

Project Deliverable G: Prototype II

Bailey Watson, 7761424

Ethan Mumford, 300233682

Yang Peng, 300257350

Aditya Mukhopadhyay, 300250553

Ayo Oladipupo, 300200715

Prototype II

One new element has been created for Prototype II, and another previously developed prototype has been improved upon according to test results conducted during Prototyping I stage. As per the prototyping plan from Deliverable E, the new element created at this stage is the Power Apps prototype. The elements are representative of the front- and back-ends of the proposed software. See details below:

Power App: A high-fidelity program has been developed using Power Apps that can perform the base functions identified in the selected Global Concept (Deliverable D). The goal of this prototype element is to refine the C program that was created in Prototype I, while also migrating it to a platform that can be embedded into the WIX webpage. The sub-systems developed are as follows: Store Points, Exchange Points, Redeem Points (points to cash), and Send Points (user to user). Each subsystem is created using a Sharepoint list, and corresponding Power App. A series of triggers and flows developed in Power Automate are then added to each list to allow the data to be modified. The final feature, View Insights, will be incorporated into prototype III, and will harness the data visualization tools in Power BI. Relevant screenshots, as well as a link to the app can be found in **Appendix B – Power Apps**.

WIX Webpage: In Prototype I, an interactive webpage was created and published using a free webpage editor called WIX. The website’s UI underwent UX testing during the Prototype I stage and has since been edited and updated to reflect the feedback that was received. In prototype III, the Power Apps will be embedded into this webpage to create a single, complete prototype. A link to the webpage can be found in **Appendix C – WIX Webpage**.

Due to unforeseen complications using the Power Automate function, the Power App is not yet completely functional and is therefore slightly behind schedule. This is not a concern for the project team, as other steps were completed to mitigate the risk associated with schedule delays. These steps include identifying how to display data from the Power App in Power BI and identifying how to embed both the Power App and Power BI into the WIX webpage using HTML code.

Analysis of Critical Components

An analysis of the critical components of this Prototype can be found in **Table 1** below. The purpose of this analysis is to validate the components that were presented in Prototype I and assess their effectiveness.

Table 1 - Analysis of Critical Components

Critical Component	Analysis
User Interface	Couldn’t use google sites due to complexity. WIX was used and is functional. See photos in Appendix C – WIX Webpage .
Store Points	Functional. See Appendix B – Power Apps .
Exchange Points	Not yet functional.
Redeem Points	Not yet functional.
Send Points	Not yet functional.
View Insights	Not yet functional.

Test Results and Updated Prototyping Test Plan

The elements of Prototype II that have been identified as needing testing have been tested according to the Prototyping Test Plan created in Deliverable E. Results of these tests can be found in **Table 2**. These tests provided more insight into Prototype III, and therefore some changes to the Testing Plan were required. See **Table 3** below for the updated prototyping test plan. Please note photos are not included in this section to justify test results, as both the WIX Webpage and Power Apps are included in Appendix.

Table 2 - Test Results

Test Parameter	Test Result
Test ID 3	Subsystem "ADD": Functional. This subsystem executes a flow that identifies a change to a Sharepoint list, and makes a change to a separate Sharepoint list. Subsystem "EXCHANGE": This is not yet functional. This subsystem identifies a value in a sharepoint list, then moves that value to another sharepoint list.
Test ID 2	Issues corrected in second iteration of WIX Webpage

Table 3 – Updated Test Plan

Test ID	Test Objective (Why)	Description of Prototype used and of Basic Test Method (What)	Description of Results to be Recorded and how these results will be used (How)	Estimated Test duration and planned start date (When)
1	Determine if updated Logic is functional for this application.	CodeBlocks prototype, using different information and situations	Record information input, record information output and code behaviour	1 week 11/04/2021 to 11/11/2021
2	Determine if updated UI/UX is functional.	Allow multiple users to use UI and ask questions about UX.	Record questions, answers, and comments from users	11/04/21 to 11/11/21
3	Test individual Power Apps before Embedding them into Website	Record inputs and outputs in each app. Check that correct info is being stored.	Record Results as bullet points using MS Word	11/04/2021 to 11/11/21
4	Test to see if iFrame HTML method is functional for embedding objects into WIX	Test embedding of random webpage	Record behaviour of embedded object	11/11/2021

5	Test if Power Bi is reading correctly from Sharepoint List	Compare Power BI data to List data	Note discrepancies and correct	11/12/2021 to 11/25/2021
6	Test how Embedded Power Apps Perform on Websites	Embed Power App into Website and Test Functionality	Record Results as bullet points using MS Word	10/21/21 - 10/28/21

Appendix A – Task Plan Update

Write Schedule, Task, and Assignment updates can be seen in below. Use the following link to access Wrike: <https://www.wrike.com/open.htm?id=761228072>

Appendix B – Power Apps

Screenshots of the Power App progress to date are included below.

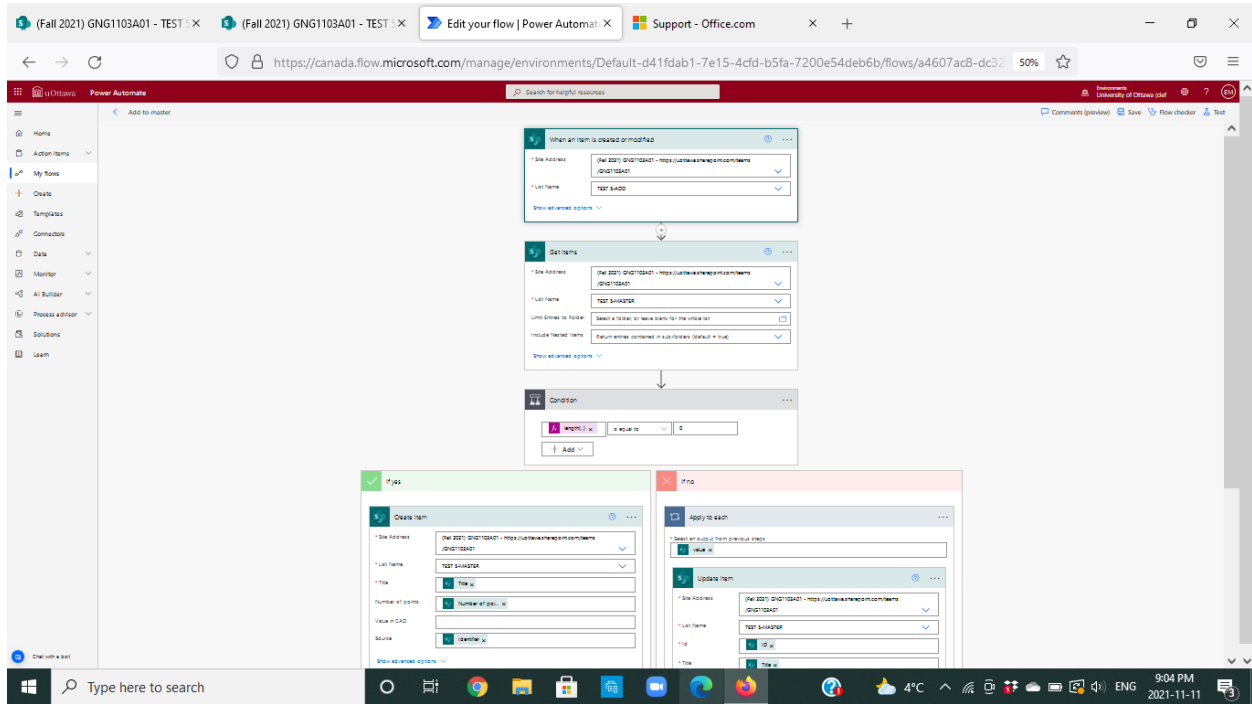


Figure 1 - Power Automate "ADD" Flow

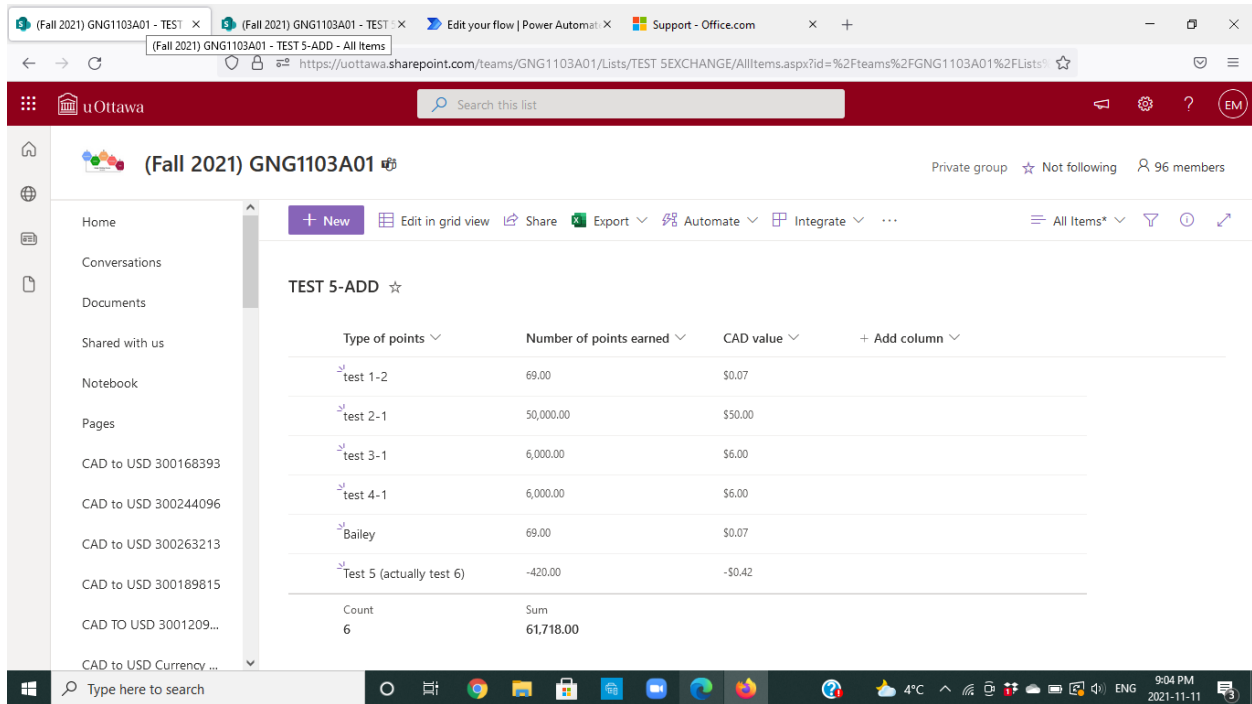


Figure 2 - "ADD" list

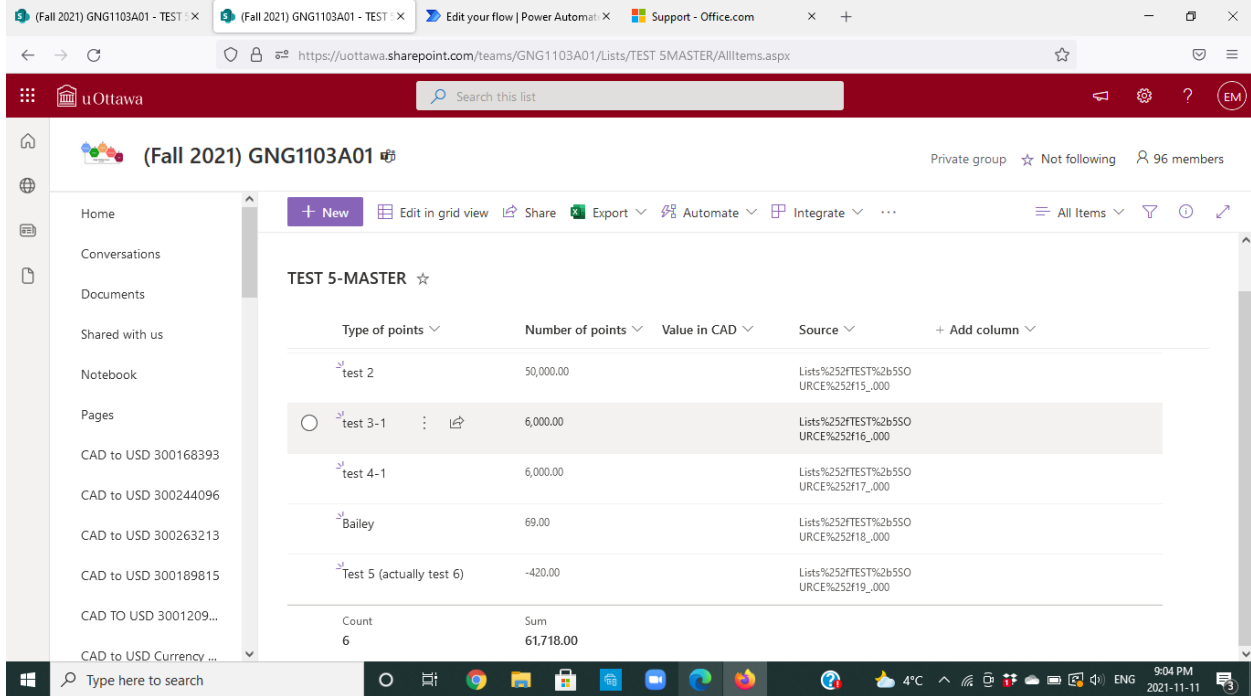


Figure 3 - Master List

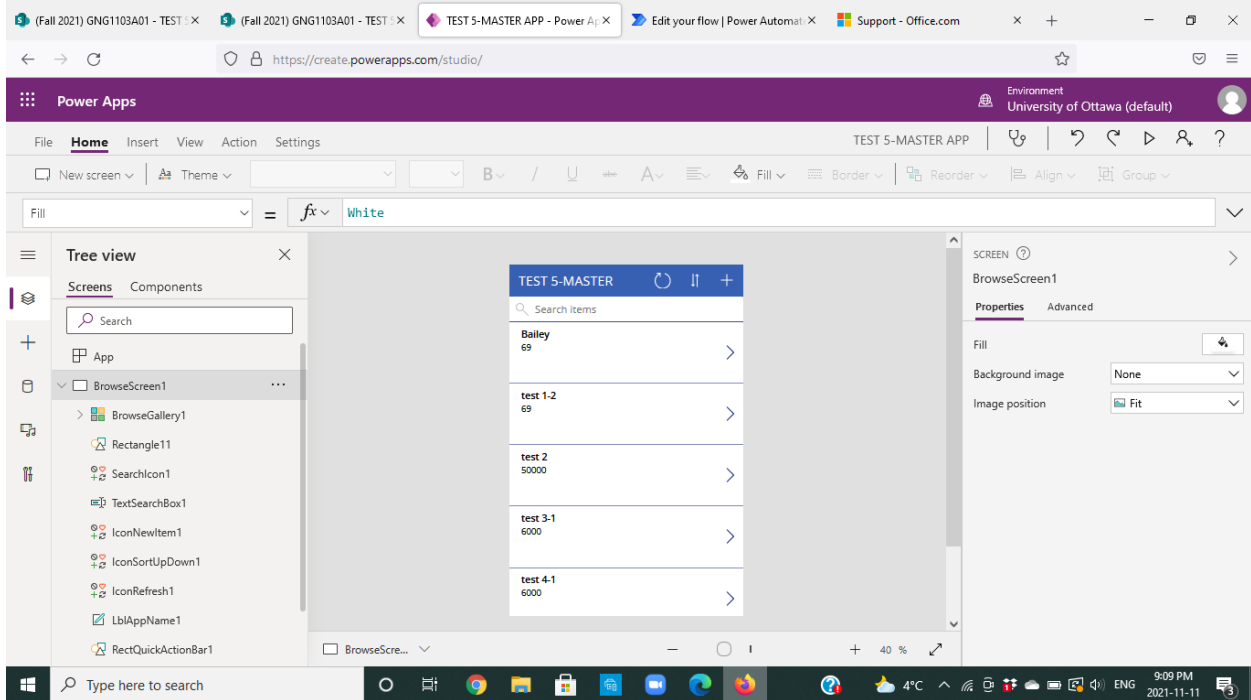
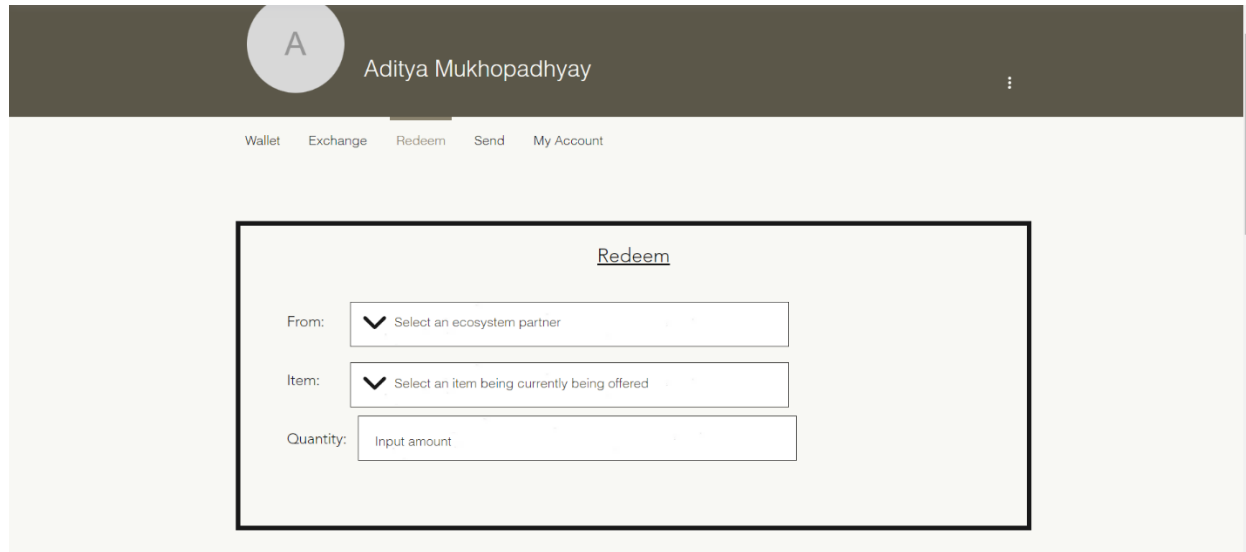


Figure 4 - Master List Power App

Appendix C – WIX Webpage

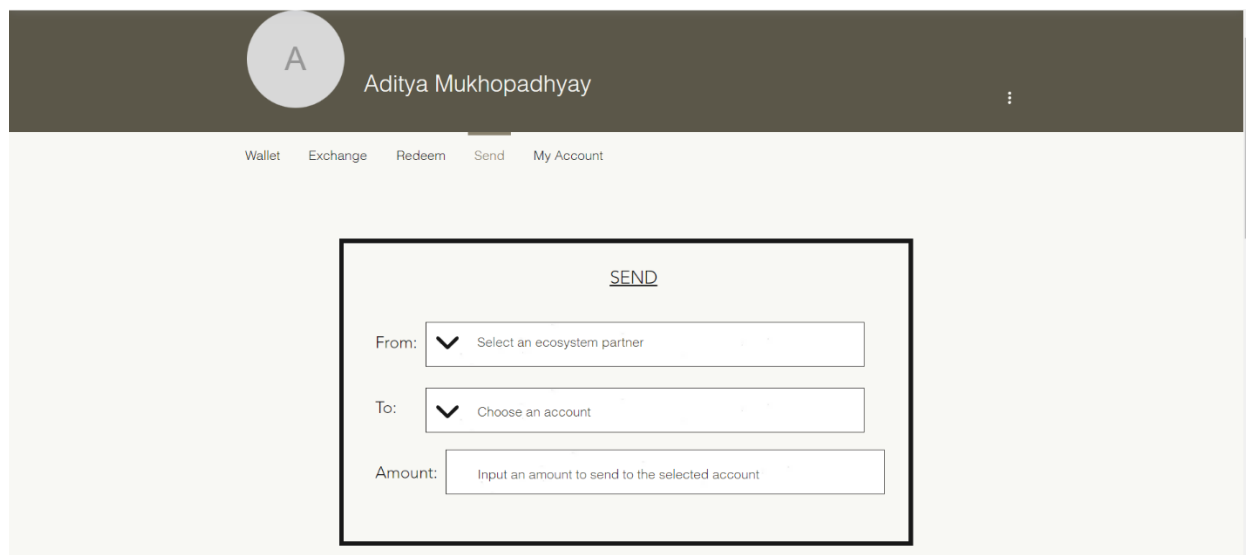
Screenshots of the WIX webpage are included below. Note that in order to view any pages past the “home” page, you must create an account. Use the following link to access the webpage:

<https://amukh058.editorx.io/wallet-xvii>



The screenshot shows the WIX Redeem page. At the top, there is a dark header with a circular profile icon containing the letter 'A' and the name 'Aditya Mukhopadhyay'. Below the header is a navigation menu with the following items: 'Wallet', 'Exchange', 'Redeem', 'Send', and 'My Account'. The 'Redeem' option is highlighted with a red underline. The main content area is titled 'Redeem' and contains three form fields: 'From:' with a dropdown menu labeled 'Select an ecosystem partner', 'Item:' with a dropdown menu labeled 'Select an item being currently being offered', and 'Quantity:' with a text input field labeled 'Input amount'.

Figure 5 - WIX Redeem Page



The screenshot shows the WIX Send page. At the top, there is a dark header with a circular profile icon containing the letter 'A' and the name 'Aditya Mukhopadhyay'. Below the header is a navigation menu with the following items: 'Wallet', 'Exchange', 'Redeem', 'Send', and 'My Account'. The 'Send' option is highlighted with a red underline. The main content area is titled 'SEND' and contains three form fields: 'From:' with a dropdown menu labeled 'Select an ecosystem partner', 'To:' with a dropdown menu labeled 'Choose an account', and 'Amount:' with a text input field labeled 'Input an amount to send to the selected account'.

Figure 6 - WIX Send Page

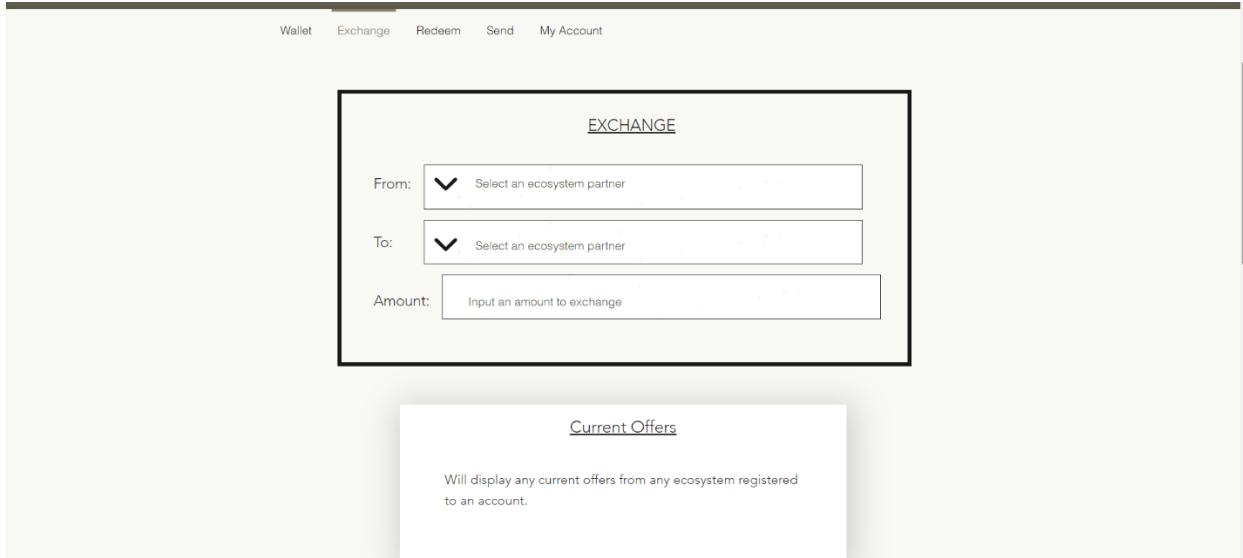


Figure 7 - WIX Exchange Page

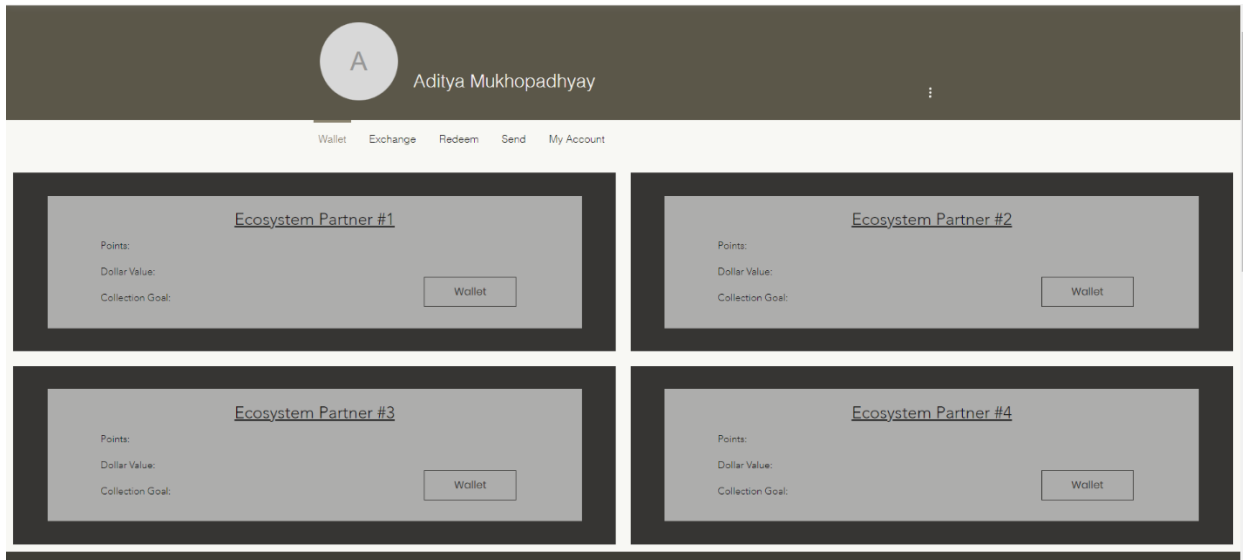


Figure 8 - WIX Wallet Page

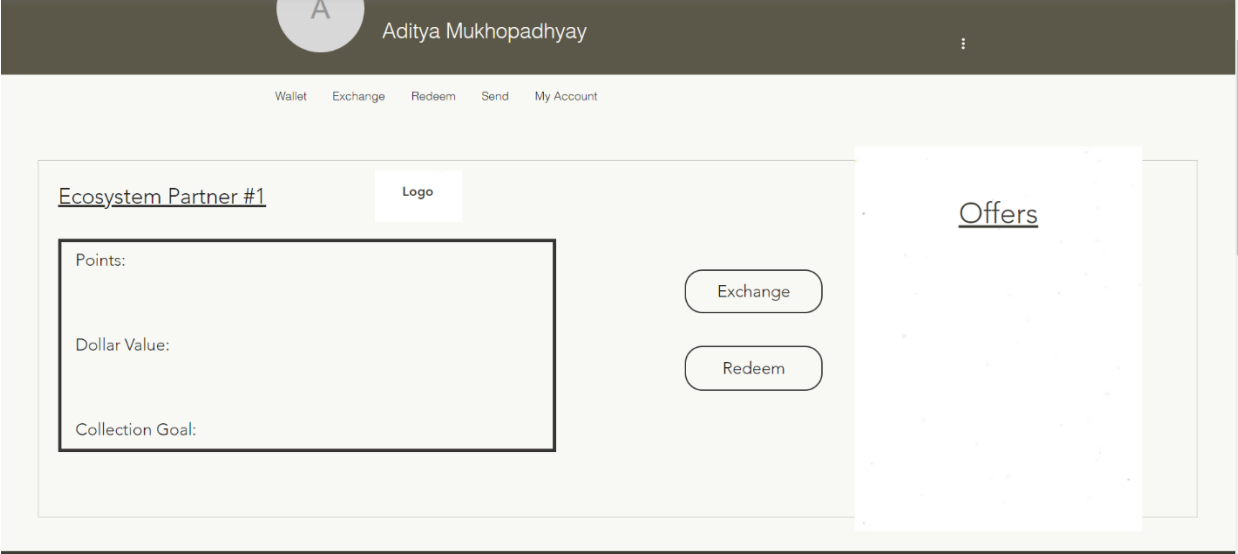


Figure 9 - WIX Wallet: Ecosystem Partner 1