

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

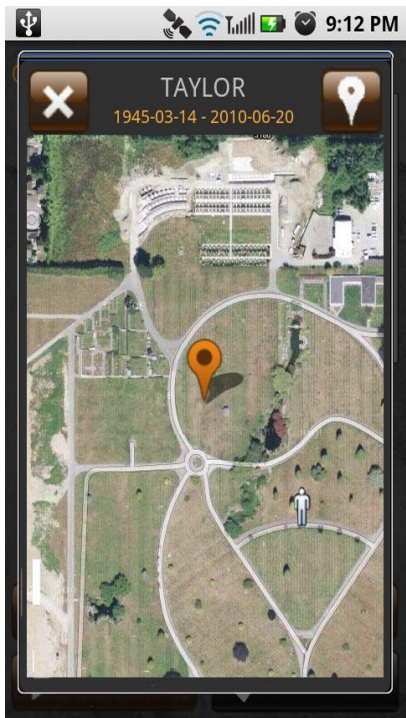
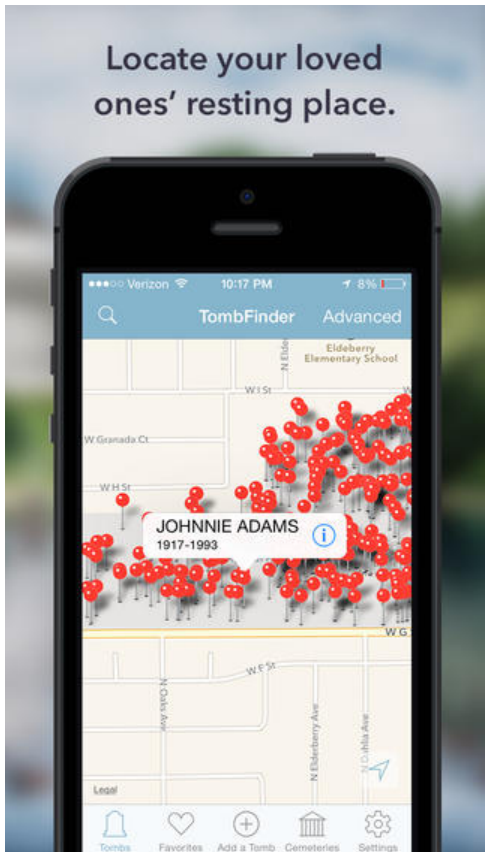
For my fourth year computing project I have decided to develop a Grave Finder application for the Windows Phone. I feel this application will benefit many people; as currently there is an issue where people cannot find or remember where the graves of their deceased family, friends and ancestors are located 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.

My application will be developed on the Windows Phone platform, which I believe is an up and coming area in mobile application as they were late starting off their applications compared to other mobile application developers like Android and iOS applications who got a head start in this area. Windows phone applications utilizes the programming language of C# with to an extent the Windows Phone API. iOS devices however are developed mainly by either objective-c or their newly developed language 'Swift' and Android devices are developed mainly by Java with bits of JSON.

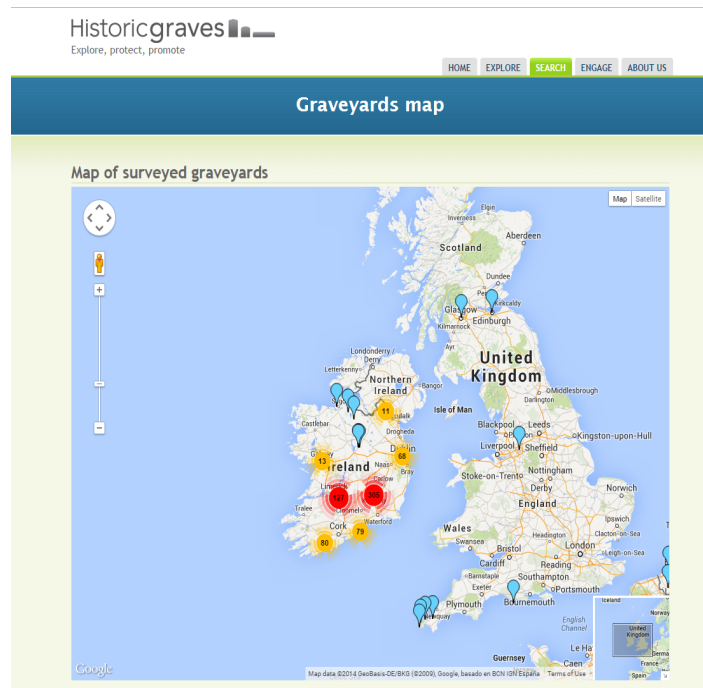
I would like my application to have a GUI where the user can select both the county and name of the cemetery they are wishing to find the grave they are looking for, the name of the deceased and the date of death or date of birth of the deceased family, friend or ancestor. The majority of the application will be the user searching the data in a database to retrieve the location of the deceased family, friend or ancestor in different cemeteries around the Republic of Ireland with a map as well as a written location of where the deceased is located. For demonstration purposes later on in the project, I plan to have sample data taken from Newlands Cross Cemetery, as it is the cemetery I am most familiar with.

Before heading straight into developing the application for the Windows Phone, I have decided to research the .NET API for Windows Phone; which will allow me to use some of the features necessary to my project under this API associated with the Windows Phone. I've also decided to research some Windows Phone examples that will be helpful with snippets of code on how to integrate the features from the .NET API into my mobile application. These examples can be found here: <https://code.msdn.microsoft.com/windowsapps/>.

Existing Applications in this Domain

Web Address	Platform	Similarities	Differences
https://play.google.com/store/apps/details?id=com.canadajk.graveyard&hl=en 	Android	<ul style="list-style-type: none"> ➤ Uses GPS/Google Maps to pin point where the grave is in the cemetery ➤ Database to store the information required (i.e. Date of death, date of birth, etc.) 	<ul style="list-style-type: none"> ➤ Locator Tool ➤ The user is able to share the details of the grave either through SMS, on a Social Media site (i.e. Facebook, Twitter, etc.) or through email
https://itunes.apple.com/us/app/tombfinder-app/id449058022?mt=8 	iOS	<ul style="list-style-type: none"> ➤ Uses GPS to identify where the graves are positioned in the cemeteries ➤ Database to store the details of the person buried in the grave 	<ul style="list-style-type: none"> ➤ Only for the cemeteries in the United States of America ➤ Stores the range of years from when the person was born till they died ➤ Can set a favourite function on a specific grave

<http://historicgraves.com>



Web Application

- Uses GPS/Google Maps as a way of pointing out where the grave is in the cemetery
- Database to store the information of all the graves in the different countries
- Search function by manually entering in the deceased details
- Can search using the map to find the grave in the cemetery
- Can search using the family information such as (surname, etc.)
- Can search cemeteries based on a limited number of countries (i.e. Australia, USA)

<http://billiongraves.com>



Web Application

- Uses GPS/Google Maps as a way of pointing out where the grave is in the cemetery
- Database to store the names of the deceased in the various cemeteries
- Search function by manually entering the details of the deceased person
- Doesn't search grave records in Republic of Ireland, only in the United States of America
- Shows an image of the headstone on the 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