Project Research Document – Grave Finder

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In this document, I will be discussing a detailed description on my fourth year project, existing applications in this area, the platforms, technologies and libraries needed for the project and the risks I will face in designing the project.

Detailed Discussion

Currently there is an issue where people cannot find or remember where the graves of their deceased family, friends and ancestors are located in a cemetery. In society today, if a person is looking to locate the grave of a family, friend or ancestor they have to ring the office in the cemetery and make an appointment to meet with a member of staff who will then give them the information on the locality of the grave or take them to the grave. The mobile application is aimed at helping members of the general public to locate the deceased person's grave to which they are searching for as to date there is no mobile application available to them on the market.

On the mobile application, the user would open the grave finder application, which then would display an empty search screen. The user would first select a county from a drop-down menu with a list of all counties in the Republic of Ireland that would be fetched using a get request to the RESTFUL web service onto the Azure Cloud Service from a table in the SQL database, which would then send a post response back to the application. This would allow the user to select a specific county to which they require. Secondly, the user would select a cemetery from another drop-down menu with a list of all cemeteries fetched using a get request to the RESTFUL web service onto the Azure Cloud Service from a table in the SQL database, which would then send a post response back to the application depending on the specific county chosen in the previous drop-down menu. This would allow the user to select a cemetery relevant to the specific county they have chosen. Next, the user would enter the forename and surname of the deceased person to whom they are searching for. By the user entering the forename and surname of the person, this would allow the SQL database to identify and find the required person in the table of the cemetery they have chosen to search through.

In the next two boxes, the user has the choice of either choosing the deceased persons date of birth in the first box or date of death in the second box from a calendar, which would be shown when the mouse is placed directly in either box. Once the user has selected the date of birth or the date of death from the calendar, the date will appear in the relevant box. By allowing the user to enter in either of the dates, the user may only know one of the dates needed. The user would then click the search button to search through the SQL database in the cloud for the name and the date of birth or date of

death of the deceased person they are looking for and return from the table in the SQL database their exact location with the row or area name and identification number of the requested grave in the cemetery to the user. A GPS/Google Maps image will also be returned to the screen from the SQL database by its latitude and longitude stored in the row in the table of each person in the cemetery with a pin on it to identify where the grave is located in the cemetery. By returning this information, it allows the user to read accurate information as well as view the location of the person's grave.

The mobile application will be used by all of the general public and would be beneficial to the staff and management within the cemeteries.

Existing Applications in this Domain

Web Address	Platform	Similarities	Differences
https://play.google.com/store/apps/details?id=com.canadajk.graveyard&hl=en	Android	➢ Uses GPS/Google Maps ➢ Database	➢ Locator Tool ➢ Send SMS, Social Media and email
https://itunes.apple.com/us/app/tombfinder-app/id449058022?mt=8	iOS	➢ Uses GPS ➢ Database	➢ Only for USA ➢ Each grave has an individual account
http://historicgraves.com	Web	➢ Uses GPS/Google Maps ➢ Database ➢ Search function	➢ Can search using the map ➢ Can search using the family information ➢ Can search cemeteries based on a limited number of countries
http://billiongraves.com	Web	➢ Uses GPS/Google Maps ➢ Database ➢ Search function	➢ Doesn't search grave records in Republic of Ireland, only in the USA ➢ Shows an image of the headstone on result returned

Platform, Technologies and Libraries

For this project, I plan to design and implement the application on the following platform and use the following technologies and libraries in order to achieve this.

Windows Phone

I have chosen to use this platform, as it is an up and coming market in the mobile application area of technology. To date, there are not many mobile applications designed for the windows phone.

C#

I will use C# as the programming language to implement the application, as it is the main programming language used by Microsoft to design they're mobile and tablet applications. I plan to use Microsoft Visual Studio Ultimate 2013 to write the code as it supports the coding of C#.

Windows Azure

I have chosen to use Windows Azure cloud services, as it will store the backend of the mobile application. It will also hold the SQL database to store the tables needed to gather the information, which would be returned to the mobile application.

ASP.NET Framework

I plan to use the ASP.NET framework on the application to handle the requests sent between the device and the Azure cloud service.

The Risks

When doing a project like this, it may come with many risks. The risks that would be faced with this project are as follow:

> ➢ Depending on the ASP.NET framework to provide the functionality between the mobile application and the SQL database stored in the Azure cloud service.
>
> ➢ Restricted myself to only designing for the windows phone platform, as it will not work on the other mobile application platforms.
>
> ➢ Depending on C# library to be the main programming language for designing this mobile application.
>
> ➢ Associating the project with an area that people sometimes find hard to discuss about