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| Student Name: Rónán DillonMobile Number: +353876271927 | Student Number: C12355251 |
| Project Title: ShazamTV | |
| Summary (approx 200 words) My proposed final year project is to create an Android and iPhone application which allows users to find out what episode and what television show they are watching. The user will record a segment of the television show they are watching using the application and on request will receive a result which will show the television show, the episode number and other details about the show. The application will be similar to the Shazam app which is used for finding out what song is being played.  The app will use speech to text to identify quotes which will be compared with show scripts to identify an episode of a TV show. It will also use the recording to compare with audio files of TV shows to return the correct result. When the user receives their result they will be able to view a brief synopsis of the particular episode, the cast of the TV show, the IMDB rating, and the Rotten Tomatoes rating. This information will be retrieved using a script stored on Amazon web services which will be triggered to run when requested by the user.  The app will track what the most common TV shows that are recorded and a user will also be able to view a timeline of when a particular show has been recorded by all users which will mean they can view the changes of searches when a show is off peak to when a show is currently on air. It will also keep a record of what TV shows the user has searched for previously.   The speech to text conversion and script matching will be completed on a central server to accommodate for users’ with devices that do not have the processing capability to run them. | |
| **Background (and References)**  This project idea came from my regular use of both IMDB and Shazam. When I am listening to the radio and want to record the name and artist of a song I take out my phone and use Shazam to do so. Similarly when I am watching a TV show and I want to know what the names of the actors are I take out my phone and search for the TV show on IMDB. My idea is for the user to be able to record a clip of the show and immediately be given all this information.  Shazam : http://www.shazam.com/ IMDB : http://www.imdb.com/ | |
| Proposed Approach My project will have four main stages and they will be as follows;   * Research and Design * Implementation of Functionality * Testing * Deployment   Research and Design  As I have not developed an iOS application before I will first need to research how to go about developing for iOS as I will want to develop both the Android and iOS applications simultaneously.  I will then design the outline for how I want the application to look, it will have little or no functionality at this stage until I am happy that the design is aesthetically pleasing and easy to use.    Implementation of Functionality  At this stage I will start developing the functionality of the application. I will start by working out how to take a recording from a TV show and use that recording to search for the TV show it belongs to. When I can obtain the correct result I will then need a script which will collect data like the cast of the show. After this stage I will then create a database which will store the TV show that was searched and the date it was searched on so that these details can be used for future reference.  Testing  As I add functionality to the application I will continuously test the app to ensure everything is running smoothly. Once the app is up to a sufficient standard I will run through multiple, possible scenarios a user could go through while using the app. I will also have a user based testing throughout the development of the application so that I will have records of both user and logic based testing.   Deployment   When the testing stage is complete I plan to deploy the application on both the Google Play Store and the App Store. | |
| Deliverables  * Interim Report * Fully functional application available on both Google Play Store and the App Store * Project Dissertation     **Priority Features**   1. Record users’ TV show clip. 2. Compare clip to TV shows and return the most likely TV show and episode. 3. Allow users’ to view their previous searches. 4. Allow users’ to view the most common searches.   **Secondary Features**   1. A connect to Facebook option where users’ can view what their friends search for. 2. A recommendations bar where users’ are shown TV shows they might like given their search history. 3. A twitter feed to the most recent tweets about the show. (With a spoiler alert warning). | |
| Technical Requirements  * Android and iOS application development * Amazon Web Services * Tool to compare audio files | |

## Project Reviews – Please include reviews of two of LAST years projects from your programme.

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| **Project 1**  **Title: Football Data Mining**  **Student: Jonathan Earle**  Description (brief):  This project is an Android application which uses data mining to produce football predictions from goals scored to how many yellow cards a team will receive in a particular match. The user can pick two teams, one home, one away and the app will give the likely statistics at certain intervals during the game. This can be used as a way for a user to gather information to put on a bet following the likely outcome.  What is complex in this project  The main complexity in this project comes from the use of data mining to gather data which, is used with statistical formulae to come up with the predictions. Jonathan mentions in his report that he did not expect there to be so much work involved in the preparation, cleaning and manipulation of data and that it took far longer than he had anticipated.  What technical architecture was used  This diagram from Jonathan’s report shows the technical architecture used in the project. The users interacts with the device which attempts to retrieve a file from the HTTP server. If the request is denied because there is no internet connection, the local data stored on the application will be used otherwise, it will get live updated data.  Explain key strengths and weaknesses of this project, as you see it.  The simplistic design of the application is a large strength as the app appears to be relatively easy to use and has help options to guide the user through the apps capabilities.   A weakness may be in the data stored locally, if this data takes up a lot of memory on a user’s phone they may be forced to delete the application the free up space. | |
| **Project 2**  Title: Fantasy Football Stock Market  Student: Yerbol Kalykhbergenov  Description (brief):  The Fantasy Football Stock Market, is an application which also users to buy and sell virtual shares of football clubs with the share price of each team determined by a complex algorithm. The idea of the application is to trade shares in order to make the most profit to be on top of the leader board.  What is complex in this project:  The complexity in this projects comes from the use of a Raspberry Pi as a server, to control the apps functionality. Another complexity was using a complex algorithm to work out the share price of each team.  What technical architecture was used  As shown in the diagram above a 3-Tier architecture was used in this project.  Explain key strengths and weaknesses of this project, as you see it.  A weakness I noticed from the screenshots of the app is that the design is quite unappealing its dark background is not very aesthetically pleasing with how the lists and data is represented.   Using a Raspberry Pi as a server is a key strength of the project as it adds the complexity expected of a 4th year project. | |
| Proposal Sign off:Lecturer Comments | |
| **Student Signature** | **Date** |
| **Lecturer Signature** | **Date** |