Deliverable F - Prototype 1 and Customer Feedback

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# Introduction

In this deliverable, we made our prototype and tested it according to the test plan outlined in the last deliverable. This document intends to discuss the results and feedback from the prototype. The first section aims to explain the objectives of this prototype, who the test subject is, and what data will be collected from this first test. The subsequent section analyzes the test results, followed by the analysis of the feedback gathered from the potential users. The following section is the plan for the second prototype, followed by its risks and contingencies, which is the last section.

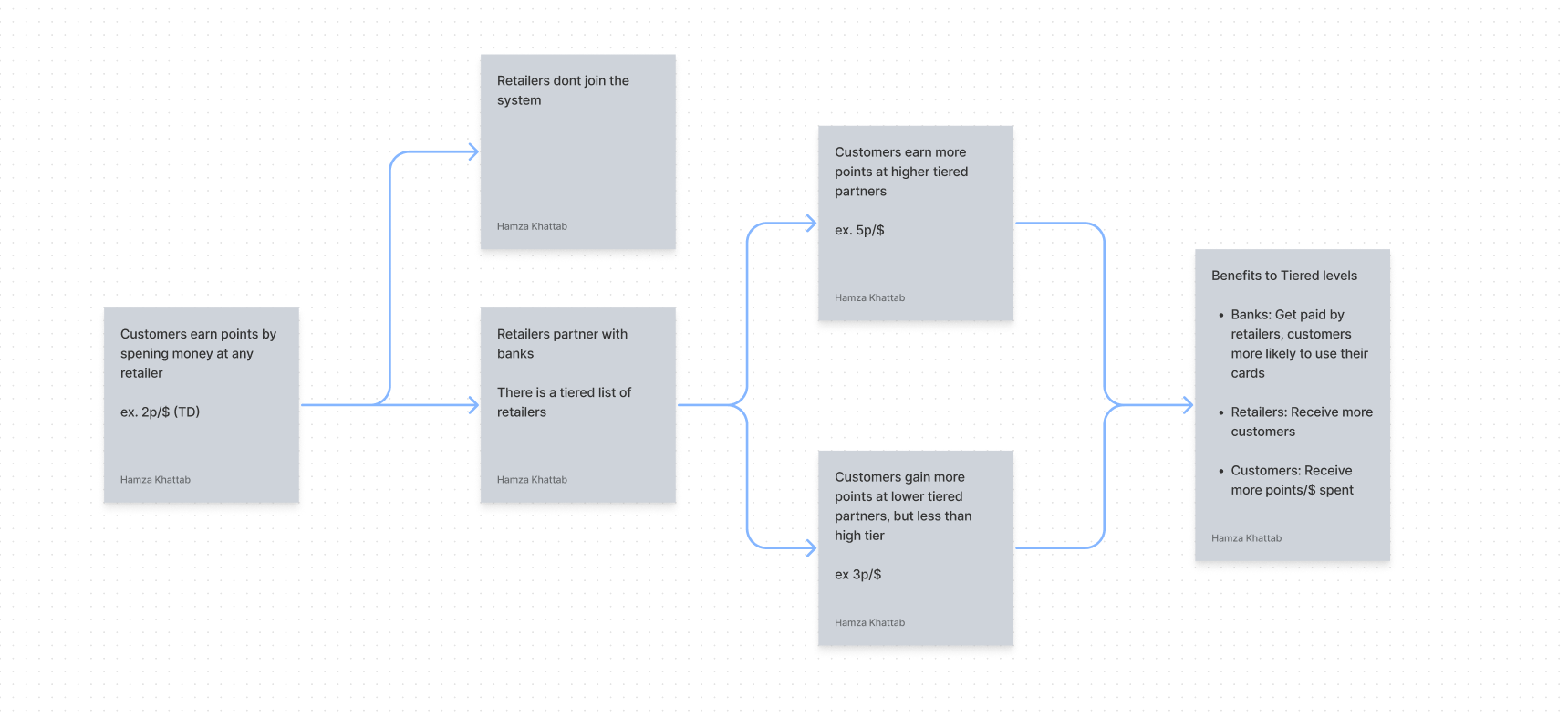
# Objectives

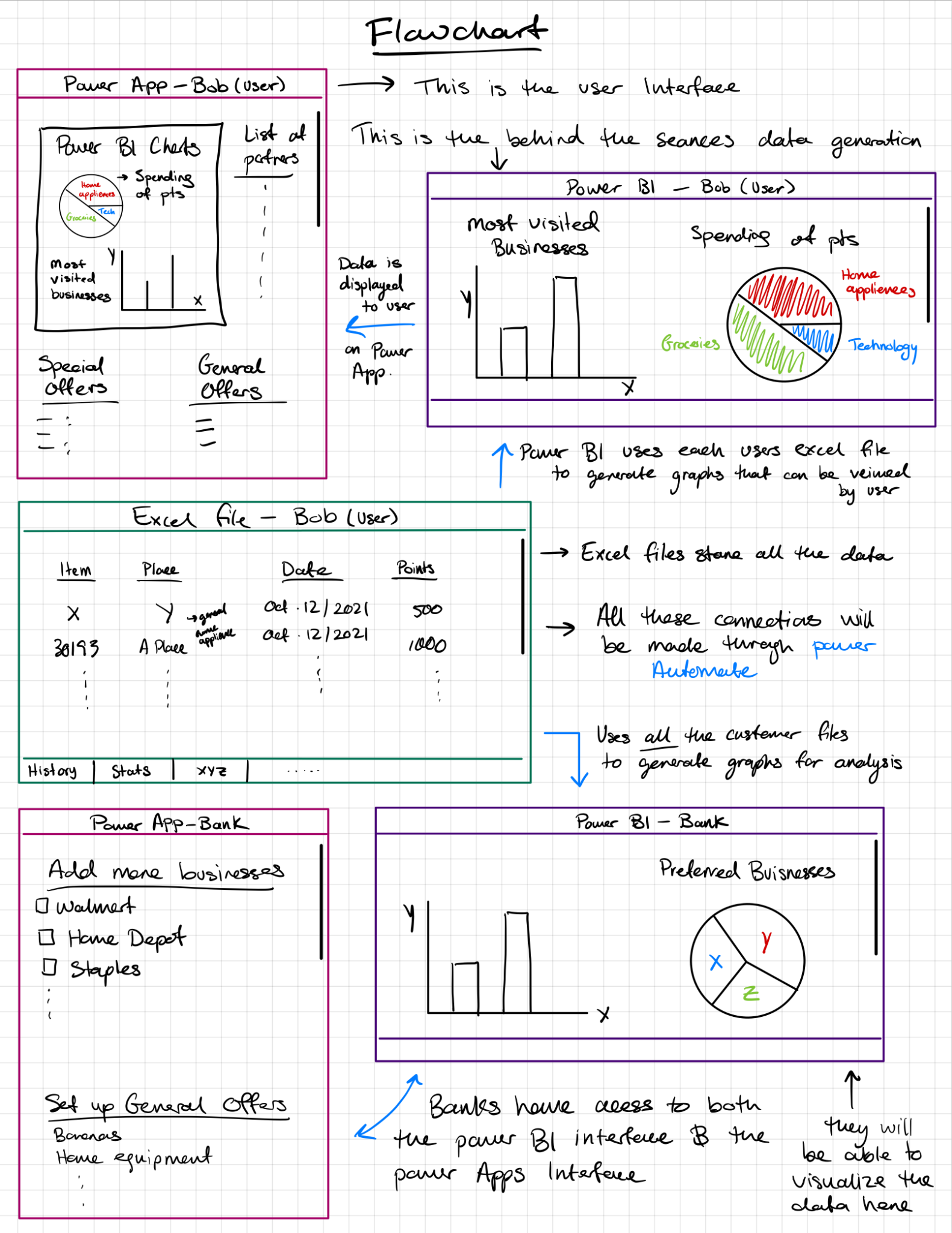
The main goal of this prototype is to get some feedback from potential users so this prototype will be shown to cardholders. We will evaluate our idea by offering them a Figma flowchart that describes the tired partner system idea and a drawing of the overall plan and how different aspects of it connect. Their opinions and suggestions will be interpreted and used to focus/modify our next prototype.

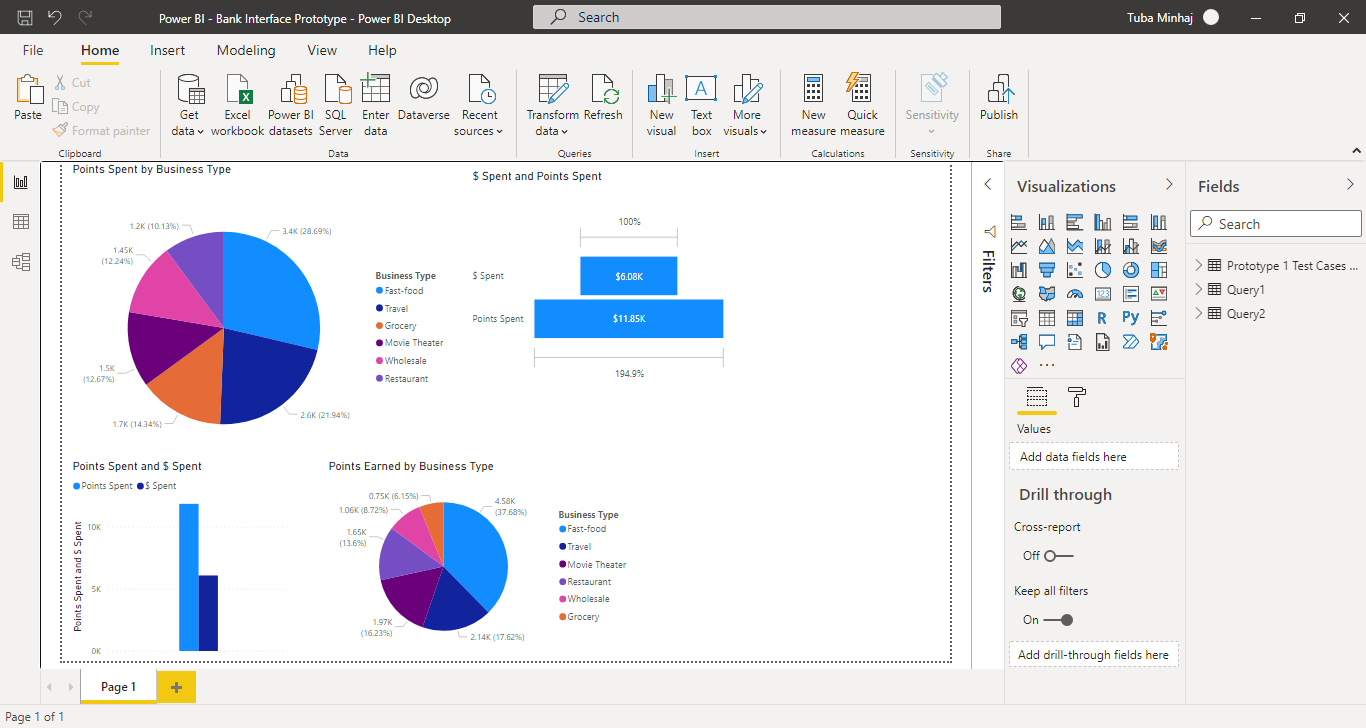
We chose to make a flowchart and drawing so the users can understand how the program will work. Then, the users were asked to read over the picture and flowchart and give their opinions and general feedback. They were also asked if they thought the program was complicated and if they would join the program.

We also made the Power BI section of the idea where when an excel file is updated, the Power BI Dataset will refresh. Therefore, the graphs made off them will be automatically modified to allow for quick analysis. We planned to test this by verifying that when the excel file is updated, the Power BI dataset refreshes and timing how long that takes.

# Analysis

This is the flowchart that was provided to potential users. It gives users a simple explanation of how points are calculated, and how the different businesses that are part of the program might affect the points earned. It also describes some of the benefits that each of the three ‘targets’ might receive.

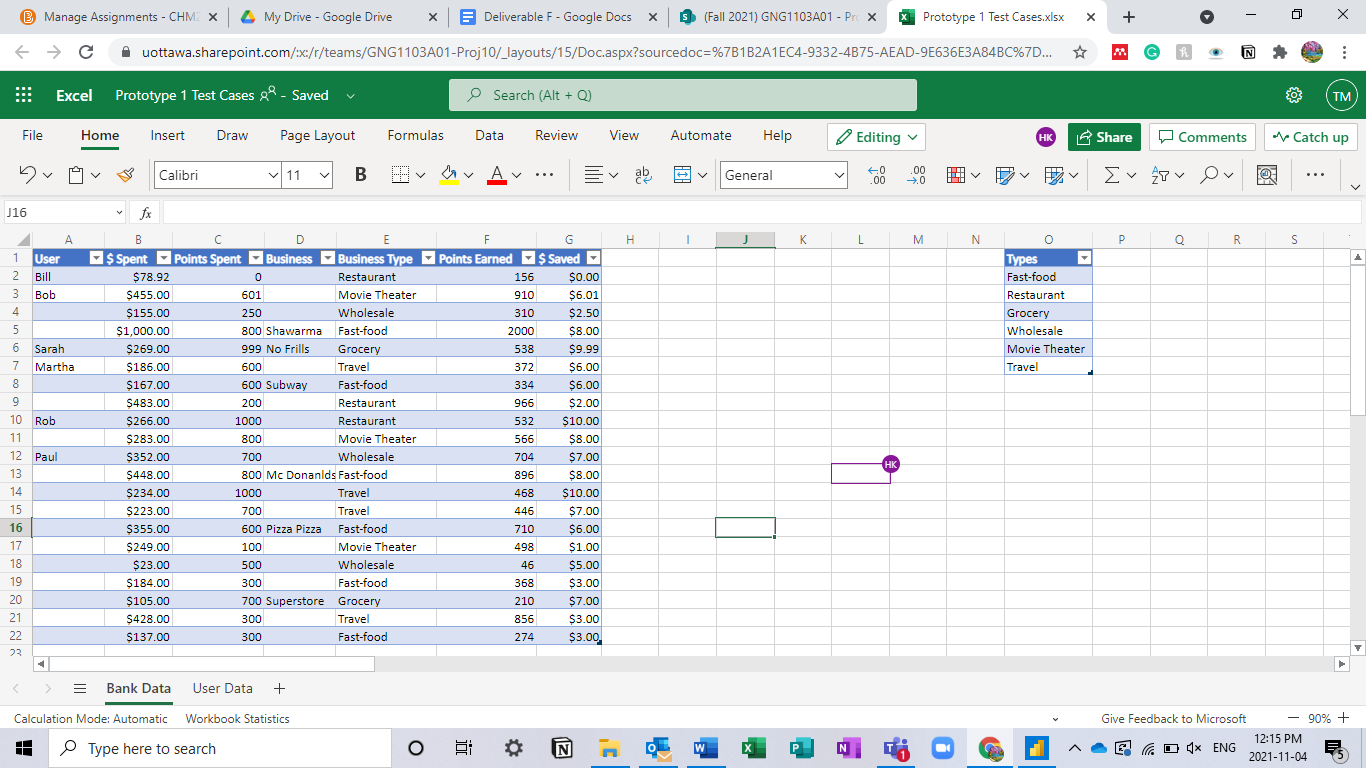
The flowchart below shows all the details of the overall program. This flowchart was also provided to potential users in order to gather more user feedback. We specifically asked for feedback about the data analytics portion of the program. We had them tell us what information they would like to see and what kind of data they did not find significant. This data would then be used to determine what data would be shown to cardholders and what data would be collected by the banks in the final product/prototype.



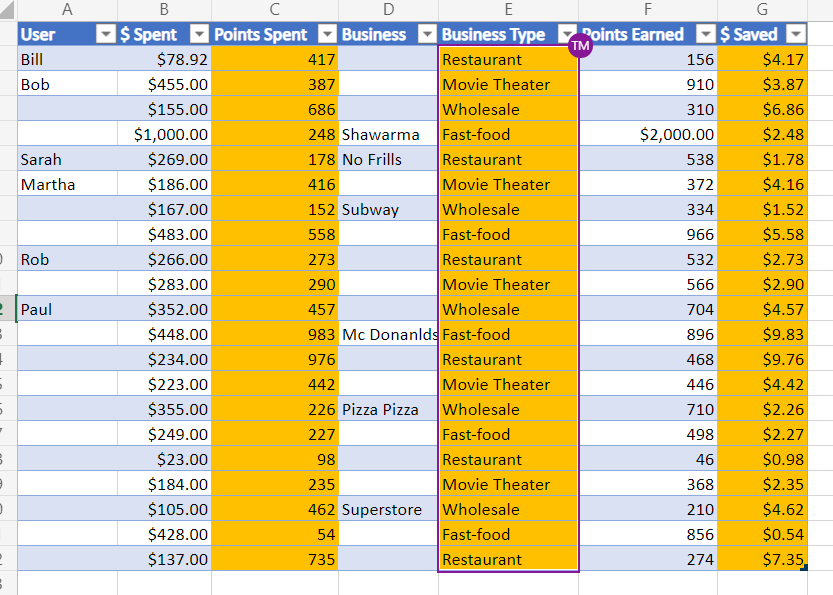
This is the Power BI Interface with some graphs made by test data. On the top left corner is a pie chart, which shows what business type the points were spent, where most users like to spend their points. Next, the bar chart shows how many points were spent versus how many dollars were spent. This way, the banks will know whether their loyalty program is successful or not by seeing if customers redeem their points. Finally, the last chart is a pie graph of what business types the users like to earn their points from.

# Test Results

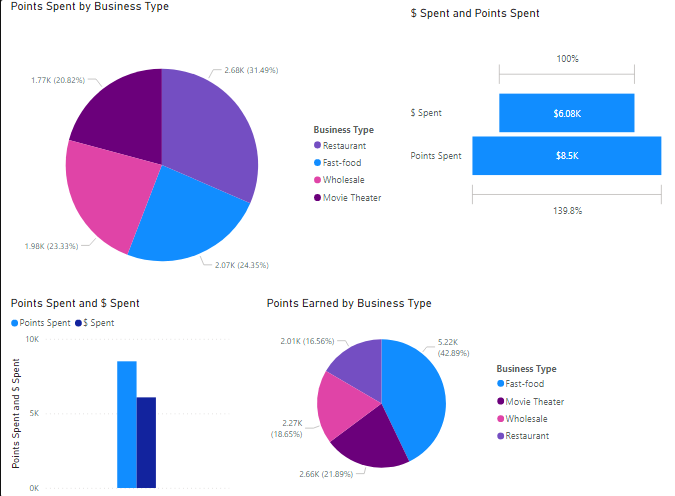
This test aims to see if the Power BI charts will update if there is a change in the excel file. We also looked at the refresh rate between the Excel file and the Power BI graphs.



This is what the excel file looked like to generate the graphs shown in the last section. The points spent column will be modified with random values, and since the points earned and $ saved are calculated based on that column, they will be adjusted automatically. The Business type of each row will also be modified to demonstrate these changes further.



Above is the new data. The columns that were changed are highlighted in orange.



It is noticeable that the grocery and travel business types are not among where the points are spent, so they aren’t shown on the chart when the data is updated, and there is a smaller difference in height with this second bar chart than the updated one. This process to refresh the data and update the graphs took less than 2 minutes.

On Power BI, we found that the data is automatically refreshed every hour via SharePoint. However, there is also an option to manually refresh the data directly through Power BI. This is important as it allows for different refresh rates depending on the importance/relevance of the data. (For the sake of this test, we refreshed it manually, but it would have refreshed on its own.)

# Feedback

The feedback that I (Tuba) received was relatively positive. Both of the people that I asked said that the tiered partner system was a good idea and that they would join the loyalty program since no matter where they spend money, they can gather points, so it was convenient for them. When I asked them about what data they would like to see, one of them said that they would want to see where they save the most money by using points, and the other one said that it would be cool if there were a way to filter the data that they see by business, or date, account, etc. So for the second suggestion, we can do something like that in Power BI; it’s called the slicer, so we will incorporate that into our next prototype.

Another focus group provided different results overall. This group was shown the block diagram/flowchart for the tiered partner system and the Power BI interface. Most of their comments were aesthetic in nature. They mentioned that the Power BI interface felt somewhat cluttered. However, they enjoyed the colour scheme and individual graphs. If they would redesign it, they would change the layout of the charts but would keep the content mostly the same. On top of Power BI, the focus group commented on our flowchart. They believed that it outlined a powerful path forward for our solution and helped them better understand the group as a whole.

# Test Plan For Prototype 2

| Test ID and Priority | 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 | Testing/  Analyzing  Implementation of Businesses | Using Excel, create a low fidelity, simple prototype of the Implementation of businesses.  (Tiered Partners) | * Test the addition and removal of businesses from list of partners * Test the creation and removal of tiers * Test assigning of tiers to partners * Test changes in point calculations brought about by different tiers | Nov 4 - Nov 11 |
| 2 | Test connection between Power Apps/Flow and the Implementation of Businesses | Use Power Flow and Power Apps to implement new business partners | * Test the connection between UI (Power Apps) and the program (Excel file) * To test the feasibility of automating the implementation of businesses | Nov 4 - Nov 11 |
| 3 | Connect Implementation of Businesses to Data Analytics  (Prototype 1 to Prototype 2) | Use Power Flow and other potential software to connect the two prototypes | * Test to see the feasibility of combining both prototypes in the time constraint * Test to see if the implementation of businesses will change Data analytics   + Ex. Different amounts of points earned/money saved at different tiers * Test to see the time it takes for a prototype to update when the other is changed | Nov 4 - Nov 11 |

# Conclusion

Overall, the work done related to this deliverable has helped provide real-world details to our speculative concepts. In addition, we received invaluable feedback that provided a new perspective on topics that our group has worked independently on so far. Specifically, we plan to adapt our current design by improving the general UI layout and including a data filter to make it easier to interpret given information. With the feedback and experience gained through this process, we feel confident in approaching our future prototypes. We believe that they will serve to even further develop our concept on top of bringing us closer to the final product.