Project Deliverable K: User and Product Manual

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Concept

The user wallet is an interface to a portfolio of different points held by a user and stored by Zafin. The wallet allows a user to store various types of loyalty rewards points in one place, where they can be exchanged, transferred, deposited, withdrawn, and redeemed. The main feature is exchange – through the banks, one type of point is converted to another based on an exchange rate using the banks stockpiles of loyalty rewards points. When a retailer joins our product, Zafin, the bank, and the retailer compromise on a dynamic exchange rate regulated through the bank. The transfer system mimics e-transfer, allowing the user to send points to another user.
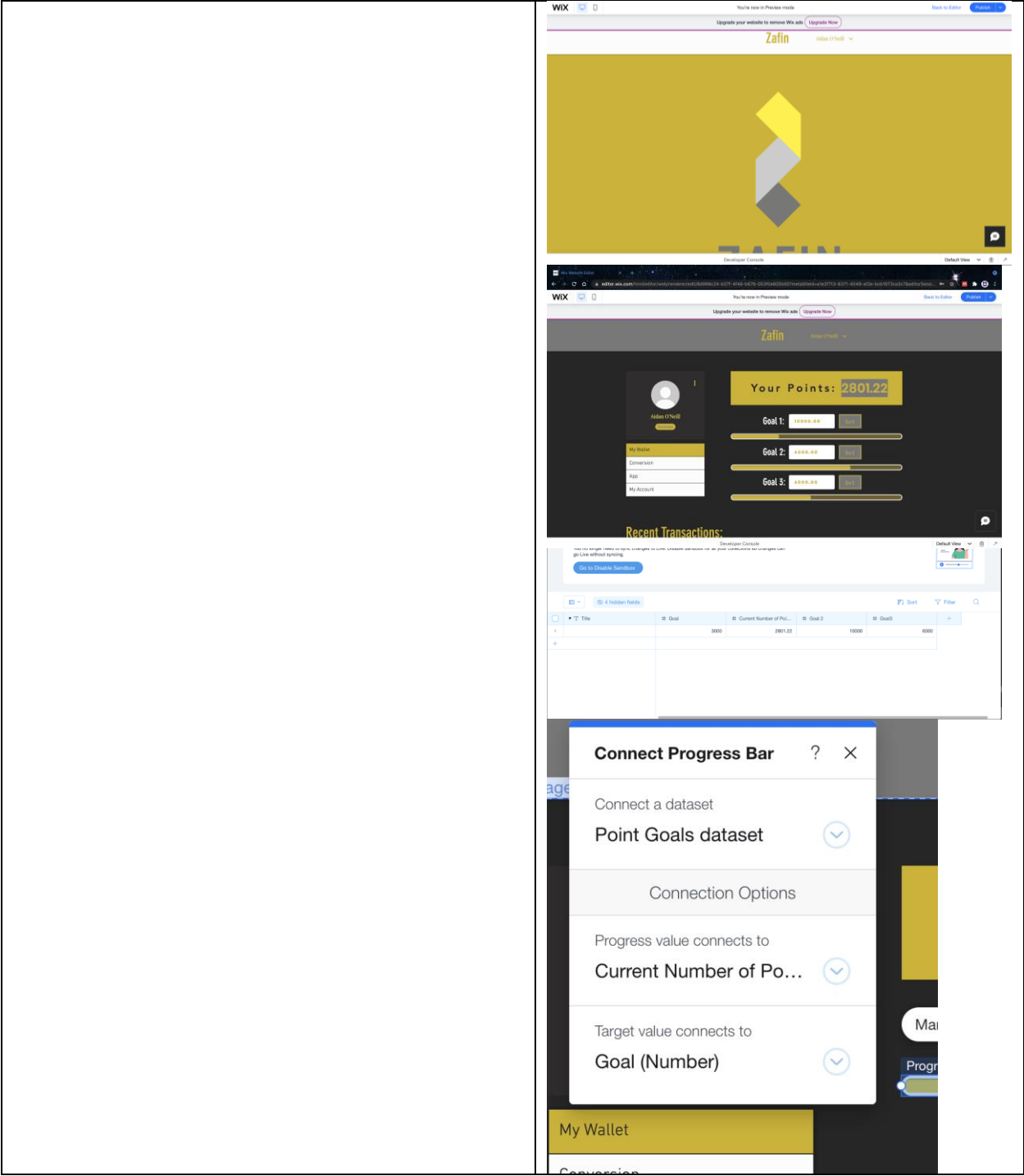
Interface

App

The app uses simple themes, it allows users to understand the app quickly and without any tutorial needed and has a login screen to protect the user information. The app acts as an interface which is the connection between users and the wallet. We can also sell the interface with the "wallet"(service) as a background code to the buyer.

The app was coded using Power Apps.

Website

Action	Screenshots
Colors: #787877, #262626, #CFB301	

```
1    import wixData from 'wix-data';
2
3    $w.onReady(function () {
4        wixData.aggregate("Test1")
5        .sum("points", "text13")
6        .run()
7        .then((result) => {
8        var current = result.items[0].text13
9        $w('#text13').text = current.toString()
10       })
11   });
```
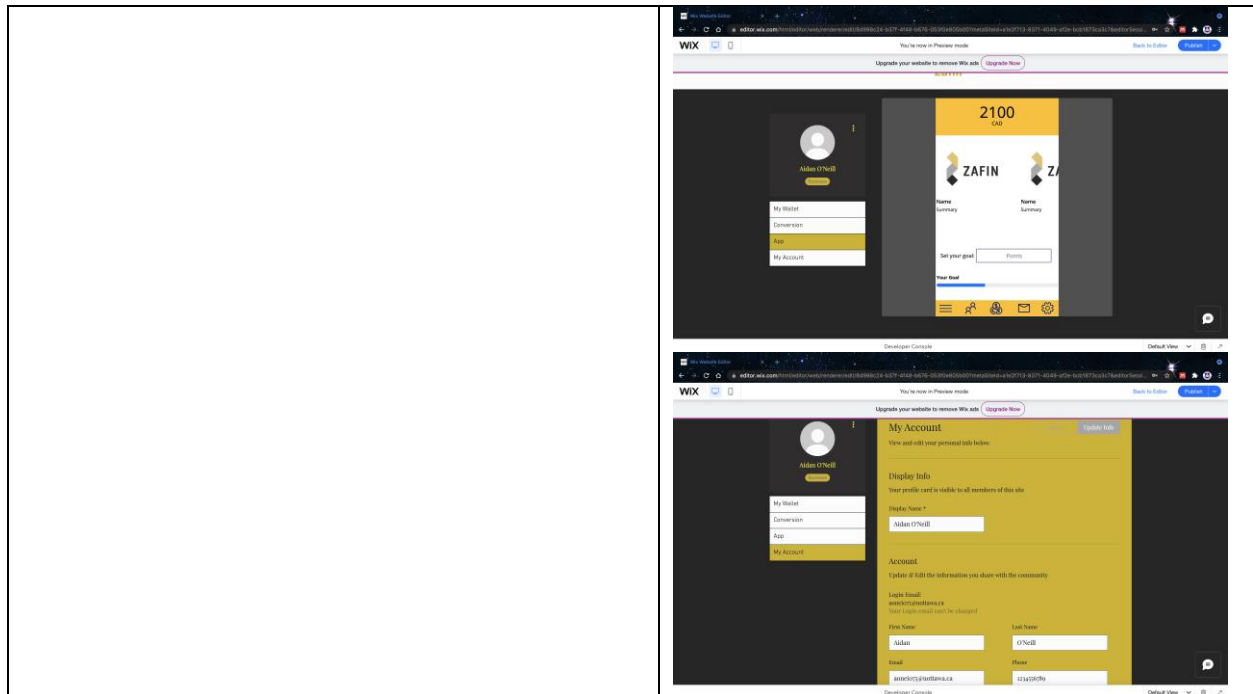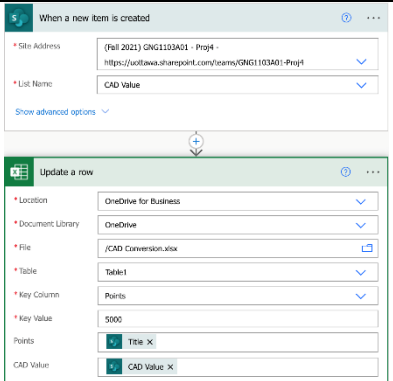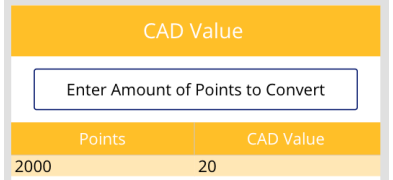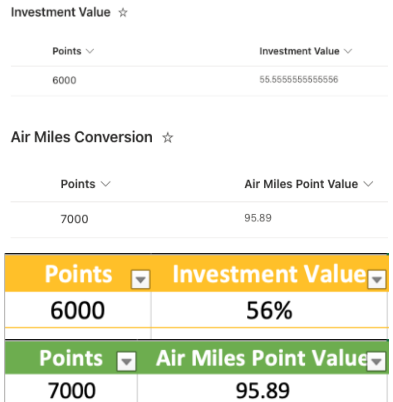
Wallet system

The "wallet" is the name given to the location where the points are stored and managed. The wallet for the user resides in SharePoint and is interacted with through the Power Apps Interface. Flows using Power Automate allows the user to convert collected points into points from a retailer, such as air miles points, investment points, or Canadian Dollars.
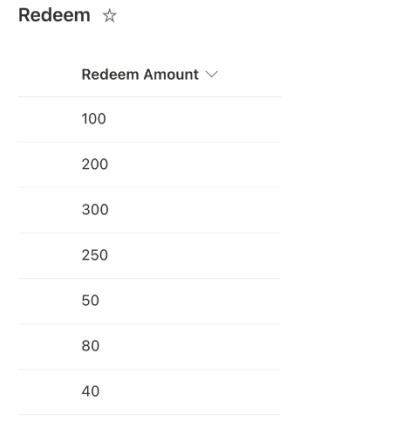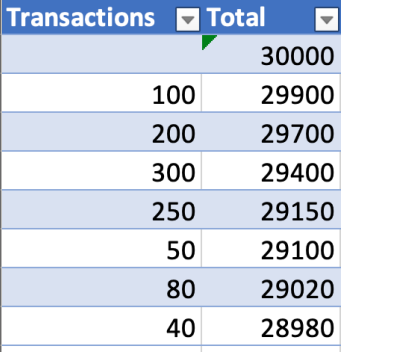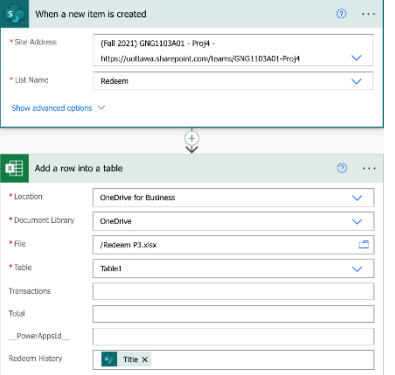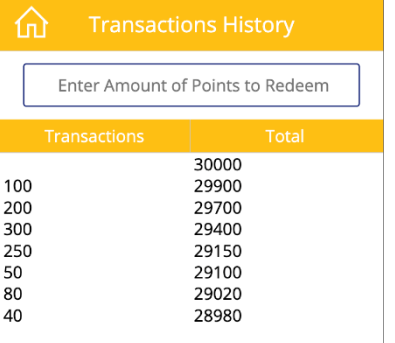
Conversions

Action	Explanation	Screenshots
Create a SharePoint list for the CAD value conversions	This SharePoint list will hold the history for all the point conversions entered for CAD value. Create one column for points entered, and one column to display the calculated CAD value. The formula for the CAD value is "[Title]/100". The formula will depend on what the business and Zafin agree on, this value is just for demonstration.	
Create an Excel spreadsheet for the calculations of the conversion. This table is used to be displayed on PowerApps	Create a column for points, and create a column for the calculated CAD value. The formula entered for the CAD value column should be the same as what was entered in the SharePoint list column for CAD value. Format the two	

Action	Explanation	Screenshots
	columns as a table; it will now be referred to as "Table1"	
Create a flow linking the CAD value SharePoint list to the Excel spreadsheet	This flow should be called "When a new item is created; Update a row". This flow needs to be updating a row instead of creating a new one since the table in Excel will be directly displayed in the PowerApps, and for the conversion feature the history of conversions is not needed. Therefore only the most recent conversion should be displayed. If the flow is successful, it should be able to take the new value added into the CAD value SharePoint list and add the exact value into the excel table. It should replace the old existing value with the new one, then the formula should be applied to it; then displaying the CAD value conversion.	
Connect the Excel Table1 to a new screen on Power Apps	Here you can customize how the interface looks. Essentially the goal is to display the Excel table as it shows the live changes from the Excel document.	
These steps were then repeated for every new conversion rate	The conversions for investments and Air Miles were also included for a demonstration for further production.	

Redeeming Points

Action	Explanation	Screenshots

Create SharePoint list for point redeem amount	This is where you can enter in number of points you want to redeem and have that amount be stored in the SharePoint list.	Redeem ☆ Redeem Amount ∨ 100 200 300 250 50 80 40
Create an Excel spreadsheet to store transactions and for calculations of new point total	Add a transaction column for the amount of points redeemed to be entered, and add a column for the calculations of the user's new total amount of points. For the "total" column the formula box should say [=B2-A3]. Format the two columns as a table so that it is registered as an excel table. This table is now referred to as "Table1"	Transactions / Total 30000 100 / 29900 200 / 29700 300 / 29400 250 / 29150 50 / 29100 80 / 29020 40 / 28980
From the SharePoint list, create a flow called "When a new item is created; Add a row into a table"	Link the Redeem SharePoint list with the Table1 in Excel. If the flow is successful, it should transfer any new value added in the SharePoint list and create a new row in the Excel table under the Transaction column. Then that exact amount should be subtracted from the previous point total, then display the new point total.	When a new item is created * Site Address: (Fall 2021) GNG1103A01 - Proj4 - https://uottawa.sharepoint.com/teams/GNG1103A01-Proj4 * List Name: Redeem Show advanced options ∨ Add a row into a table * Location: OneDrive for Business * Document Library: OneDrive * File: /Redeem P3.xlsx * Table: Table1 Transactions Total __PowerAppsId__ Redeem History: Title ×
Create a blank page on PowerApps for the transactions history	Connect the Excel table by going to insert, and select data. If done so correctly, the table on the Power App should be able to display any live changes made from the Excel table.	⌂ Transactions History Enter Amount of Points to Redeem Transactions / Total 30000 100 / 29900 200 / 29700 300 / 29400 250 / 29150 50 / 29100 80 / 29020 40 / 28980

Point Transfers

Creating a method of transferring points between accounts was not possible for a couple of reasons:

1. Power Automate does not have the functionality to do so.

   There is no direct trigger or action that copies SharePoint items in Power Automate, only folders ("wallets"). Doing this indirectly also has issues. The original item first needs to be modified (the number of points to be transferred are subtracted), then the value of the *difference* needs to be created as a new item in the destination wallet.

   The actions in Power Automate are not sophisticated enough to calculate the difference, save that value and creating a new item with that value. The "Create Item" action can only create items that are given set values, so it cannot create a new item with the difference of the modified item as its value.

   Creating a purely visual representation was also prohibitive. An avenue explored was creating a flow where the entire wallet would be transferred to another account, and the issue with using the difference could be avoided. The problem then became the same as previously, where you can't create an item that copies the values of another.

2. Creating a transfer system would necessitate creating another User Account on our interfaces.

   Creating another account for our app and website, while possible, was time-prohibitive.