

# Trinity Capital

## Official Documentation

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### Description:

Trinity Capital is a web application designed for use in the education market. Its core functionality is to simulate banking systems in such a manner that can be used to teach students concepts such as personal finance, banking, and using similar banking software.

The application is made using multiple tools and technologies that are frequently updated. As of 08/04/2023, there are two versions. Those two versions are;

1. Demo (A front-end made application designed to showcase the application)
2. Production (A full-stack application intended for use by students and staff)

**Note:** As of 08/04/2023, the production version has not been started.

The current demo version uses the following technologies

- HTML 5
- CSS 3
- Javascript ES6
- Bootstrap

More technologies can be added as the application is continued.

# **Tutorial**

This tutorial will show you how to use the application in full, and how each feature works. This tutorial will be followed by a code explanation and includes screenshots and troubleshooting issues.

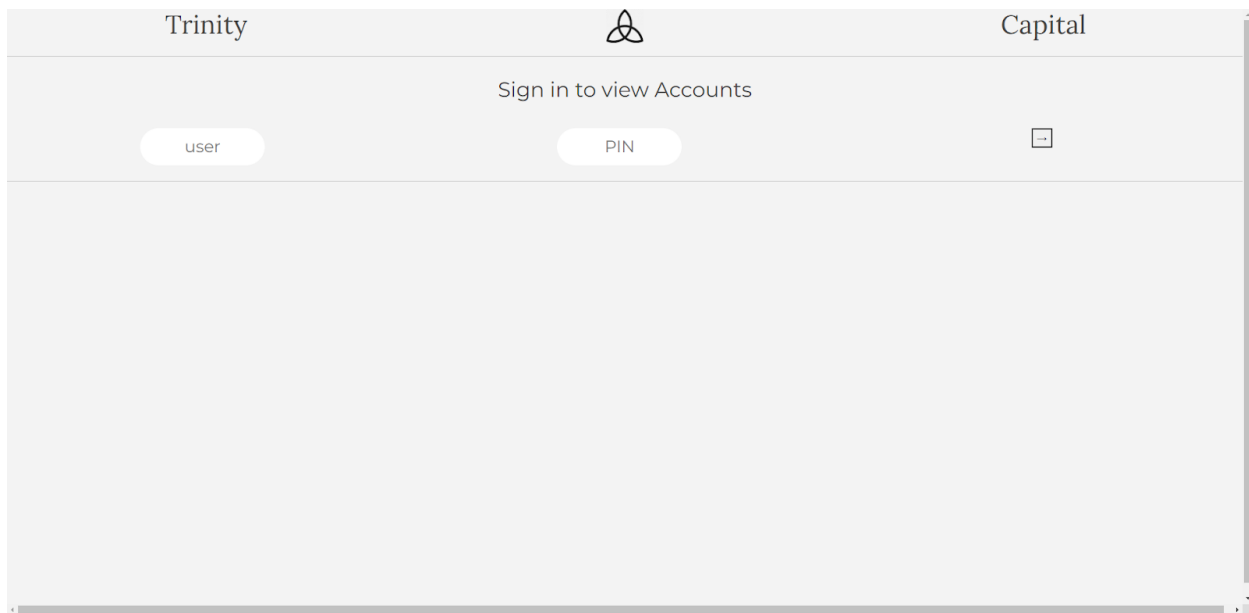
## **Opening the site**

To get started, follow this link to open the website.

<https://trinitycapitalsim.com>

This is the official link to the demo website.

When you open this link, you will see this screen.



## Logging in

This is the login screen. This is where you enter your PIN and username in order to access the site.

**Note:** In the production version, users will be able to create their own usernames and PINs, however for the demo, the usernames and pins are simple two-letter and four-number combos (respectively) that are pre-programmed into the application.

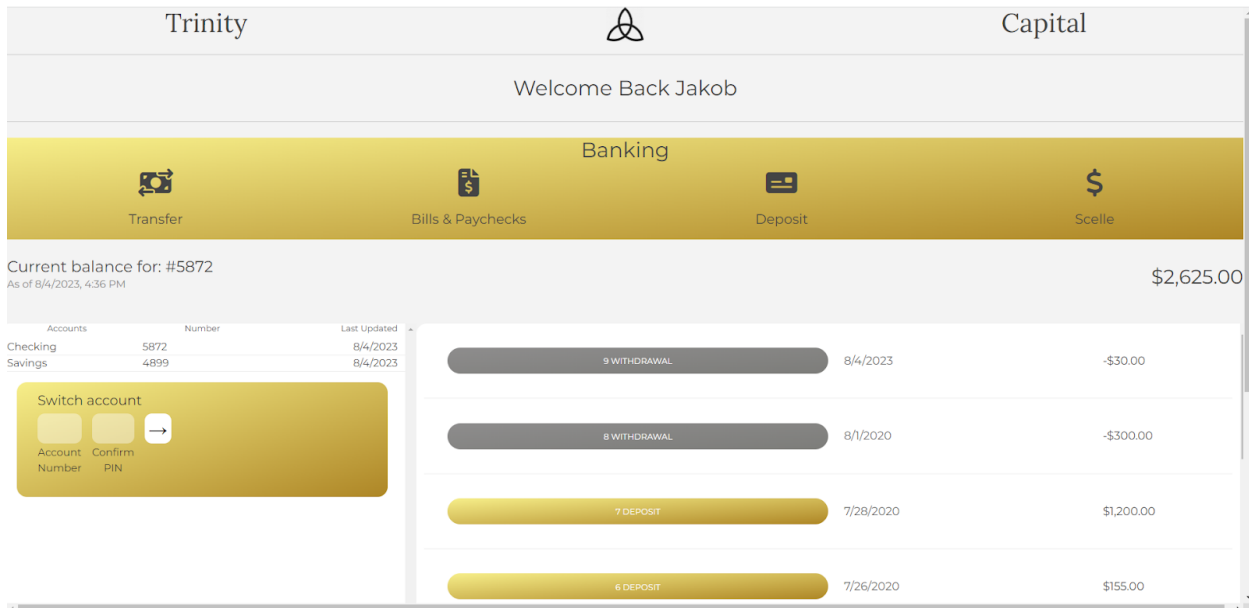
The login for the site is as follows

User: jf

PIN: 4564

To log in, enter the User data (jf) in the user section. Then, enter the pin in the PIN section (4564). Once both have been entered, click the arrow on the right side.

Once you log in, you should see this screen...



This is the main app. There is also more towards the bottom that looks like this. You can access the bottom half by scrolling down.

Accounts	Number	Last updated
Checking	5872	8/4/2023
Savings	4899	8/4/2023

Switch account

Account Number

Confirm PIN

→

5 DEPOSIT	5/8/2020	\$25.00
4 DEPOSIT	4/1/2020	\$25.00
3 WITHDRAWAL	1/28/2020	-\$200.00
2 DEPOSIT	12/23/2019	\$1,200.00

Tools

Request loan

Amount

→

Donate

Amount

Confirm PIN

→

Bugs, suggestions, and feedback

The bottom half has the tools for loans, and donations and a bug and feedback link

**Note:** The bug and feedback link is an HTML mailto element that leads to my official email. Using this will require users to send a detailed email with their issue. To use the feature, simply click on the link at the bottom that says “Bugs, suggestions, and feedback”

## Using the main application

This section will detail each feature of the main page and describe how to use each feature, as well as how it works. We will go through these in order of appearance.

## Banking tools

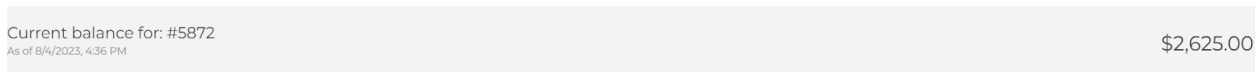
The first set of features is the banking tools. These are used to complete tasks such as transfers, bills, and deposits to name a few. This is what it looks like.



Each icon links to another page with its own functionality. We will go into each page's functionality at a later time.

## The balance, account, and balance date section

Just below the banking tools, you will see the balance, the current account number, and the current date and time in the following section.



The 4 numbers that appear after "Current balance for #" are the last four numbers of your checking account. In the production version, you will be made a checking account by default when you sign up for the bank.

The date and time are current and formatted for your locale as well as your balance.

## The accounts box

The accounts box is where you can see all of the accounts you own, their types, the last four of their numbers, and the date they last had a transaction pushed to it.

Accounts	Number	Last Updated
Checking	5872	8/4/2023
Savings	4899	8/4/2023

Switch account

→

Account

Confirm

Number

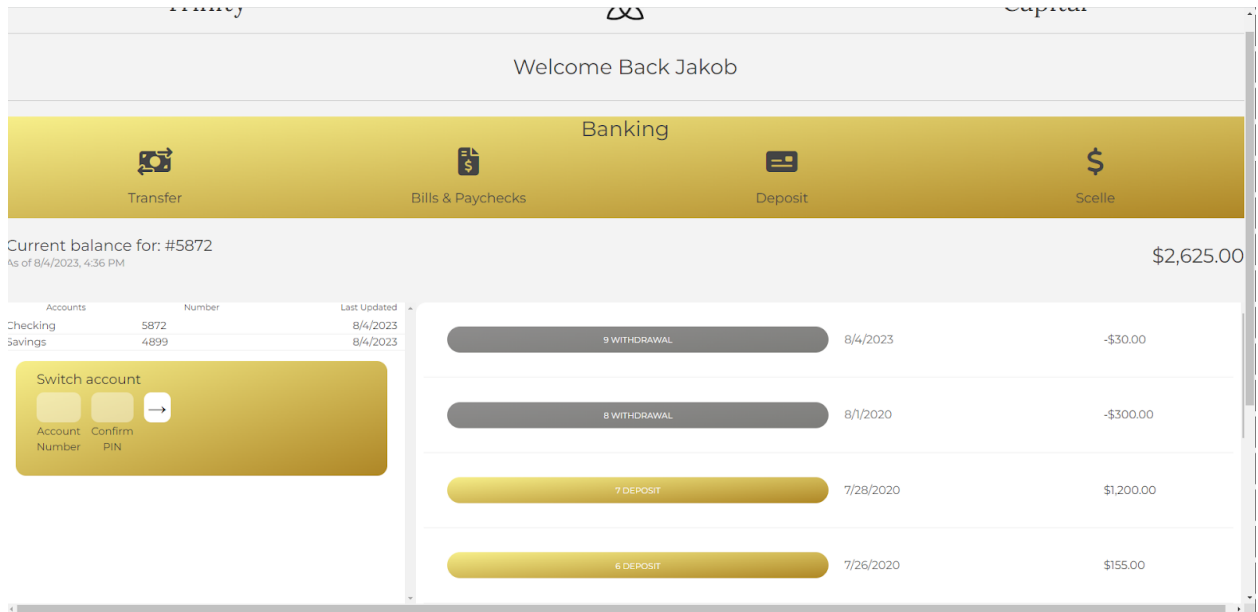
PIN

To switch the account you want to view, first enter the last four of the account you want to see in the account number box. The account you are in can be seen in the “Current Balance for” section. The account numbers you can switch to can be found in the accounts box under the “Number” section. Then, in the Confirm PIN box, enter the PIN you used to log in to the website. Then finally, hit the arrow.

Once you do, you should see the last four of the account you selected, their balance, its

transactions, and potentially a different time depending on when you made the switch.

## Before



Banking app interface showing the 'Before' state. The user is Jakob, and the current balance for account #5872 is \$2,625.00 as of 8/4/2023, 4:36 PM. The app displays a list of transactions for the selected account.

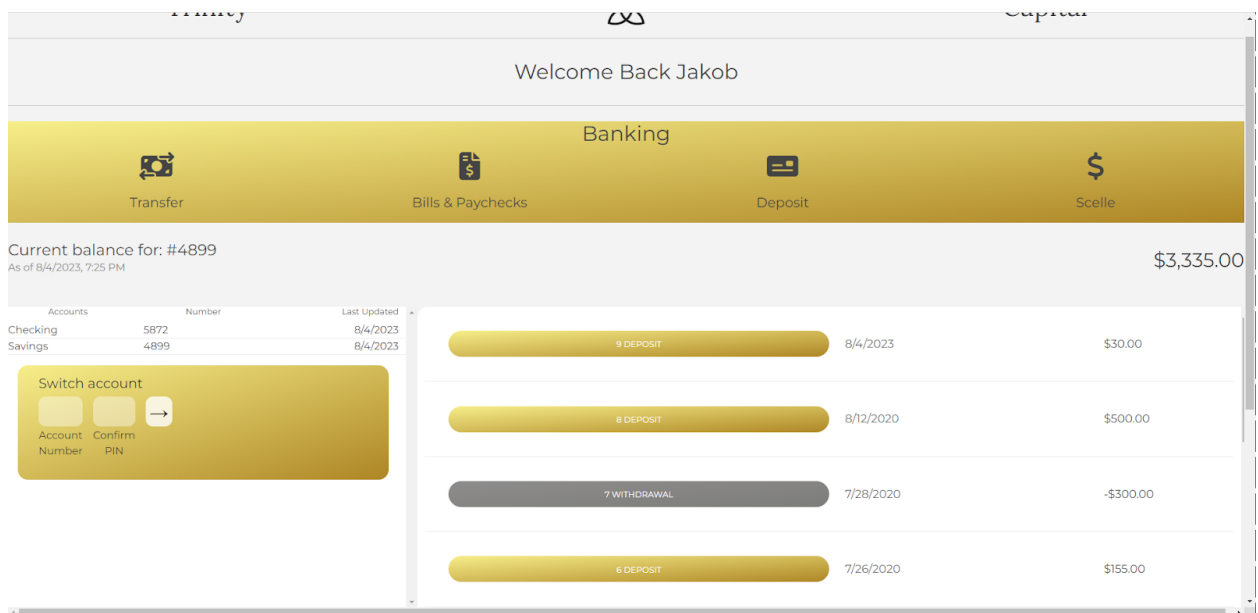
Accounts	Number	Last Updated
Checking	5872	8/4/2023
Savings	4899	8/4/2023

Switch account

Account Number: 5872, Confirm PIN: [ ]

Transaction	Date	Amount
9 WITHDRAWAL	8/4/2023	-\$30.00
8 WITHDRAWAL	8/1/2020	-\$300.00
7 DEPOSIT	7/28/2020	\$1,200.00
6 DEPOSIT	7/26/2020	\$155.00

## After



Banking app interface showing the 'After' state. The user is Jakob, and the current balance for account #4899 is \$3,335.00 as of 8/4/2023, 7:25 PM. The app displays a list of transactions for the selected account.

Accounts	Number	Last Updated
Checking	5872	8/4/2023
Savings	4899	8/4/2023

Switch account

Account Number: 4899, Confirm PIN: [ ]

Transaction	Date	Amount
9 DEPOSIT	8/4/2023	\$30.00
8 DEPOSIT	8/12/2020	\$500.00
7 WITHDRAWAL	7/28/2020	-\$300.00
6 DEPOSIT	7/26/2020	\$155.00

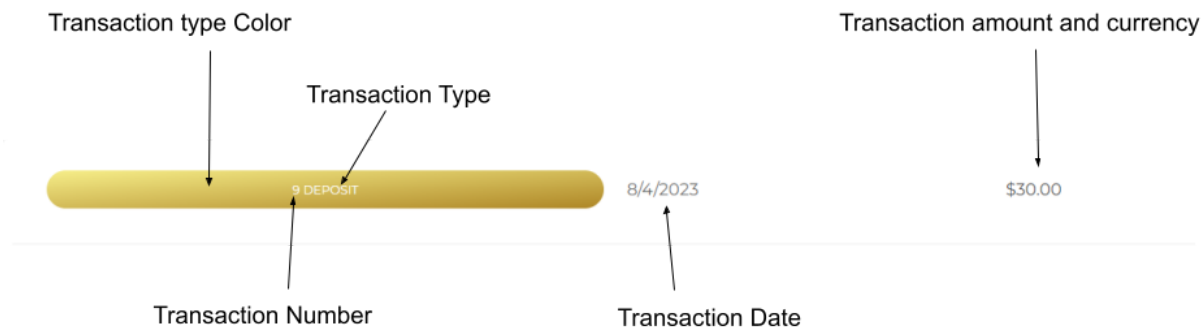


## The Transactions Section

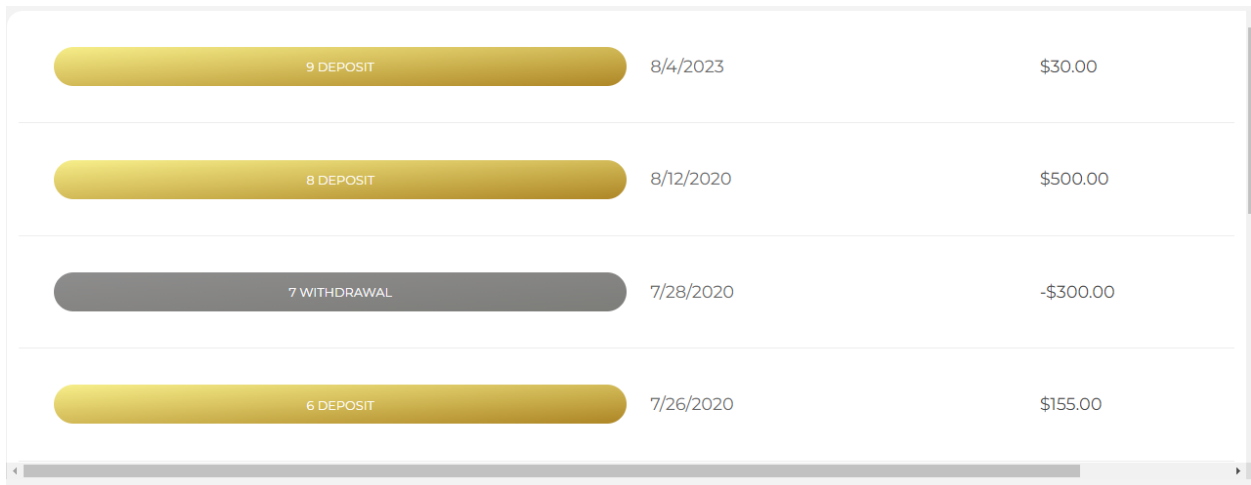
The transactions section shows all of the transactions associated with that account. For each section, you are able to see the following details about each transaction:

- Transaction type (Deposit/withdrawal)
- Transaction Number
- Transaction date
- Transaction amount (formatted for the user locale)
- negative/positive transactions (Denoted by the negative symbol "-")

**Note:** Each transaction is colored for its type. Deposits are gold, while withdrawals are gray



## Full Transaction section



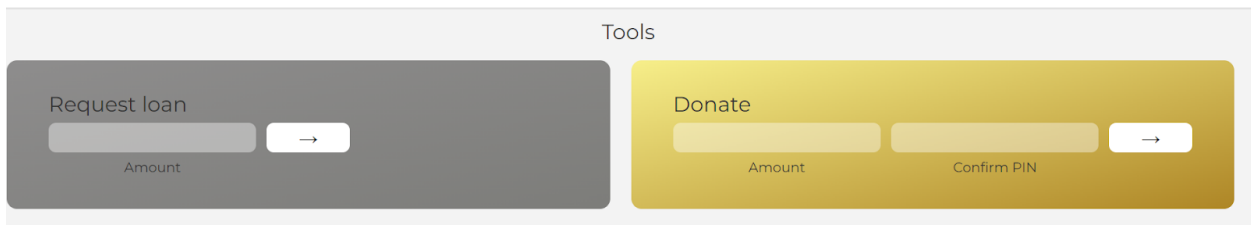
9 DEPOSIT	8/4/2023	\$30.00
8 DEPOSIT	8/12/2020	\$500.00
7 WITHDRAWAL	7/28/2020	-\$300.00
6 DEPOSIT	7/26/2020	\$155.00

In order to see every transaction on an account, use the scroll bar on the right side, and scroll down to see your other transactions.

## Tools

Along with the banking tools above, you also have tools at the bottom of the page to help in banking. In your checking account, you have the ability to request loans and submit donations. In your savings account, however, you only can submit donations

## Checking



Tools

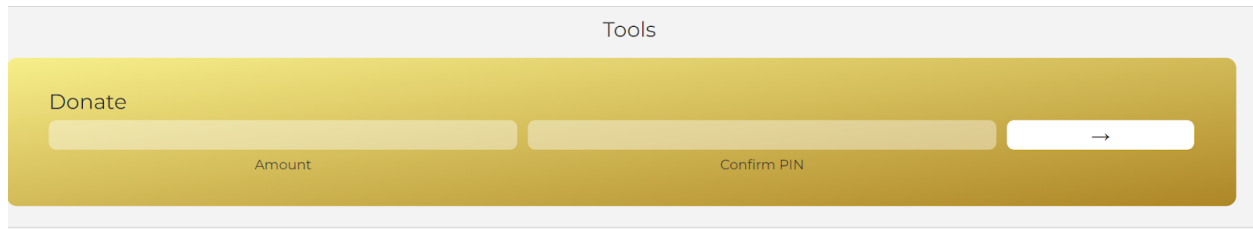
Request loan

Amount

Donate

Amount Confirm PIN

## Savings



The screenshot shows a 'Tools' section with a yellow background. At the top left is the word 'Donate'. Below it are two input fields: the first is labeled 'Amount' and the second is labeled 'Confirm PIN'. To the right of these fields is a white button with a right-pointing arrow.

**Note:** The savings account does not have the ability to submit loans, but can submit donations. If you are in a savings account and wish to submit a loan, you need to use the switch account steps above to switch back to the checking account to submit a loan.

**Note:** You can submit a donation from either your savings account or your checking account. At your discretion, switch to the account you wish to donate from, then follow the steps below to submit a donation.

To submit a donation, first, scroll down until the donation box comes fully into view. Then in the amount box, enter how much money you would like to donate. In the Confirm PIN box, enter the PIN you used to log in, and then hit the arrow. Once you do, you can see a new withdrawal in your transactions for the amount you donated.

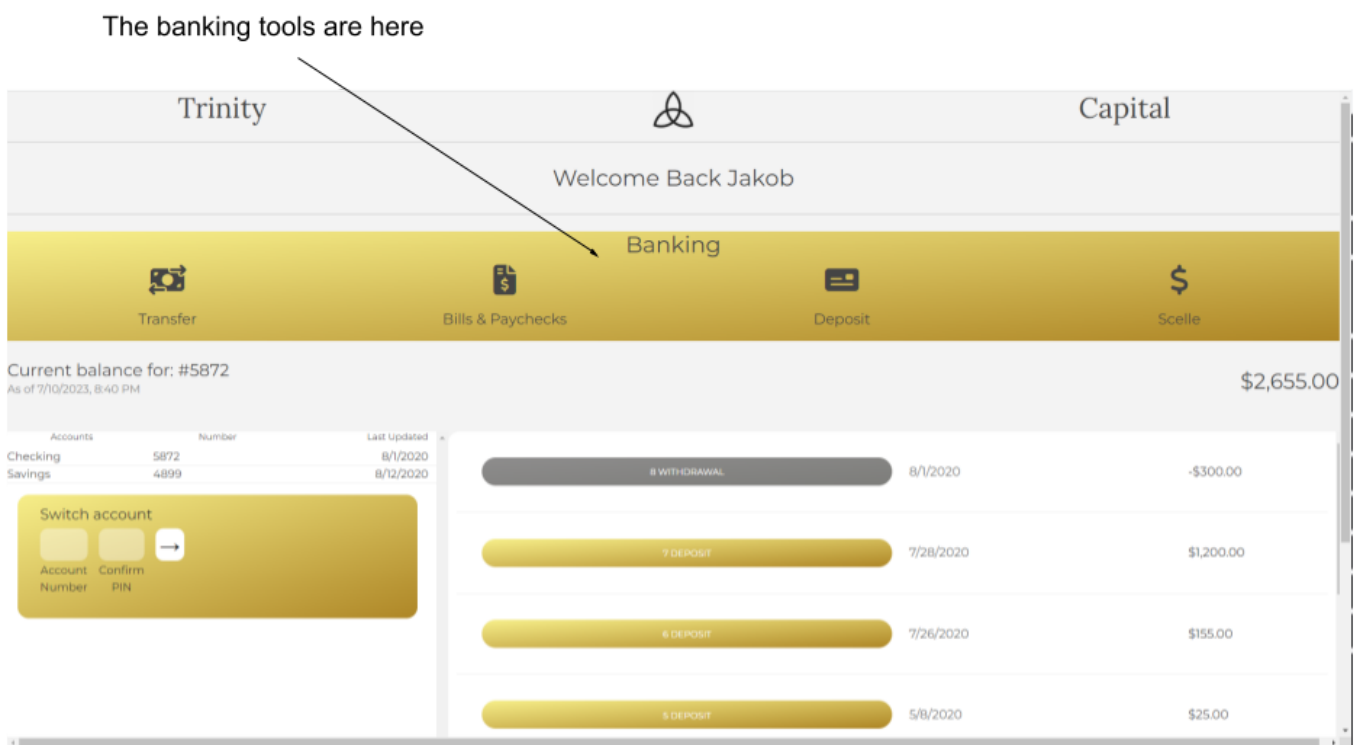
To submit a loan, scroll down until the loan box comes fully into view. Then, enter your Loan amount, and finally, hit the arrow. Once you do, you can see a new deposit in your transactions for the loan amount you requested.

## The Banking Tools in depth

In this part of the tutorial, we will go through all of the banking tools in depth and describe how to use them in detail. We will start in order from left to right.

## Transfers


To get to the transfers page, first, scroll up to the banking tools on the main page. The banking tools are in this location.



Once you are here, click on the Dollar Bill icon above the word “Transfer”. This will bring you to the Transfers page. When you make it, you should see two gold blocks' named from, and too, as well as places to insert information about your transfer. To start you should also see a login form.

This is what you should see when you get to the Transfers page.

Trinity




Capital

Transfers

Enter your PIN to continue

PIN



Select the account you wish to transfer from

From


Choose an Account

Account

Select the account you wish to transfer to

Too

### Bottom half



Select the account you wish to transfer from

From

Choose an Account

Account

Select the account you wish to transfer to


Too

Choose an Account

Account

Amount

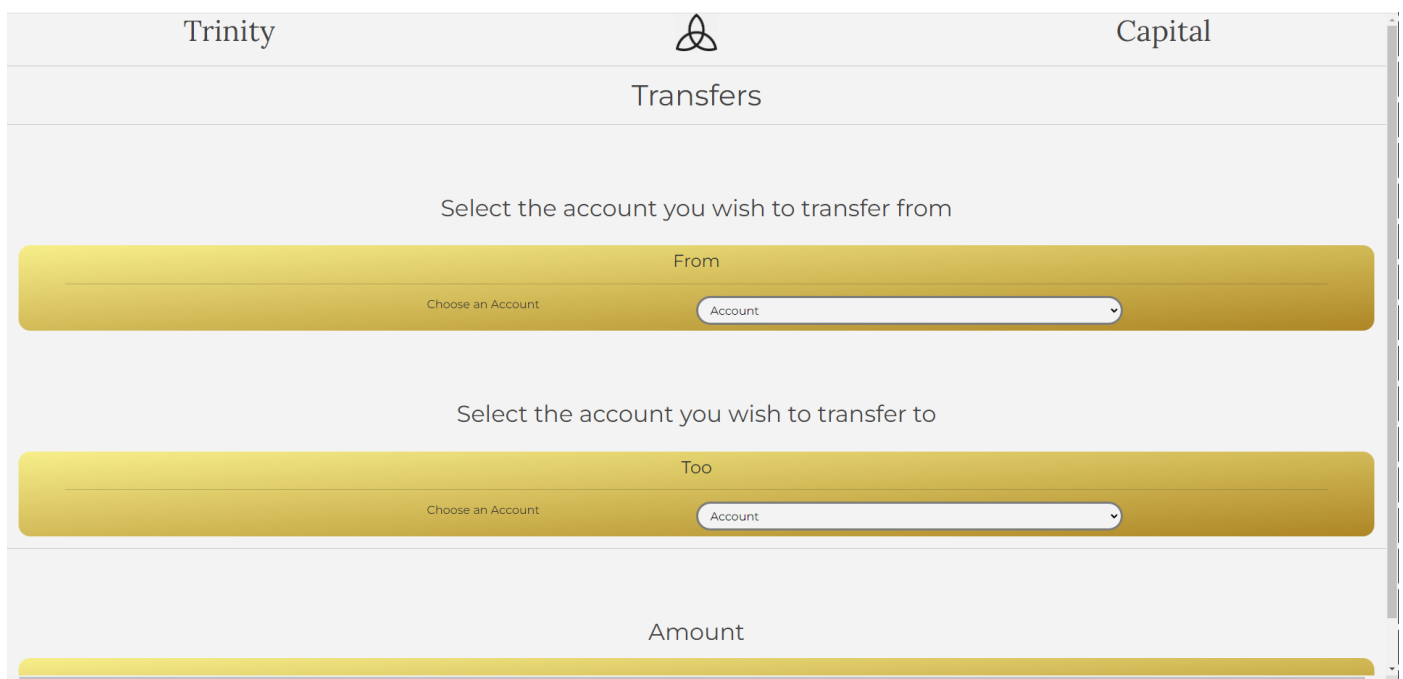
Amount



**Note:** If you enter the transfers page and still see the login input below “Enter your pin to continue, transfers **WILL NOT WORK**. You need to log in using your login PIN in order to access the rest of the page.

In order to access the data on the transfers page, scroll up to the top of the page, and locate “Enter your PIN to continue” Below that is an input box named PIN. Enter your login PIN in this box, then select the arrow below the box. Once you do, the login section will disappear, and you will be able to access your accounts in the From and Too sections.

### After login



The screenshot shows the 'Transfers' page after a successful login. The page has a light gray header with 'Trinity' on the left, a logo in the center, and 'Capital' on the right. Below the header, the word 'Transfers' is centered. The main content area is divided into two sections for selecting accounts. The first section is titled 'Select the account you wish to transfer from' and contains a yellow bar with the label 'From'. Inside this bar, there is a 'Choose an Account' label and a dropdown menu with 'Account' selected. The second section is titled 'Select the account you wish to transfer to' and contains a yellow bar with the label 'Too'. Inside this bar, there is a 'Choose an Account' label and a dropdown menu with 'Account' selected. At the bottom of the form, the word 'Amount' is centered, followed by a yellow bar for entering the transfer amount.

## Setting up a transfer

After you have logged in, you will be able to access all of the data on the transfers page. Once you are here, here is how you can set up a transfer.

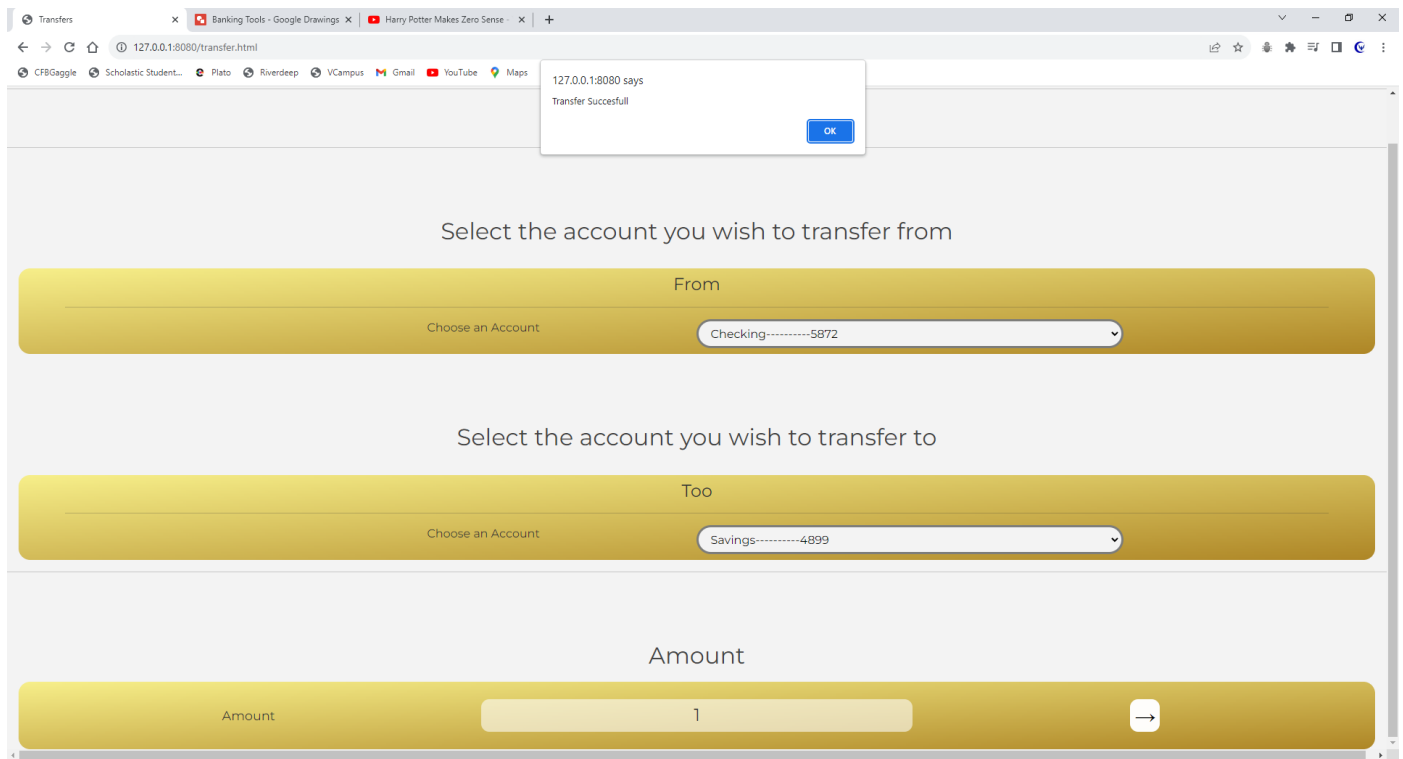
1. Select the account you want to transfer money from
  - a. Go to the top gold box that says “From”. This box selects the account you want to take money out of. From there, select the white box that says “account” and select which account you want to transfer out of. You will see your checking account, and your savings account to choose from

The screenshot shows a web interface for setting up a transfer. At the top, there are three tabs: 'Trinity', a logo, and 'Capital'. Below these is a header 'Transfers'. The main content area has a light gray background with the text 'Select the account you wish to transfer from'. Below this is a gold-colored box labeled 'From'. Inside this box, there is a 'Choose an Account' label and a dropdown menu. The dropdown menu is open, showing three options: 'Account', 'Checking-----5872', and 'Savings-----4899'. Below the 'From' box is another light gray section with the text 'Select the account you wish to transfer to'. Below this is another gold-colored box labeled 'To'. Inside this box, there is a 'Choose an Account' label and a dropdown menu with 'Account' selected. At the bottom of the form is a light gray section labeled 'Amount' with a gold-colored input box.

2. Select the account you want to send money too
  - a. Go to the bottom gold box that says too. Then select the account you want to send money too
    - i. NOTE: You cannot use the same account twice
3. Enter the amount that you want to transfer, and submit the transfer
  - a. Scroll down to the bottom of the page until the gold amount box comes into full view. Then in the clear box to the right of “amount” enter how much money you want transferred. Once you do that, click the arrow on the right side of the box.

## Returning to the homepage

Once you have successfully submitted a transfer, an alert will appear on your page notifying you of a successful transfer. Once you hit “ok” on this alert, you will be brought back to the main app page.



The screenshot shows a web browser window with the address bar displaying "127.0.0.1:8080/transfer.html". A notification alert box is visible in the center, stating "127.0.0.1:8080 says Transfer Successful" with an "OK" button. Below the alert, the transfer form is displayed. It consists of three main sections: "From", "To", and "Amount". The "From" section has a label "Select the account you wish to transfer from" and a dropdown menu showing "Checking-----5872". The "To" section has a label "Select the account you wish to transfer to" and a dropdown menu showing "Savings-----4899". The "Amount" section has a label "Amount" and a text input field containing the number "1", followed by a right-pointing arrow button.

Once you have returned, you will be able to see the transaction on both accounts. One will be a withdrawal on the account you pulled from, and one will be a deposit on the account you added money to.



Current balance for: #5872

As of 8/5/2023, 11:21 AM

\$2,654.00

Accounts	Number	Last Updated
Checking	5872	8/5/2023
Savings	4899	8/5/2023

Switch account

Account Number

Confirm PIN

→

9 WITHDRAWAL

8/5/2023

-\$1.00

8 WITHDRAWAL

8/1/2020

-\$300.00

7 DEPOSIT

7/28/2020

\$1,200.00

6 DEPOSIT

7/26/2020

\$155.00

Current balance for: #4899

As of 8/5/2023, 11:24 AM

\$3,306.00

Accounts	Number	Last Updated
Checking	5872	8/5/2023
Savings	4899	8/5/2023

Switch account

Account Number

Confirm PIN

→

9 DEPOSIT

8/5/2023

\$1.00

8 DEPOSIT

8/12/2020

\$500.00

7 WITHDRAWAL

7/28/2020

-\$300.00

6 DEPOSIT

7/26/2020

\$155.00

**Note:** Whenever you return to the main app page from any of the banking tools pages, you will need to log in again. In order to log in, see the section above named “Logging in”

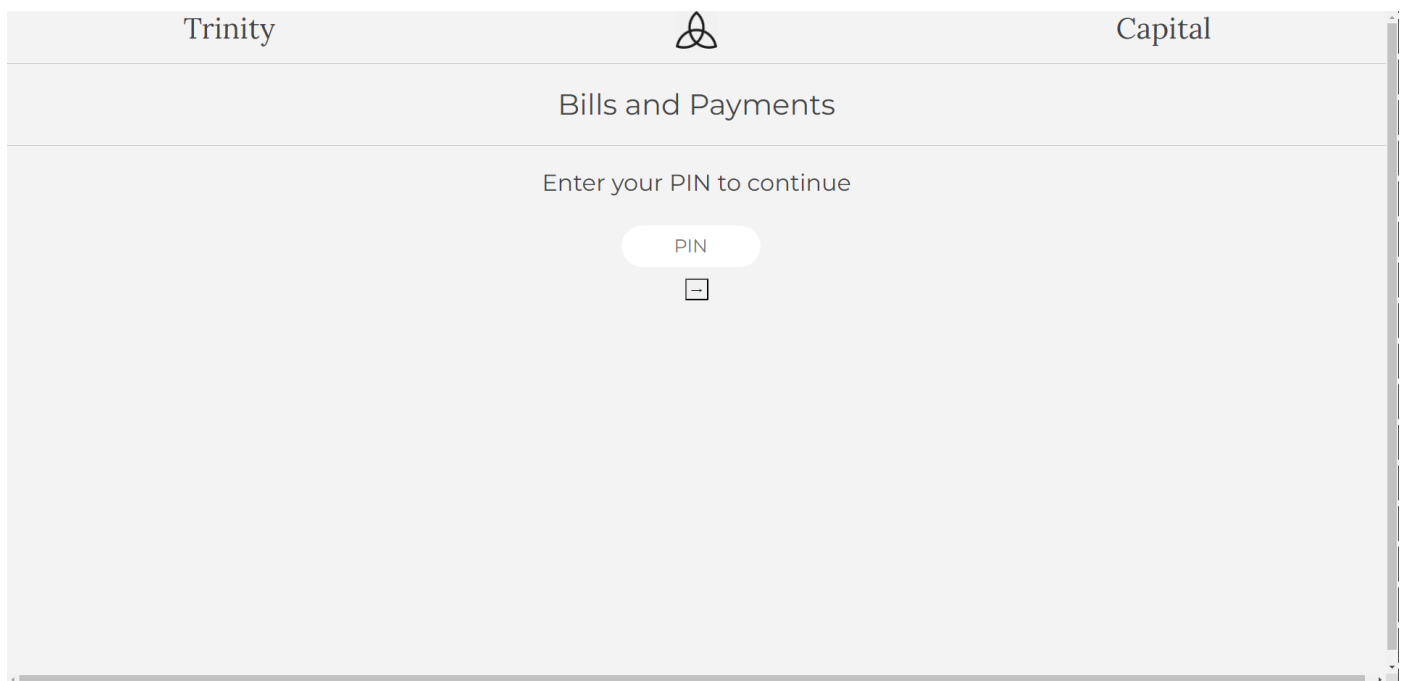
## Bills and payments

The next banking tool is Bills and Paychecks. This section allows users to simulate paychecks they would receive from employment, and bills they would pay in the real world. The system is built to account for multiple bills and paychecks running at different pay intervals, and at different amounts.

**Note:** For the demo version, 1 second is equal to 1 day, and pay intervals are set up in seconds as follows

- Weekly = 7 seconds
- Bi-weekly = 14 seconds
- Monthly = 30 seconds

To get to the Bills and Payments section, click on the paper logo with the dollar sign on it that hovers above “Bills and Paychecks.” When you click on that icon, you will be brought to the page. When you are on the page, you should see a similar login section as the transfers page.



The screenshot shows a web interface for the 'Bills and Payments' section. At the top, there is a header bar with 'Trinity' on the left, a logo in the center, and 'Capital' on the right. Below the header, the title 'Bills and Payments' is centered. The main content area prompts the user to 'Enter your PIN to continue'. Below this text is a rounded rectangular input field labeled 'PIN'. Directly under the input field is a small square icon containing a minus sign, likely for toggling password visibility. The entire interface is set against a light gray background.

To log in, simply enter your login pin in the PIN box as before, and click the arrow below it. Once you do, you should see the following appear on your screen.

The screenshot displays the Trinity Capital application interface. At the top, the header bar includes the 'Trinity' logo on the left, a central icon of three interlocking circles, and the word 'Capital' on the right. Below the header, a grey bar contains the text 'Bills and Payments'. The main content area is divided into two sections: 'Bills' and 'Payments'. Each section has a yellow background and contains a form with an 'Amount' input field, a 'Frequency' dropdown menu (with 'choose Interval' as the selected option), a 'Submit' button, and a white arrow button at the bottom. The 'Bills' section is positioned above the 'Payments' section.

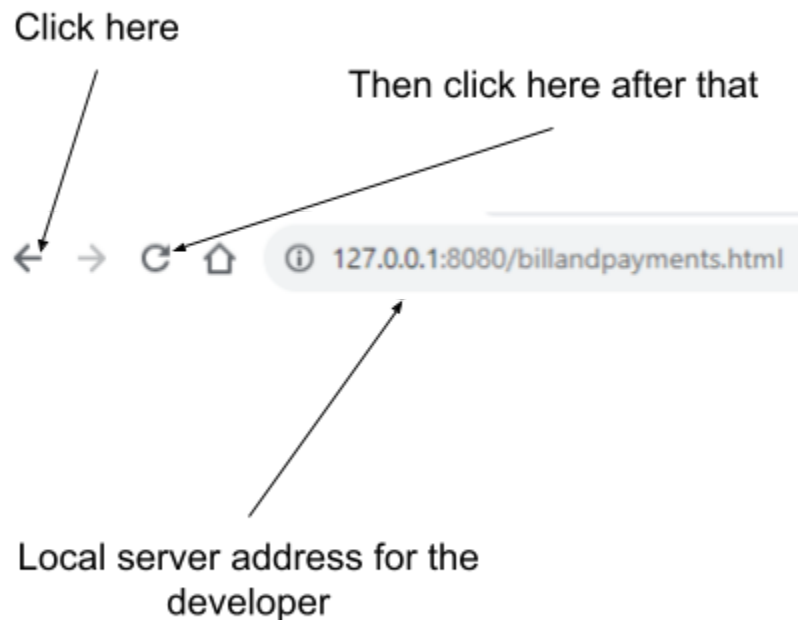
**Note:** The steps to submit a payment are the same as to submit a Bill. Simply follow the steps to submit a bill to submit a payment and it will work the same way.

**Note:** Each section must be done one at a time. All steps need to be completed for one section before you can move on to the next section. Failure to do so may cause errors.

To submit a bill/payment, first, select which you would like to do first, either a bill or a payment. Remember you must complete one before you can move on to the next. Once you have decided whether you want to submit a bill or payment first, follow these steps.

1. In the Amount section, enter how much your bill/payment will be.
2. In the frequency section, select how often the bill/payment should reoccur. (Weekly, bi-weekly, or monthly)
3. Below the submit section, click the arrow to submit the bill
4. Repeat for the opposite section (If you did bill first, payment, and if you did payment first, bill)

Once you are fully done, hit the back arrow in the browser to return to the main page. Once the main page appears, hit the refresh button to start showing your bills and payments.



**Note:** A feature will soon be added to all pages that will allow users to return to the main page by clicking a button on the page.

When you return to the main page, you will see your bills and payments occur at the time intervals you selected.

**More to come as of 08/05/2023**