GNG1103

University of Ottawa: Faculty of Engineering

Project Deliverable F: Prototype I and Customer Feedback

Sunday, March 7, 2021

Group 4

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Abstract

In the previous deliverable, a project schedule and cost estimation was done to prepare for the remainder of the project. The purpose of this deliverable was to outline the basic features of the mobile application and to discuss the client feedback that was received. The feedback from the client was overwhelmingly positive, indicating that the conceptual design was a success and that product development can move forward.

Introduction

The purpose of this deliverable was to start developing the conceptual design developed in previous deliverables using Unity and Vuforia and taking into account customer feedback given from the most recent meeting. This deliverable will be divided into three main sections; the first prototype, customer feedback and what comes next in the project.

Prototype I

The main focus of this prototype was to develop the basics for the application. The basics of the app, “Spot it!”, include the home screen, main screen and and their main functions. This prototype was built as a focus prototype, where not all parts of the app are included, but contains the main attributes which will allow for client feedback.

The Home Screen

The home screen application will be the first screen the user sees when they open the application. It included buttons that will lead to the main screen, a calendar page, a rewards market/achievement, an options page, and a tutorials page. Figure 1.1 below is a screenshot of the application home page on Unity. It is shown how all the previously mentioned buttons have been developed, and a portion of them have been developed using Unity script. Namely, the button that allows the AR function to run and scan the items has been fully developed.

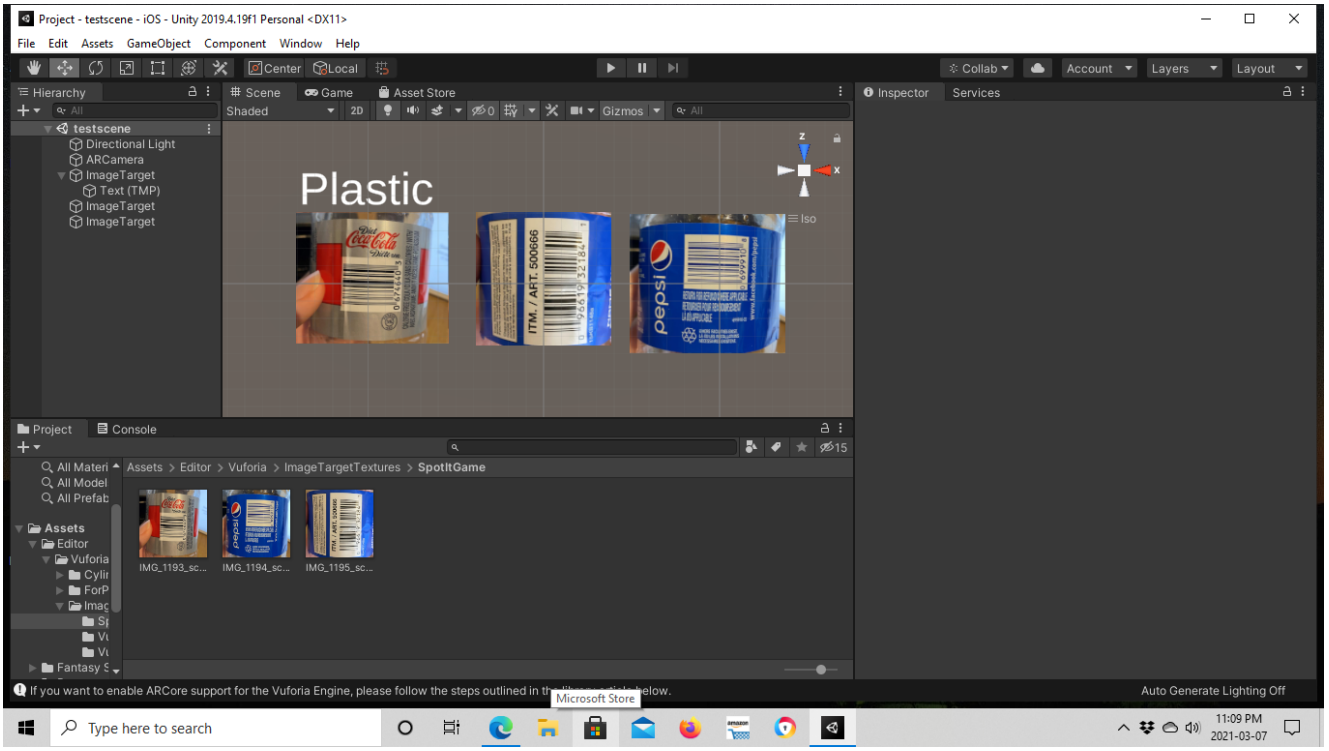
In regards to what remains to be coded, the buttons will be redesigned to look more aesthetic and the remaining pages (a calendar page, a rewards market/achievement, an options page, and a tutorials page) will be coded for and finalized. The calendar page will show a calendar with all of the towns respective pick up and drop off dates. The rewards market/achievements page will show all of the users received achievements and allow them to use their reward points to alter certain characteristics of the application, like the colour of the home screen or the colour of the buttons. The options page will allow the user to change the base language of the app (between English and French) and adjust sounds and contain account information. The tutorial page will include videos that explain the basics of the recycling program.

Figure 1.1- Home Screen

The Main Screen

The main screen, also known as the AR scanning screen, is the most important part of the application. This page will allow users of the app to scan their recycling products and sort their product into the correct recycling bin. Figure 2.1 below demonstrates how the main AR screen of the application will look on Unity. The black background on the screen indicates how the main screen will be using the camera input as the background. Other features of this page include three buttons (for each of the possible bins) to allow users to attempt to pre-sort their item before the correct answer is revealed.

In regards to what remains to be completed for the upcoming prototypes, the game function of the main screen still needs to be coded and scripted in Unity.



Testing

The testing phase is one of the most important parts of prototyping. The main tests completed to see if the application was functioning were to determine if it worked on the Unity device and if it worked on a mobile device of both IOS and Android. The stopping criteria for the Unity run were whether or not the buttons functioned correctly (as they were scripted) and if the screen placement was good. The stopping criteria for the mobile devices were if the AR camera background functioned correctly, if the buttons worked on the device, if the application layout worked on a device of any screen and if it worked on both platforms.

In regards to the testing results, there was not sufficient time left to put the application through testing on a device that was not a phone. The application was tested on the Unity software, but there was not sufficient time to compile and send it to a phone.

Being a focused prototype the tests mentioned above were not comprehensive and were designed to test the basic functions of the application and to prepare for the first client meet. For future prototypes, more rigorous testing methods will be applied including (but not limited to): functionality across platforms and devices, aesthetics, functionality and accuracy of features and overall user interface. In the future, sufficient time will be prepared for in order to be able to perform the various tests.

Feedback

The second client meeting gave our team the chance to get useful feedback regarding the conceptual design of our application. We also had the chance to hear back from the project managers and discuss their insight on our design concept.

Client Feedback for Product Design

The overall feedback for the client to our group was overwhelmingly positive. The client appreciated the simple design for our application and liked the game-like function of our application. The client had no other feedback to give our group other than to continue what we were doing.

This type of feedback can greatly affect a team's morale and hinder the overall progress. With no substantial feedback given from anyone, the applications build could take a dive with an overall lack of direction given. However, our team will use the positive feedback to continue pushing and motivate us to do a better job.

Future Feedback Methods

As mentioned, the feedback obtained from the client only pertained to the conceptual design of our application. For future prototypes, more comprehensive feedback methods will be used. These methods will include using feedback from other groups as well as asking targeted questions to the client and possible users. This feedback will assist the team in designing an app that fits all of the clients criteria as well as one that is compatible with the average users needs.

Conclusion

From the client's feedback, we can determine that our conceptual design was a success. The client was very pleased with the conceptual design that we presented and was interested in seeing what we could produce. For prototype II we are planning to finish coding the remaining screens and focusing on the aesthetics of the application.