 **FACULTY OF SCIENCE AND**

**ENGINEERING SEMESTER 2, 2018**

**IAB330: Mobile App Development**

**Assignment 3: App Prototype** **Due Date: Friday, 2ndNov 2018, 11:59 pm**

**Assignment submission as a team through Blackboard**

**Weight: 50%**

You must sign below. By signing this form, you agree to the following:

We declare that all of the work submitted for this assignment is our own

original work except for material that is explicitly referenced and for which we have permission, or which is freely available (and also referenced)

The assignment shall be conducted in a team of 3-4 students, each team member must sign, as it is a formal agreement that represents that everyone is contributing to the whole assignment.

|  |  |  |
| --- | --- | --- |
|  | **Team Member Detail** | **s** |
| **Student Number** | **Student Name** | **Signature** |
| N10000569 | Sean O'Connell |  |

Contents

[User Stories 3](#_Toc528836543)

[Featured User Stories 3](#_Toc528836544)

[MVP Implementation 3](#_Toc528836545)

[User Interface 4](#_Toc528836546)

[Opening Pages 4](#_Toc528836547)

[Guest Pages 5](#_Toc528836548)

[Host Pages 5](#_Toc528836549)

[Software Architecture 6](#_Toc528836550)

[Testing and Quality Assurance Strategy 6](#_Toc528836551)

[Reflection on Learning 6](#_Toc528836552)

# User Stories

### Featured User Stories

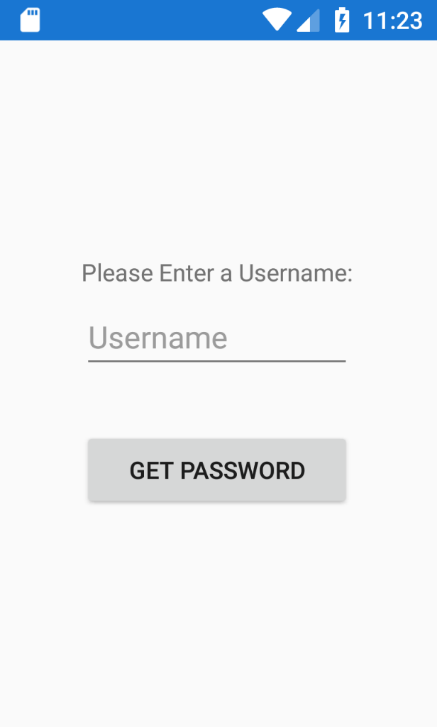
|  |  |  |
| --- | --- | --- |
| Story ID | User Story | Status |
| 1 | As a user, I want to register an account so that I can use the system. | Incomplete |
| 2 | As a user, I want to sign into my account so that I can use the system with more control and customisability. | Complete |
| 3 | As a user, I want to create a new host instance so that I can create and control events. | Complete |
| 4 | As a user, I want to create a guest host instance so that I can join and vote for songs in events. | Complete |
| 5 | As a host, I want to create a set list so that I can allow people to vote for the songs at an event. | Incomplete |
| 6 | As a host, I want to create an event so that I can give the audience more control of the upcoming songs at an event. | Complete |
| 7 | As a guest, I want to find an event so that I can vote for my favourite songs at events. | Incomplete |
| 8 | As a guest, I want to join an event so that I can make my experience better with the host playing my favourite songs. | Complete |
| 9 | As a host, I want to see how much time I have left in the event so that I can plan the amount of upcoming songs and to see if I can fit an upcoming song into the remaining time. | Incomplete |
| 10 | As a guest, I want to vote on songs so that I can enjoy the experience at the event. | Incomplete |

### MVP Implementation

The completion of the MVP wasn’t successful in this iteration. However, the key features are outlined in the current version. The main reasons as to why the these aren’t completed as they require a backend database for holding the sort of information for dynamic use of the application. The implementation of these user stories will be completed using an Azure mobile backend. This extra functionality would complete all the user stories and allow for a more complete application. Unfortunately, I ran out of time to implement this and thus properly complete all the user stories.

# User Interface

### Opening Pages

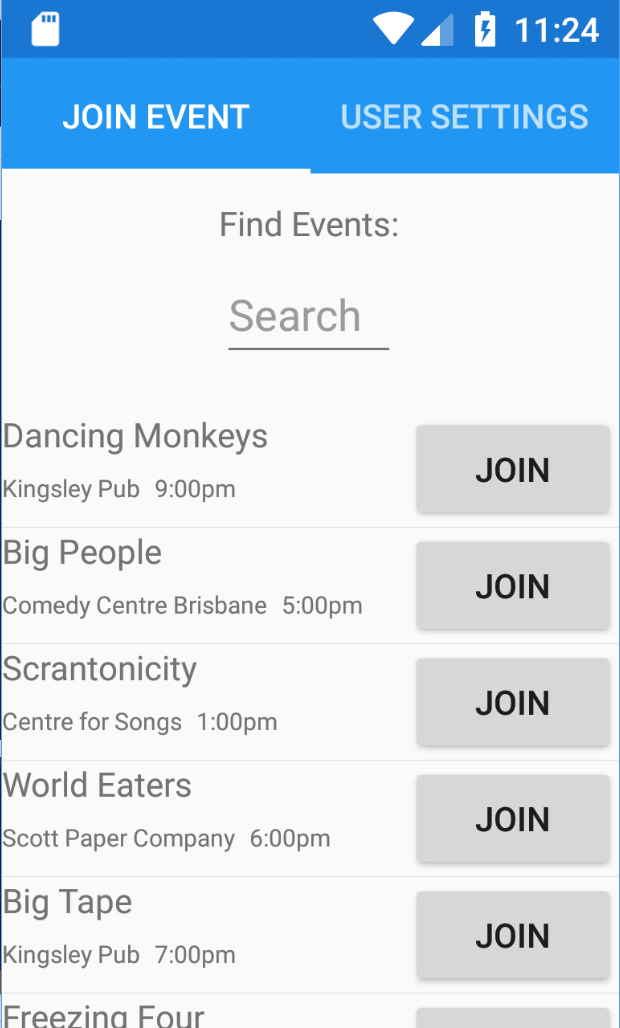
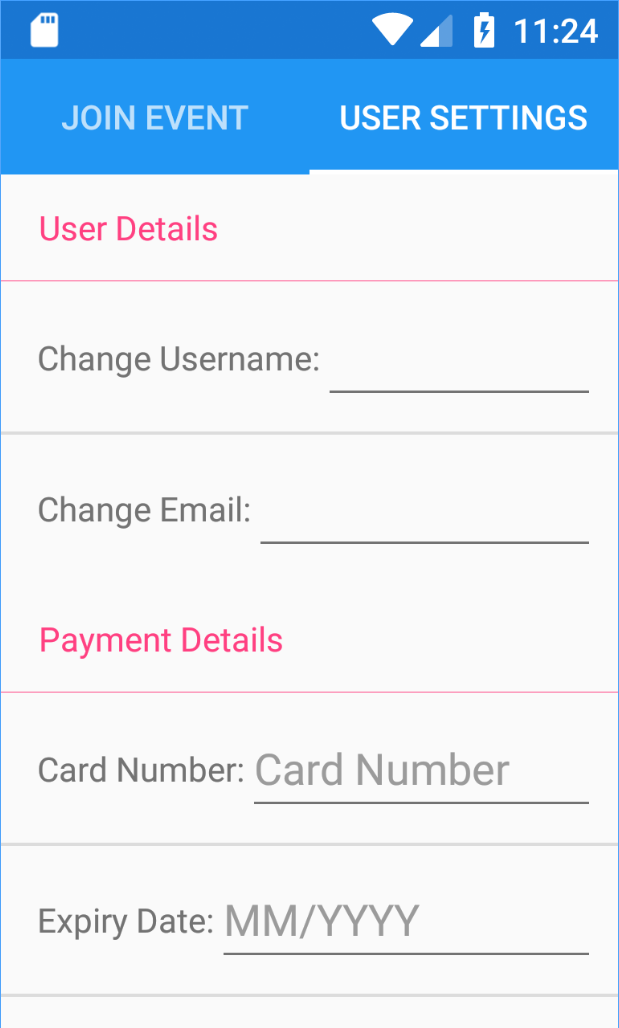
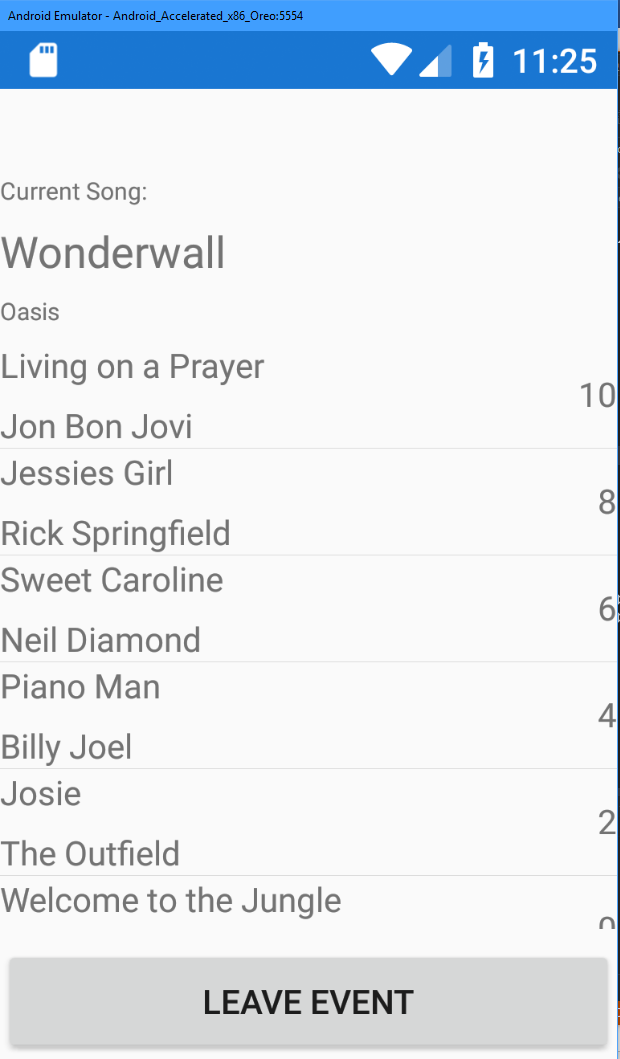


These pages have been grouped together as they all demonstrate the importance of user account control in the application.

The first page is the login page that allows user login and take the user to an instance page that redirects them to a guest or a host instance.

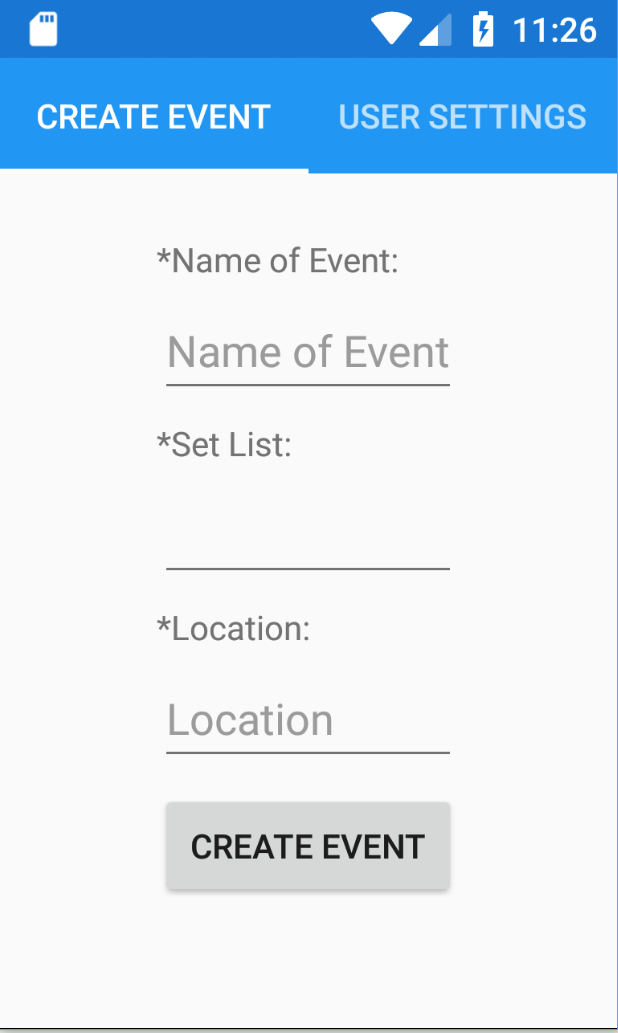
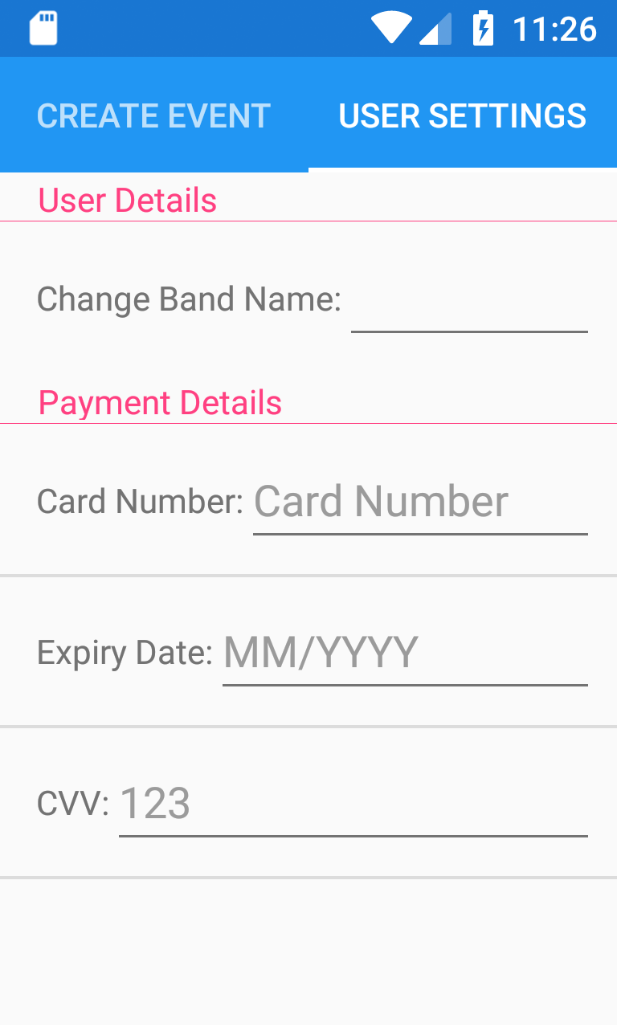
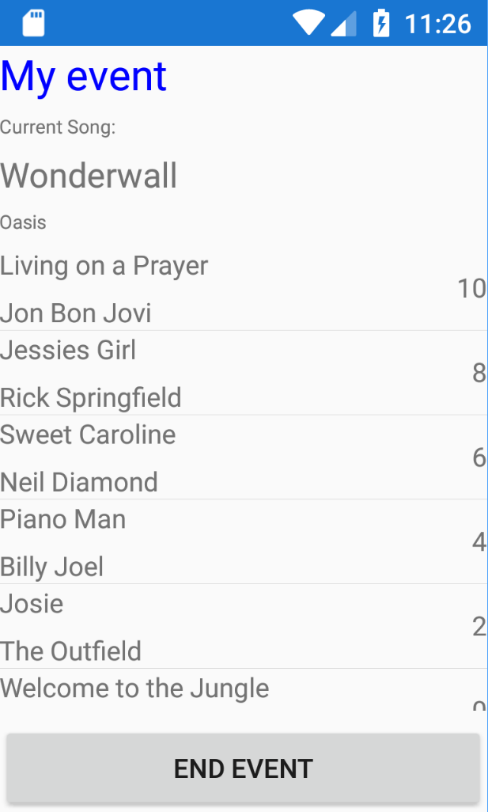
The third and fourth pages demonstrate user registration and user password retrieval. These aren’t fully functional as they require a database backend to save and control the user information.

### Guest Pages



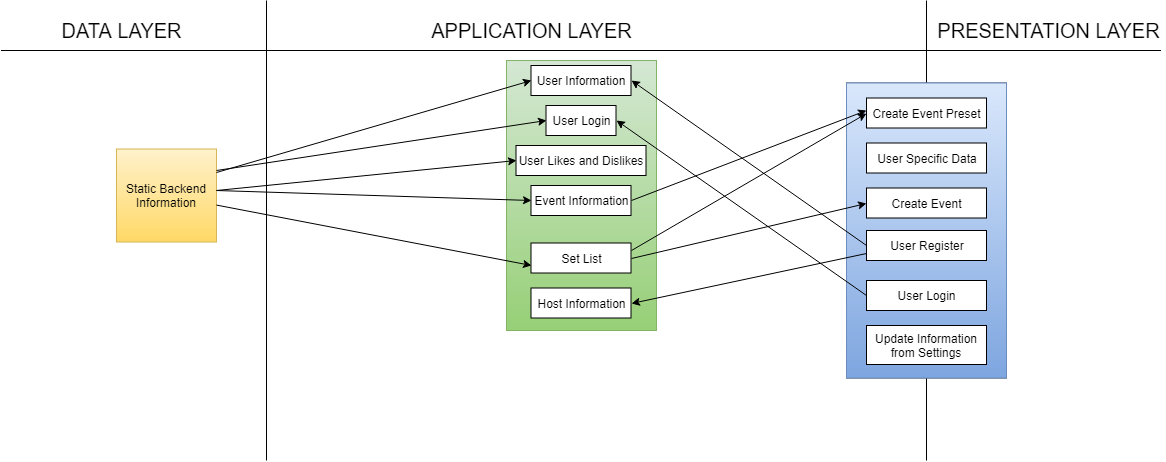
These pages are the available pages to any user starting a guest instance. This instnace allows the user to join an event, make an input on that event and change the user information. These are all important to the guest experience.

### Host Pages



These pages highlight the access that the host has to the event creation and control. Admittedly, there isn’t much control in this MVP. However, the application does enlighten to the fact that the host can make these events with great functionality.

# Software Architecture



The architecture changed over the period of implementation. The structure changed drastically compared to the proposed structure in assignment 1. This was due to difficulties in incorporating an Azure database. This would have enabled the application to be more complete and to run like a more marketable application. The other notable item that is missing from the application, is the incorporation of the Spotify API. This would have enabled the application to use playlists and user accounts to limit the resources required for a backend. This would have greatly improved the application’s viability and functionality.

These changes were made as the pressure of time was overwhelming for the completion. I believe, with more time to fully dive into the rich documentation that Xamarin supplies. The application should be complete with some great functionality and great viability for the market. The changes were made to ensure a version of an MVP could be completed and presented.

# Testing and Quality Assurance Strategy

The testing and quality assurance strategies outlined in the second assignment were not implemented and were only incorporated in a manual user testing method. This method of testing includes visually comparing the current application UI and UX with the proposed version is assignment 2. This was a method of quality assurance for the application. This ensured the constant management of the visual elements of the application.

# Reflection on Learning

The challenges faced became a familiar uphill battle. This was caused by the learning curve of Xamarin as a framework and the ways in which they interact with other entities in the application. The application caused a constant change in environment that in turn caused a requirement, as the developer, to adapt and overcome. The main challenges included; getting the database to work correctly with the front end and the packages they included, and the incorporation of the application with the Spotify API. These challenges were resolved in a way that were very binary. The main way to resolve them was to first of all get a working MVP that demonstrated the applications purpose rather than supply a application that could be sold on the store.

There were other challenges to the completion of the application. These challenges are more based on the devices and resources that were used in the development phase. These resources were outlined in the second assignment. These resources include, Trello and Github.

Trello wasn’t used successfully as the application structure was restructured multiple times which would have caused a confusing map of movements on each feature.

Github was used in a successful manner as the repository allowed the application to evolve and adapt to the challenges as it allowed for control of code in a safe and controllable way.

The learning curve of this assignment was steep but rich with information. Working on this application threw up its own challenges but it highlighted my strengths and weaknesses to myself. This has allowed me to grow as a programmer. The main thing I take away from the assignment is that Xamarin is a rich resource for cross-platform development for mobile applications. This lacklustre completion of this assignment has enlightened me to look further into this application and develop it further on my own time. This should enable me to complete a commercially viable application.