Conservatory Catch Project Description Two-Page Summary

Group 09: Jose Cuellar-Aguirre, Marcos Echevarria, Christian Garcia, and Nicholas Tryba

For our project, we are designing an Augmented Reality (AR) mobile game that will promote interest in the Garfield Park Conservatory (GPC). More specifically, we will be working alongside the Garfield Park Conservatory Alliance (GPCA), which is the nonprofit that works with the city to provide programming and resources for the conservatory and its visitors.

The game itself will function as an AR game where players will be able to walk around the conservatory alongside their in-game character through the use of GPS. As players walk around, random plant species will have the chance of appearing on screen, where players can play a minigame to add the species to their collection. Collections will be where most of the learning takes place, as players can view information and trivia on each of the species they have collected.

The purpose of our project is to promote interest in the conservatory, and to offer visitors an exciting new means of educational programming. We believe that the increased interest in the GPC generated by the app will lead to increased donations for the GPCA. The GPCA is one of the primary clients for this project. They provide educational programming, events, and create resources for visitors. The other clients are plant enthusiasts and gamers, for which we want to provide an exciting new way of learning by combining AR gaming with learning. We will measure the success of the project by tracking donation amounts, both in frequency and by total amount donated, on a week-to-week basis.

The product will work in unison with the GPCA's vision, which is to show people the importance of nature. Currently the GPCA provides various programs which differ in price and location. Our product will be an interactive and free means of programming available at any time and will help fund future events through donations. Our business events in this case include the GPCA, the visitor, the programmer(s), the database, and the player's smartphone. More information on specific events is provided in the project description report. There are no specific competing products for our niche, but in general, we are competing with plant books and courses, as they offer a means of learning about plant species.

The main actions in our product are logging in, walking around the overworld, playing minigames, viewing your collection, and exiting the game. Specific definitions for these terms are provided in the project description report. The general scenario for Conservatory Catch, is that the player logs in with their account, walks around the overworld, finds an event minigame, and adds to their collection. The specific actors here are the user, the profile database developer, the software developer, and the conservatory specialist providing the information.

The client of our project is the GPCA. We want to attract more visitors and encourage repeat visitors, which will lead to a greater potential for donations. The game will have an in-

game donation button. Post-launch there will also be the potential for a monetization shop, which can lead to even more donations. The customer of our product captures three main consumer bases: those who enjoy AR style games, those who enjoy learning about plant species, and those who enjoy collect-a-thon games. The hands-on users of our product include conservatory visitors and conservatory employees. The debugging maintenance users will be responsible for debugging potential errors with new content updates. New content users will be responsible for taking client feedback and providing new content and quality of life updates. Other stakeholders may include conservatory employees, testers, tech experts, usability experts, and exotic species experts. We've identified conservatory employees and the conservatory itself as the key users, with the visitors being secondary, and non-visitors being unimportant.

The constraints on our project is that it is available on mobile devices, and available on mobile platforms such as IOS and Android. The product needs to be on mobile devices in order to allow users to effectively participate. The product also needs to be available on the major mobile platforms, so that everyone can play regardless of what kind of phone they own. Conservatory Catch will be developed for mobile using the Flutter framework, which will allow us to develop for both IOS and Android. One collaborative application used will be Microsoft Office, which is for the purpose of presenting data and giving presentations. The only off-the-shelf software for the project is the Flutter framework by Google. Conservatory Catch is a mobile game, so the main environment will be a phone app used in the conservatory. On busier days, the conservatory may be noisy, and thus audible minigames may not work as well. The environment itself may also be congested so it is important that events spawn only in safe and spread out areas to avoid piling dozens of users. We expect development to take place over the course of 3 years, with extensive and rigorous testing done and feedback taken into account. We want monetization to be implemented 6 months post-launch, so that there is a window for a player base to be nurtured. We anticipate the budget to be at most 4 million dollars. This should cover the game development and testing of Conservatory Catch.

For our report, we followed Version 2.0 OMG UML standard, as described by Fowler in "UML Distilled, 3rd Edition. We have also described the collection class and keywords in our report.

Conservatory Catch will be active and maintained for about 2-4 years, with consistent communication between the GPCA and the development team. We are assuming that visitors using the app read English at a middle-school level. For hardware we are assuming that visitors have semi-recent phones (within the last 5 years), have enough storage for the app, and a working GPS on their phone.