

Project Deliverable F: Prototype I

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Prototype I

Two individual elements have been created for Prototype I, according to the Prototyping Plan developed in Deliverable E. The elements are representative of the front- and back-ends of the proposed software. See details below:

1. C Program: A low-fidelity program has been developed using the C coding language that can perform the base functions identified in the selected Global Concept (Deliverable D). The goal of this prototype element is to test the logic behind each sub-system and ensure that they are all able to work in parallel to produce the desired output. The sub-systems developed are as follows: Store Points, Exchange Points, Redeem Points (points to cash), Send Points (user to user), Grand Points System (view insights). This element was created using Code Blocks software, with the intention of transferring the logic used into a Power Apps format for Prototype II. The full C code and relevant screenshots can be found in **Appendix B – C Program**.
2. WIX Webpage: An interactive webpage has been created and published using a free webpage editor called WIX. It was identified that, in order to properly perform UX testing on our proposed User Interface from the sketches in Deliverable E, an interactive solution was required. With this interactive UI, more comprehensive feedback can be solicited from testers. This feedback will be analyzed, and then incorporated into the Power Apps version of the software for Prototype II. A link to the webpage and relevant screenshots can be found in **Appendix C – WIX Webpage**.

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.
Store Points	Functional.
Exchange Points	Functional, but need to indicate current point amount.
Redeem Points	Functional, but need to indicate current point amount.
Send Points	Functional, but need to indicate current point amount.
View Insights	Functional. Needed to combine all C Program subsystems into one to be able to fetch and display data.

Test Results and Updated Prototyping Test Plan

The elements of Prototype I 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 II, 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 C Code are included in Appendix.

Table 2 - Test Results

Test Parameter	Test Result
Test ID 1	Logic is functional, as program can run without errors. The program produces the desired outputs without errors.
Test ID 2	<ol style="list-style-type: none"> 1. On the "Trade", "Redeem", and "exchange" tabs, there should be a text input box beside "amount". 2. Under "wallet", add Ecosystem Partner Number to be able to distinguish them.

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	Check the running memory size of the software.	Make sure that the software's running memory is not too large, so that some customers cannot be downloaded.	Record the questions, comments of each customer.	10/24/21- 10/31/21
3	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 have been made. Use the following link to access Wrike:

<https://www.wrike.com/open.htm?id=761228072>

Appendix B – C Program

1. Storage of points code

```
#include <stdio.h>
#include <stdlib.h>

int main()
{
    float pc=0, aerop=0, scene=0, timsr=0;
    int x=0;
    float earned=0;
    while(x==0)
    {
        printf("\n***\nWhat type of points did you earn?\n");
        printf ("Please enter 1 for PC points\n");
        printf ("Please enter 2 for Aeroplan points\n");
        printf ("Please enter 3 for Scene points\n");
        printf ("Please enter 4 for Tims Reward points\n");
        printf ("Enter 5 to end the program\n");
        scanf("%d", &x);
        switch(x)
        {
            case 1:
                {
                    printf("Please enter the number of PC points you earned.\n");
                    scanf("%f", &earned);
                    pc=pc+earned;
                    printf("you now have %f PC points\n", pc);
                    earned=0;
                    x=0;
                    break;
                }
        }
    }
}
```

```
}
```

```
case 2:
```

```
{
```

```
    printf("Please enter the number of Areoplan points you earned.\n");
```

```
    scanf("%f", &earned);
```

```
    aerop=aerop+earned;
```

```
    printf("you now have %f Aeroplan points\n", aerop);
```

```
    earned=0;
```

```
    x=0;
```

```
    break;
```

```
}
```

```
case 3:
```

```
{
```

```
    printf("Please enter the number of Scene points you earned.\n");
```

```
    scanf("%f", &earned);
```

```
    scene=scene+earned;
```

```
    printf("you now have %f Scene points\n", scene);
```

```
    earned=0;
```

```
    x=0;
```

```
    break;
```

```
}
```

```
case 4:
```

```
{
```

```
    printf("Please enter the number of Tims Reward points you earned.\n");
```

```
    scanf("%f", &earned);
```

```
    timsr=timsr+earned;
```

```
    printf("you now have %f PC points\n", timsr);
```

```
    earned=0;
```

```
    x=0;
```

```
    break;
```

```

    }
    default:
    {
        x=10;
    }
}
}
x=0;
return 0;
}

```

2. Exchanging points to other points

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
int main()
```

```
{
```

```
float pc=0, aerop=0, scene=0, timsr=0;
```

```
int x=1, y=0;
```

```
float exchanged=0;
```

```
float bankprofit=0;
```

```
while(x==1)
```

```
{
```

```
printf("\n***\nWhat type of points would like to exchange?\n");
```

```
printf ("Please enter 1 for PC points\n");
```

```
printf ("Please enter 2 for Aeroplan points\n");
```

```
printf ("Please enter 3 for Scene points\n");
```

```
printf ("Please enter 4 for Tims Reward points\n");
```

```
printf ("Enter 5 to end the program\n");
```

```
scanf("%d", &x);
```

```

switch(x)
{
case(1):
{
printf("Please enter the number of PC points you want to exchange.\n");
scanf("%f", &exchanged);
pc=pc-exchanged;
bankprofit=bankprofit+((exchanged*0.05)*0.001);
exchanged=exchanged*0.95;
printf("What type of points do you want to turn these points into?\n");
printf ("Please enter 1 for Aeroplan points points\n");
printf ("Please enter 2 for Scene points points\n");
printf ("Please enter 3 for Tims Reward points points\n");
scanf("%d", &y);
switch(y)
{
case(1):
{
aerop=aerop+(exchanged/20);
printf("you now have %f Aeroplan points\n", aerop);
break;
}
case(2):
{
scene=scene+(exchanged/10);
printf("you now have %f Scene points\n", scene);
break;
}
case(3):

```



```

    {
        timsr=timsr+(exchanged/35.6);
        printf("you now have %f Tims Reward points\n", timsr);
        break;
    }
}
printf("you now have %f PC points\n", pc);
x=1;
break;
}
case(2):
{
    printf("Please enter the number of Aeroplan points you want to exchange.\n");
    scanf("%f", &exchanged);
    aerop=aerop-exchanged;
    bankprofit=bankprofit+((exchanged*0.05)*0.02);
    exchanged=exchanged*0.95;
    printf("What type of points do you want to turn these points into?\n");
    printf ("Please enter 1 for PC points points\n");
    printf ("Please enter 2 for Scene points points\n");
    printf ("Please enter 3 for Tims Reward points points\n");
    scanf("%d", &y);
    switch(y)
    {
        case(1):
        {
            pc=pc+(exchanged*20);
            printf("you now have %f PC points\n", pc);
            break;
        }
    }
}

```

```

}
case(2):
{
    scene=scene+(exchanged*2);
    printf("you now have %f Scene points\n", scene);
    break;
}
case(3):
{
    timsr=timsr+(exchanged/1.78);
    printf("you now have %f Tims Reward points\n", timsr);
    break;
}
}
printf("you now have %f Aeroplan points\n", aerop);
x=1;
break;
}
case(3):
{
    printf("Please enter the number of Scene points you want to exchange.\n");
    scanf("%f", &exchanged);
    scene=scene-exchanged;
    bankprofit=bankprofit+((exchanged*0.05)*0.01);
    exchanged=exchanged*0.95;
    printf("What type of points do you want to turn these points into?\n");
    printf ("Please enter 1 for PC points points\n");
    printf ("Please enter 2 for Aeroplan points points\n");
    printf ("Please enter 3 for Tims Reward points points\n");
}

```

```
scanf("%d", &y);
switch(y)
{
    case(1):
    {
        pc=pc+(exchanged*10);
        printf("you now have %f PC points\n", pc);
        break;
    }
    case(2):
    {
        aerop=aerop+(exchanged/2);
        printf("you now have %f Areoplan points\n", aerop);
        break;
    }
    case(3):
    {
        timsr=timsr+(exchanged/3.56);
        printf("you now have %f Tims Reward points\n", timsr);
        break;
    }
}
printf("you now have %f Scene points\n", scene);
x=1;
break;
}
case(4):
{
    printf("Please enter the number of Tims Reward points you want to exchange.\n");
```

```
scanf("%f", &exchanged);
timsr=timsr-exchanged;
bankprofit=bankprofit+((exchanged*0.05)*0.0356);
exchanged=exchanged*0.95;
printf("What type of points do you want to turn these points into?\n");
printf ("Please enter 1 for PC points points\n");
printf ("Please enter 2 for Aeroplan points points\n");
printf ("Please enter 3 for Scene points points\n");
scanf("%d", &y);
switch(y)
{
    case(1):
    {
        pc=pc+(exchanged*35.6);
        printf("you now have %f PC points\n", pc);
        break;
    }
    case(2):
    {
        aerop=aerop+(exchanged*1.78);
        printf("you now have %f Areoplan points\n", aerop);
        break;
    }
    case(3):
    {
        scene=scene+(exchanged*3.56);
        printf("you now have %f Scene points\n", scene);
        break;
    }
}
```

```

    }
    printf("you now have %f Tims Reward points\n", timsr);
    x=1;
    break;
}
default:
{
    x=10;
}
}
}
printf("the bank has made %f CAD off of exchanges", bankprofit);
return 0;
}

```

3. Redeem points

```

#include <stdio.h>
#include <stdlib.h>

int main()
{
    float pc=0, aerop=0, scene=0, timsr=0, CAD=0;
    int x=2;
    float amountconvert=0;
    float bankprofit=0;
    while(x==2)
    {
        printf ("\n***\nPlease enter the type of points you want to convert.\n");
        printf ("Please enter 1 for PC points\n");
        printf ("Please enter 2 for Aeroplan points\n");
    }
}

```

```
printf ("Please enter 3 for Scene points points\n");
printf ("Please enter 4 for Tims Reward points points\n");
printf ("Enter 5 to end the program\n");
scanf("%d", &x);
switch(x)
{
  case(1):
  {
    printf("Please enter the amount of money you want to convert in CAD\n");
    scanf("%f", &amountconvert);
    bankprofit=bankprofit+(amountconvert*0.05);
    CAD=CAD+amountconvert;
    pc=pc-((amountconvert*1000)*1.05);
    printf("you now have %f PC points\n", pc);
    printf("you now have %f CAD\n", CAD);
    x=2;
    break;
  }
  case(2):
  {
    printf("Please enter the amount of money you want to convert in CAD\n");
    scanf("%f", &amountconvert);
    bankprofit=bankprofit+(amountconvert*0.05);
    CAD=CAD+amountconvert;
    aerop=aerop-((amountconvert*50)*1.05);
    printf("you now have %f Aeroplan points\n", aerop);
    printf("you now have %f CAD\n", CAD);
    x=2;
    break;
  }
}
```

```

}
case(3):
{
    printf("Please enter the amount of money you want to convert in CAD\n");
    scanf("%f", &amountconvert);
    bankprofit=bankprofit+(amountconvert*0.05);
    CAD=CAD+amountconvert;
    scene=scene-((amountconvert*100)*1.05);
    printf("you now have %f Scene points\n", scene);
    printf("you now have %f CAD\n", CAD);
    x=2;
    break;
}
case(4):
{
    printf("Please enter the amount of money you want to convert in CAD\n");
    scanf("%f", &amountconvert);
    bankprofit=bankprofit+(amountconvert*0.05);
    CAD=CAD+amountconvert;
    timsr=timsr-((amountconvert*28.08)*1.05);
    printf("you now have %f Tims Reward points\n", timsr);
    printf("you now have %f CAD\n", CAD);
    x=2;
    break;
}
default:
{
    x=10;
}

```

```

    }
}

printf("the bank has made %f CAD off of conversions", bankprofit);

return 0;
}

```

4. Sending points

```

#include <stdio.h>
#include <stdlib.h>

int main()
{
    float pc=0, aerop=0, scene=0, timsr=0;
    int x=3;
    float amountsend=0, CADsent=0, bankprofit=0;
    while(x==3)
    {
        printf ("\n***\nWhat type of points do you want to send?\n");
        printf ("Please enter 1 for PC points\n");
        printf ("Please enter 2 for Aeroplan points\n");
        printf ("Please enter 3 for Scene points\n");
        printf ("Please enter 4 for Tims Reward points\n");
        printf ("Enter 5 to end the program\n");
        scanf("%d", &x);
        switch(x)
        {
            case(1):
            {
                printf("Please enter the amount of money you want to send in CAD\n");
                scanf("%f", &amountsend);
            }
        }
    }
}

```



```

bankprofit=bankprofit+(amountsend*0.02);
CADsent=CADsent+amountsend;
pc=pc-((amountsend*1000)*1.02);
printf("you now have %f PC points\n", pc);
printf("you now have sent %f CAD\n", CADsent);
x=3;
break;
}
case(2):
{
printf("Please enter the amount of money you want to send in CAD\n");
scanf("%f", &amountsend);
bankprofit=bankprofit+(amountsend*0.02);
CADsent=CADsent+amountsend;
aerop=aerop-((amountsend*50)*1.02);
printf("you now have %f Aeroplan points\n", aerop);
printf("you now have sent %f CAD\n", CADsent);
x=3;
break;
}
case(3):
{
printf("Please enter the amount of money you want to send in CAD\n");
scanf("%f", &amountsend);
bankprofit=bankprofit+(amountsend*0.02);
CADsent=CADsent+amountsend;
scene=scene-((amountsend*100)*1.02);
printf("you now have %f Scene points\n", scene);
printf("you now have sent %f CAD\n", CADsent);
}

```

```

        x=3;
        break;
    }
    case(4):
    {
        printf("Please enter the amount of money you want to send in CAD\n");
        scanf("%f", &amountsend);
        bankprofit=bankprofit+(amountsend*0.02);
        CADsent=CADsent+amountsend;
        timsr=timsr-((amountsend*28.08)*1.02);
        printf("you now have %f Tims Reward points\n", timsr);
        printf("you now have sent %f CAD\n", CADsent);
        x=3;
        break;
    }
    default:
    {
        x=10;
    }
}
printf("the bank has made %f CAD off of points sent", bankprofit);
return 0;
}

```

5. The grand points system, this is an amalgamation of systems 1 – 4 and has a report function to show what the user is doing with their points and how much money the bank has made.

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```

int main()
{
    float pc=0, aerop=0, scene=0, timsr=0;
    float CADsent=0, CAD=0;
    float earned=0, exchanged=0, amountconvert=0, amountsend=0;
    float earnedPC=0, earnedAP=0, earnedSP=0, earnedTR=0;
    float exchangedPC=0, exchangedAP=0, exchangedSP=0, exchangedTR=0;
    float convertPC=0, convertAP=0, convertSP=0, convertTR=0;
    float sendPC=0, sendAP=0, sendSP=0, sendTR=0;
    float bankprofit=0;
    int x=10, y=0;
    while(x==10)
    {
        printf("\n*****\n");
        printf("Please enter what action you want to take.\n");
        printf("Enter 1 for storing points\n");
        printf("Enter 2 for exchanging points\n");
        printf("Enter 3 for convert to CAD points\n");
        printf("Enter 4 for sending points\n");
        printf("Enter 5 for a points report\n");
        printf("Enter 6 to end the program\n");
        scanf("%d", &x);
        switch(x)
        {
            case(1):
            {
                x=0;
                while(x==0)
                {

```

```

printf ("\n***\nWhat type of points did you earn?\n");
printf ("Please enter 1 for PC points\n");
printf ("Please enter 2 for Aeroplan points\n");
printf ("Please enter 3 for Scene points\n");
printf ("Please enter 4 for Tims Reward points\n");
printf ("Enter 5 to return\n");
scanf("%d", &x);
switch(x)
{
    case 1:
    {
        printf("Please enter the number of PC points you earned.\n");
        scanf("%f", &earned);
        earnedPC=earnedPC+earned;
        pc=pc+earned;
        printf("you now have %f PC points\n", pc);
        earned=0;
        x=0;
        break;
    }
    case 2:
    {
        printf("Please enter the number of Areoplan points you earned.\n");
        scanf("%f", &earned);
        earnedAP=earnedAP+earned;
        aerop=aerop+earned;
        printf("you now have %f Aeroplan points\n", aerop);
        earned=0;
        x=0;
    }
}

```

```
        break;
    }
    case 3:
    {
        printf("Please enter the number of Scene points you earned.\n");
        scanf("%f", &earned);
        earnedSP=earnedSP+earned;
        scene=scene+earned;
        printf("you now have %f Scene points\n", scene);
        earned=0;
        x=0;
        break;
    }
    case 4:
    {
        printf("Please enter the number of Tims Reward points you earned.\n");
        scanf("%f", &earned);
        earnedTR=earnedTR+earned;
        timsr=timsr+earned;
        printf("you now have %f PC points\n", timsr);
        earned=0;
        x=0;
        break;
    }
    default:
    {
        x=10;
    }
}
```

```

    }
break;
}
case(2):
{
    x=1;
    while(x==1)
    {
        printf ("\n***\nWhat type of points would like to exchange?\n");
        printf ("Please enter 1 for PC points\n");
        printf ("Please enter 2 for Aeroplan points\n");
        printf ("Please enter 3 for Scene points\n");
        printf ("Please enter 4 for Tims Reward points\n");
        printf ("Enter 5 to return\n");
        scanf("%d", &x);
        switch(x)
        {
            case(1):
            {
                printf("Please enter the number of PC points you want to exchange.\n");
                scanf("%f", &exchanged);
                exchangedPC=exchangedPC+exchanged;
                pc=pc-exchanged;
                bankprofit=bankprofit+((exchanged*0.05)*0.001);
                exchanged=exchanged*0.95;
                printf("What type of points do you want to turn these points into?\n");
                printf ("Please enter 1 for Aeroplan points\n");
                printf ("Please enter 2 for Scene points\n");
                printf ("Please enter 3 for Tims Reward points\n");
            }
        }
    }
}

```

```

scanf("%d", &y);
switch(y)
{
    case(1):
    {
        aerop=aerop+(exchanged/20);
        printf("you now have %f Aeroplan points\n", aerop);
        break;
    }
    case(2):
    {
        scene=scene+(exchanged/10);
        printf("you now have %f Scene points\n", scene);
        break;
    }
    case(3):
    {
        timsr=timsr+(exchanged/35.6);
        printf("you now have %f Tims Reward points\n", timsr);
        break;
    }
}
printf("you now have %f PC points\n", pc);
x=1;
break;
}
case(2):
{
    printf("Please enter the number of Aeroplan points you want to exchange.\n");
}

```

```
scanf("%f", &exchanged);
exchangedAP=exchangedAP+exchanged;
aerop=aerop-exchanged;
bankprofit=bankprofit+((exchanged*0.05)*0.02);
exchanged=exchanged*0.95;
printf("What type of points do you want to turn these points into?\n");
printf ("Please enter 1 for PC points points\n");
printf ("Please enter 2 for Scene points points\n");
printf ("Please enter 3 for Tims Reward points points\n");
scanf("%d", &y);
switch(y)
{
    case(1):
    {
        pc=pc+(exchanged*20);
        printf("you now have %f PC points\n", pc);
        break;
    }
    case(2):
    {
        scene=scene+(exchanged*2);
        printf("you now have %f Scene points\n", scene);
        break;
    }
    case(3):
    {
        timsr=timsr+(exchanged/1.78);
        printf("you now have %f Tims Reward points\n", timsr);
        break;
    }
}
```



```

    }
}
printf("you now have %f Aeroplan points\n", aerop);
x=1;
break;
}
case(3):
{
    printf("Please enter the number of Scene points you want to exchange.\n");
    scanf("%f", &exchanged);
    exchangedSP=exchangedSP+exchanged;
    scene=scene-exchanged;
    bankprofit=bankprofit+((exchanged*0.05)*0.01);
    exchanged=exchanged*0.95;
    printf("What type of points do you want to turn these points into?\n");
    printf ("Please enter 1 for PC points points\n");
    printf ("Please enter 2 for Aeroplan points points\n");
    printf ("Please enter 3 for Tims Reward points points\n");
    scanf("%d", &y);
    switch(y)
    {
        case(1):
        {
            pc=pc+(exchanged*10);
            printf("you now have %f PC points\n", pc);
            break;
        }
        case(2):
        {

```

```

        aerop=aerop+(exchanged/2);
        printf("you now have %f Areoplan points\n", aerop);
        break;
    }
    case(3):
    {
        timsr=timsr+(exchanged/3.56);
        printf("you now have %f Tims Reward points\n", timsr);
        break;
    }
}
printf("you now have %f Scene points\n", scene);
x=1;
break;
}
case(4):
{
    printf("Please enter the number of Tims Reward points you want to exchange.\n");
    scanf("%f", &exchanged);
    exchangedTR=exchangedTR+exchanged;
    timsr=timsr-exchanged;
    bankprofit=bankprofit+((exchanged*0.05)*0.0356);
    exchanged=exchanged*0.95;
    printf("What type of points do you want to turn these points into?\n");
    printf ("Please enter 1 for PC points points\n");
    printf ("Please enter 2 for Aeroplan points points\n");
    printf ("Please enter 3 for Scene points points\n");
    scanf("%d", &y);
    switch(y)

```

```
{
  case(1):
  {
    pc=pc+(exchanged*35.6);
    printf("you now have %f PC points\n", pc);
    break;
  }
  case(2):
  {
    aerop=aerop+(exchanged*1.78);
    printf("you now have %f Areoplan points\n", aerop);
    break;
  }
  case(3):
  {
    scene=scene+(exchanged*3.56);
    printf("you now have %f Scene points\n", scene);
    break;
  }
}
printf("you now have %f Tims Reward points\n", timsr);
x=1;
break;
}
default:
{
  x=10;
}
}
```

```

    }
    break;
}
case(3):
{
    x=2;
    while(x==2)
    {
        printf ("\n***\nPlease enter the type of points you want to convert.\n");
        printf ("Please enter 1 for PC points\n");
        printf ("Please enter 2 for Aeroplan points\n");
        printf ("Please enter 3 for Scene points\n");
        printf ("Please enter 4 for Tims Reward points\n");
        printf ("Enter 5 to return\n");
        scanf("%d", &x);
        switch(x)
        {
            case(1):
            {
                printf("Please enter the amount of money you want to convert in CAD\n");
                scanf("%f", &amountconvert);
                convertPC=convertPC+((amountconvert*1000)*1.05);
                bankprofit=bankprofit+(amountconvert*0.05);
                CAD=CAD+amountconvert;
                pc=pc-((amountconvert*1000)*1.05);
                printf("you now have %f PC points\n", pc);
                printf("you now have %f CAD\n", CAD);
                x=2;
                break;
            }
        }
    }
}

```

```
}  
case(2):  
{  
    printf("Please enter the amount of money you want to convert in CAD\n");  
    scanf("%f", &amountconvert);  
    convertAP=convertAP+((amountconvert*50)*1.05);  
    bankprofit=bankprofit+(amountconvert*0.05);  
    CAD=CAD+amountconvert;  
    aerop=aerop-((amountconvert*50)*1.05);  
    printf("you now have %f Aeroplan points\n", aerop);  
    printf("you now have %f CAD\n", CAD);  
    x=2;  
    break;  
}  
case(3):  
{  
    printf("Please enter the amount of money you want to convert in CAD\n");  
    scanf("%f", &amountconvert);  
    convertSP=convertSP+((amountconvert*100)*1.05);  
    bankprofit=bankprofit+(amountconvert*0.05);  
    CAD=CAD+amountconvert;  
    scene=scene-((amountconvert*100)*1.05);  
    printf("you now have %f Scene points\n", scene);  
    printf("you now have %f CAD\n", CAD);  
    x=2;  
    break;  
}  
case(4):  
{
```

```

printf("Please enter the amount of money you want to convert in CAD\n");
scanf("%f", &amountconvert);

convertTR=convertTR+((amountconvert*28.08)*1.05);
bankprofit=bankprofit+(amountconvert*0.05);
CAD=CAD+amountconvert;
timsr=timsr-((amountconvert*28.08)*1.05);
printf("you now have %f Tims Reward points\n", timsr);
printf("you now have %f CAD\n", CAD);

x=2;
break;
}
default:
{
x=10;
}
}
}
break;
}
case(4):
{
x=3;
while(x==3)
{
printf ("\n***\nWhat type of points do you want to send?\n");
printf ("Please enter 1 for PC points\n");
printf ("Please enter 2 for Aeroplan points\n");
printf ("Please enter 3 for Scene points\n");
printf ("Please enter 4 for Tims Reward points\n");

```

```

printf ("Enter 5 to return\n");
scanf("%d", &x);
switch(x)
{
case(1):
{
printf("Please enter the amount of money you want to send in CAD\n");
scanf("%f", &amountsend);
sendPC=sendPC+((amountsend*1000)*1.02);
bankprofit=bankprofit+(amountsend*0.02);
CADsent=CADsent+amountsend;
pc=pc-((amountsend*1000)*1.02);
printf("you now have %f PC points\n", pc);
printf("you now have sent %f CAD\n", CADsent);
x=3;
break;
}
case(2):
{
printf("Please enter the amount of money you want to send in CAD\n");
scanf("%f", &amountsend);
sendAP=sendAP+((amountsend*50)*1.02);
bankprofit=bankprofit+(amountsend*0.02);
CADsent=CADsent+amountsend;
aerop=aerop-((amountsend*50)*1.02);
printf("you now have %f Aeroplan points\n", aerop);
printf("you now have sent %f CAD\n", CADsent);
x=3;
break;
}
}

```

```

}
case(3):
{
    printf("Please enter the amount of money you want to send in CAD\n");
    scanf("%f", &amountsend);
    sendSP=sendSP+((amountsend*100)*1.02);
    bankprofit=bankprofit+(amountsend*0.02);
    CADsent=CADsent+amountsend;
    scene=scene-((amountsend*100)*1.02);
    printf("you now have %f Scene points\n", scene);
    printf("you now have sent %f CAD\n", CADsent);
    x=3;
    break;
}
case(4):
{
    printf("Please enter the amount of money you want to send in CAD\n");
    scanf("%f", &amountsend);
    sendTR=sendTR+((amountsend*28.08)*1.02);
    bankprofit=bankprofit+(amountsend*0.02);
    CADsent=CADsent+amountsend;
    timsr=timsr-((amountsend*28.08)*1.02);
    printf("you now have %f Tims Reward points\n", timsr);
    printf("you now have sent %f CAD\n", CADsent);
    x=3;
    break;
}
default:
{

```



```
    printf("  You have convert a total of %f Tims Reward points to %f CAD\n", convertTR,  
(convertTR*0.01));  
    printf("  You have sent a total of %f Tims Reward points\n", sendTR);  
    printf("The bank has made a profit of %f CAD", bankprofit);  
    x=10;  
    break;  
}  
default:  
{  
    x=-1;  
}  
}  
}  
return 0;  
}
```

Appendix C – WIX Webpage

Note that in order to view any pages past the “home” page, you must create an account.

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