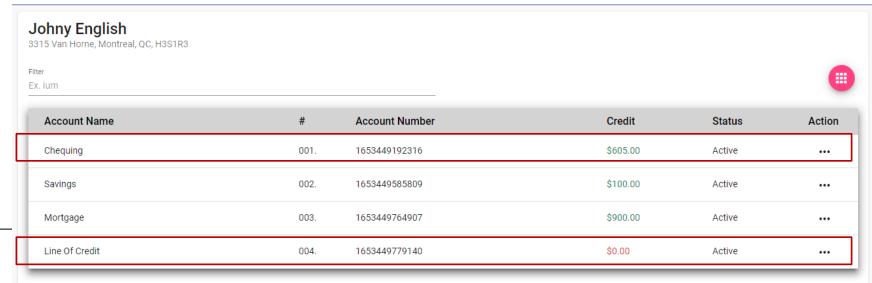


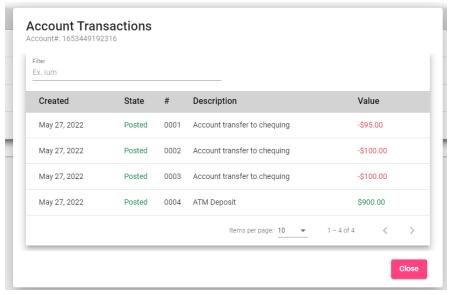
Chequing to Line of Credit Transfer transaction.

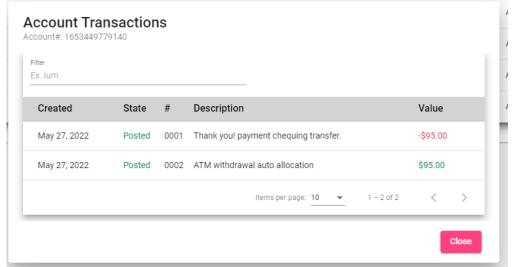




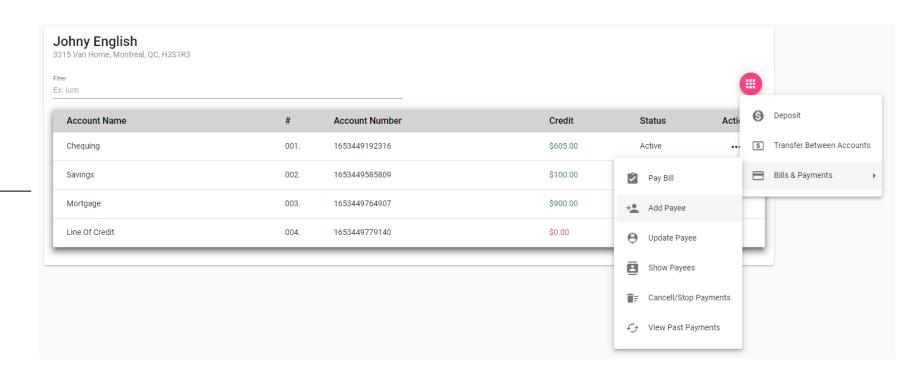
We can verify the transaction by looking into account history.







To Pay a bill the user must click on the menu button > Bills & Payments.

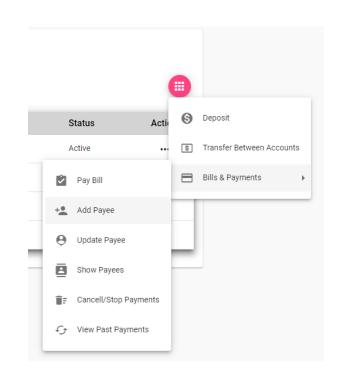


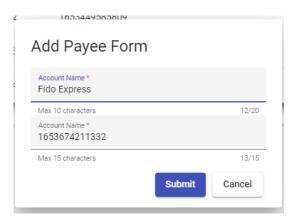
Before the user can make a payment, he will need to enroll a payee to his account.

This can be done by clicking the menu button > Add Payee.

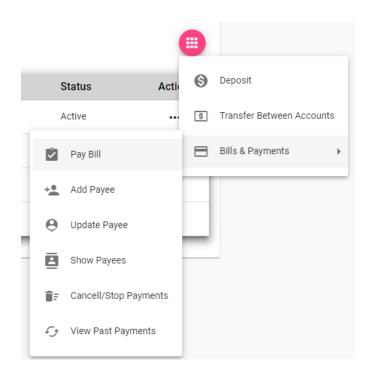
For testing purposes, the account number is auto generated by the system.

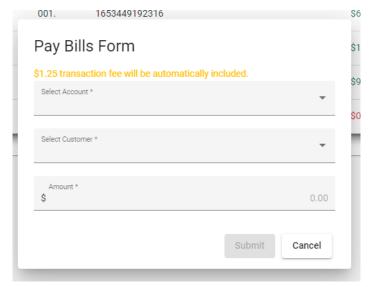
The user will only need to provide an account name.



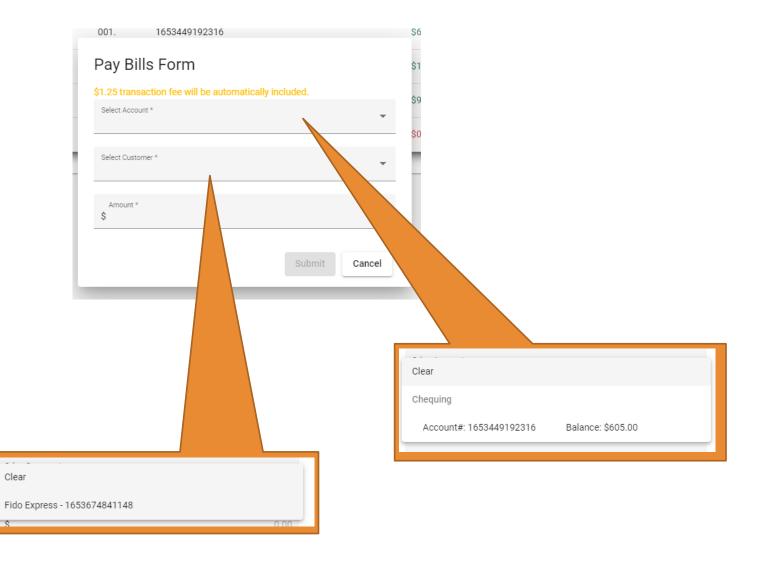


To pay a bill the user will have to click on the menu button > Pay Bill.

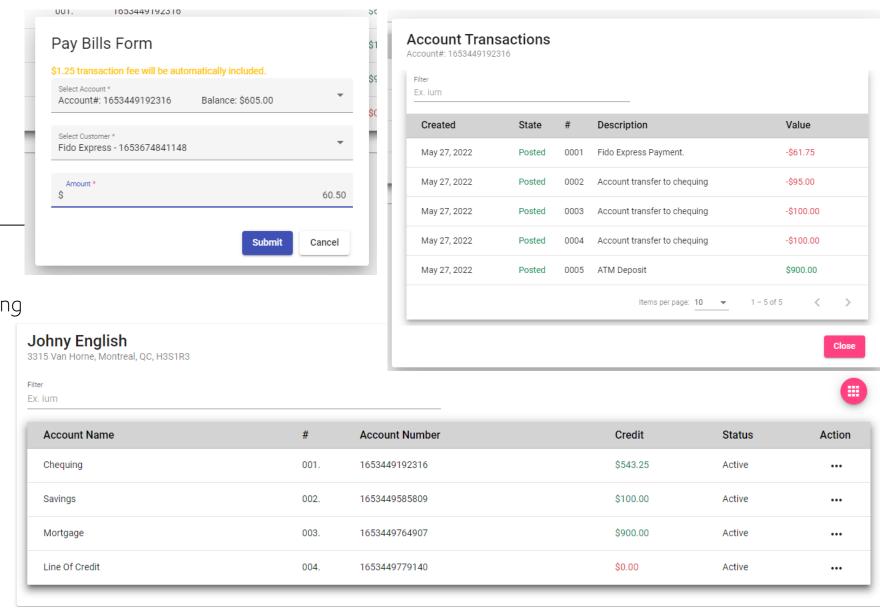




To pay a bill the user will have to click on the menu button > Pay Bill.



After paying a bill we can verify that the transaction have been posted by viewing the account transaction history of the selected account.



# End of File