Xamarin Port of Dr. Discovery Summary Report

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Project Definition

Our project was to port the existing Dr. Discovery App (written in xamarin) to iPhones and Android. The original app was written to A) better present information about museum exhibits to patrons, and to B) provide feedback to museums about how patrons generally view their exhibits. We want to take the current iPad app and make it more accessible via the play store, so that anyone cause use it whether or not they are in a museum and on their own devices. This semester, we have successfully gotten up to speed with the existing code base and have gotten a solid start on both the iOS and android app. We will be well equipped to have both done next semester without any fear of lateness.

Role

We separated the project into 2 parts, the iOS part and the android part. I am a part of the android part, and as such my job this semester was to 1) learn the codebase, and 2) get familiar with android development in xamarin. To that end, I made several android views that correspond to views in the current iPad app. These views may or may not end up in the final android app, their main purpose was to learn how to develop in android in general.

Deliverables

iOS app
Android app views (contributed)
Android app logic

Users/Actors

Actor	Description
Museum	Museums using this app to gather data on and provide information to museum goers.
Museum goer	People visiting museums using this app to access additional information about the exhibits.
Researcher	Our sponsors, using the data gathered by this app to determine how users interact with and view exhibits.

Requirements

Requirement 1: iOS Port

Actor: iPhone User

Name: iOS Port

Description: Currently the application only works on iPads. In order to get this application more available to the people at the museum, the application must be ported to work on other iOS Devices.

User Story: “As an iPhone user, I want to be able to use the Dr. Discovery application on my iPhone”

Requirement 2: iOS Interface Design

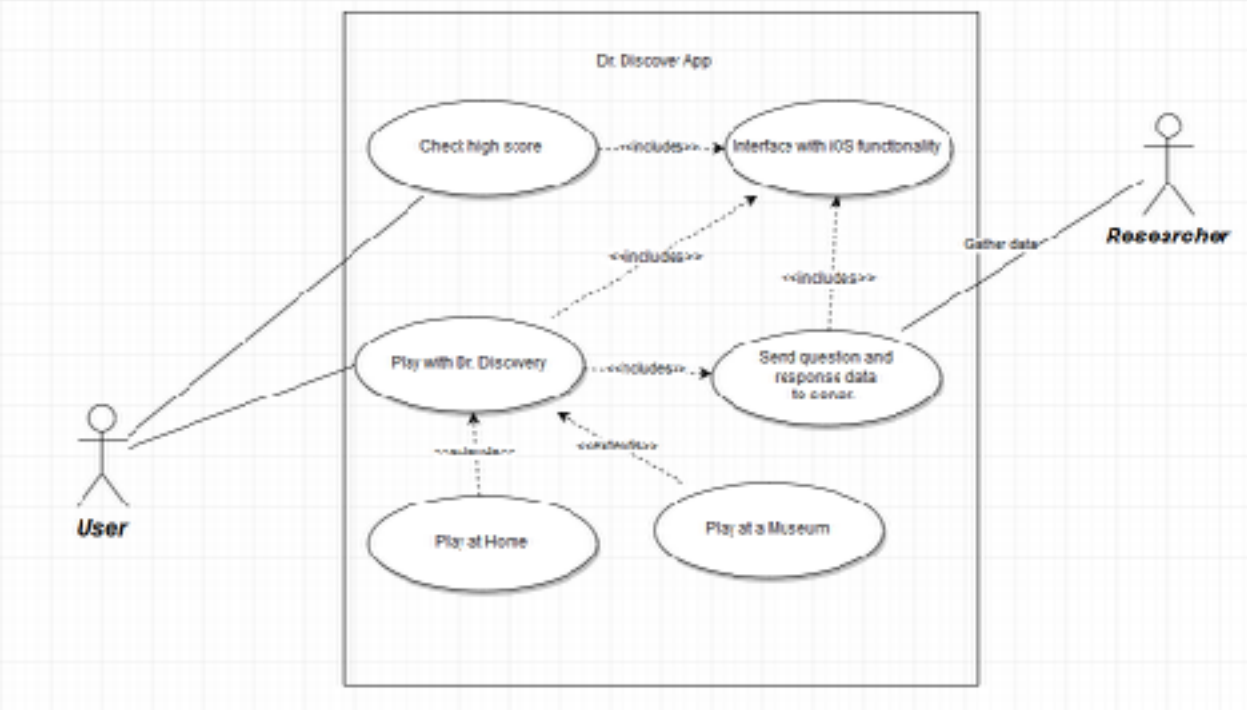
Actor: iPhone User

Name: iOS Interface Design

Description: The iOS interface design is similar to, but not identical to, the iPad design and as such would need to be tweaked to better match what users expect in an iOS application.

User Story: “As an iPhone user, I want to be able to use the Dr. Discovery application in a similar way to how I would use the existing iPad version of the application”

Use Case Diagram:



Requirement 3: Android Port

Actor: Android User

Name: Android Port

Description: Currently, the application only works on iPad devices. In order to make this application more available to the visitors of museums, the application must be ported to work on Android Devices.

User Story: “As an Android user, I want to be able to use the Dr.Discovery application on my Android device”

Requirement 4: Android Interface Design

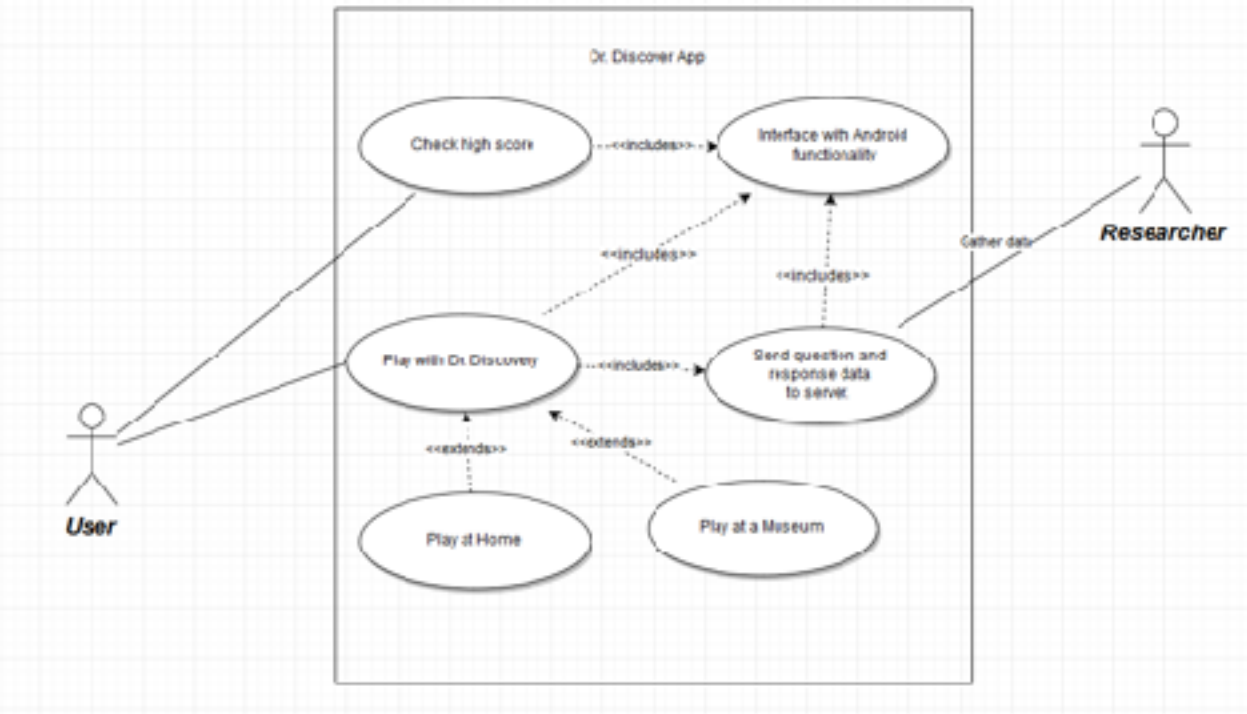
Actor: Android User

Name: Android Interface Design

Description: The interface associated with Android Devices is well defined by Google’s Material Design standards. By making this application adhere to those standards, it will help make the application easier to use by users accustomed to Android devices because it will appear familiar and act in an expected way.

User Story: “As an Android user, I want to be able to use the Dr. Discovery application in a similar way to how I would use the existing iPad version of the application”
Use Case Diagram:

Use case Diagram:



Requirement 5: General Interface Design

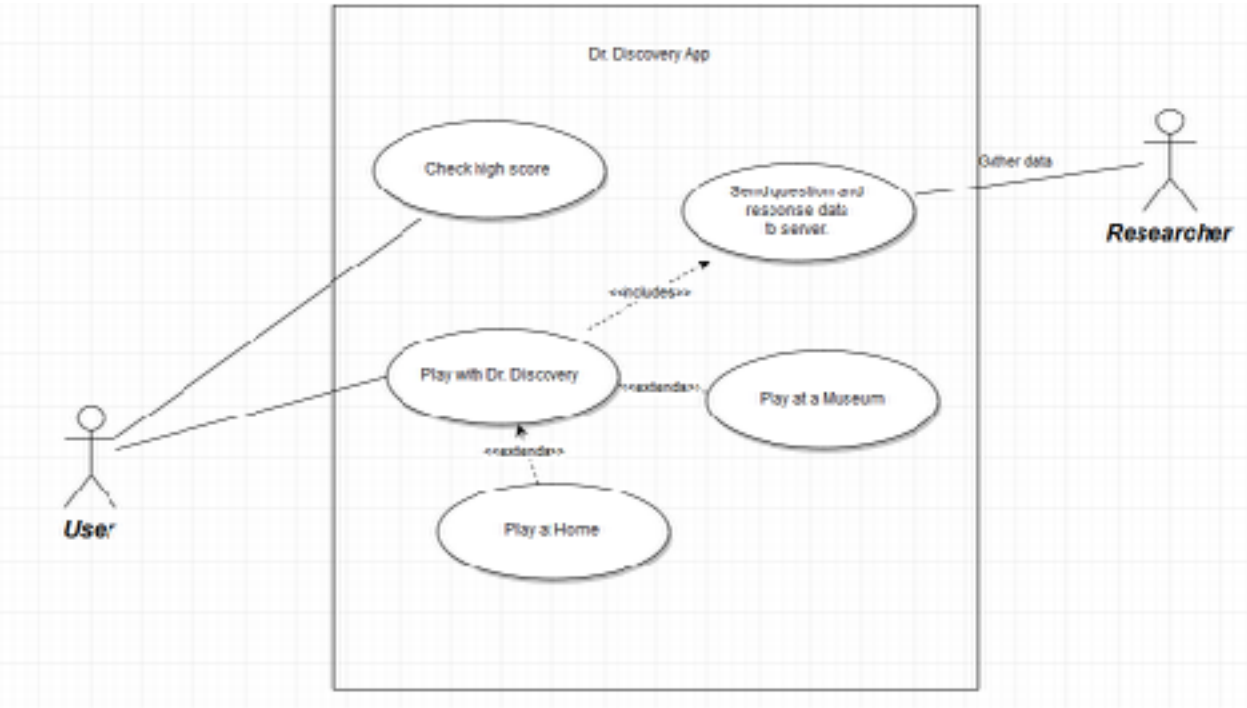
Actor: User

Name: General Interface Design

Description: Currently, the app's user flow is designed to accommodate museum personnel and users that only use the device while at the museum and leave it there for the next user when they are done. This needs to be updated to fit a typical "download and use" style more suited to a typical app.

User Story: “As an average user, I want the Dr. Discovery application to be intuitive to use”

Use Case Diagram:



Requirement 6: Xamarin Test Cloud

Actor: User

Name: Xamarin Test Cloud

Description: Xamarin provides some very useful tools to test applications across multiple types of devices and platforms. We will use these to ensure that the app works well even on devices we can't physically test due to lack of access or for other reasons.

User Story: “As a user, I want the Dr. Discovery application to perform well and not crash on my device”

Requirement 8: Apple App Store

Actor: iPhone User

Name: Apple App Store

Description: To make this application available to all iOS users, the application must be uploaded to the Apple App Store and made available for download. This way, Museum Goers with iPhone or iPad devices can download the application during their visit to the museum and begin using it on demand.

User Story: “As an iPhone or iPad user, I want to be able to download the Dr. Discovery application from the Apple App Store”

Requirement 8: Google Play Store

Actor: Android User

Name: Google Play Store

Description: To make this application available to all Android users, the application must be uploaded to the Google Play Store and made available for download. This way, Museum Goers with Android devices can download the application during their visit to the museum and begin using it on demand.

User Story: “As an Android user, I want to be able to download the Dr. Discovery application from the Google Play Store”