Final Year Project Report

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2. Difficulties during the process of implementation  
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1. Advertising the final product and targeted industry  
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2. Conducted research and feedbacks  
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   - ( to complete )   
   - ( to complete )
3. Final conclusion and possible improvements  
   - ( to complete )  
   - ( to complete )  
   - ( to complete )  
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Quick overview

Project reasoning

As a software engineer I have realized that the only products that become successful are products that bring solution to a problem. As a person who has worked for quite a while in hospitality industry I have met and talked to people from different aspects of life and all ends of the World. That gave me a good starting point to search for feedback from most of the personalities I had the chance to discuss my product with. The reason I’m calling it a product, not a project, is because I believe that the definition of a project is held within a product itself, as a final result of project execution. Following up the thought of my experience in hospitality, I have had the chance to meet lots of professionals from every level of any business. Juniors, seniors, directors, CEO, CTO etc. and all of them had a small piece of information which they had to carry all over during a conference, corporative meeting or a meeting to catch up with colleague(s). That piece of information is their business card(s). Most of them had carried 5-10-15(sometimes even more) business cards in the pockets of their well-ironed blazers which till a point has caused low comfortability. I thought of changing the way it serves its owner by adding a bit of 21st century functionality, without losing its importance.

The process of implementation and development strategy

Although a student undertaking a course, studying mostly JAVA programming language, I have decided to implement my project using Microsoft Products. The reason why is, because Microsoft have been successfully providing the industry with cross-platform IDEs (Integrated Development Environment) which require the user to code in C# programming language but providing the so important and core functionality which is exporting the product into iOS, Android OS and Windows OS. The IDE with that functionality is the cross-platform application Xamarin, which benefits from native user interface and cross-platform app development. Also, a part from Microsoft products, I will be using project management application, which will help me organize my schedule in terms of development of the product. In short conclusion, my strategy is to split the project into small pieces and execute on each one of them. I will add GitHub, Microsoft and 3rd party project management application services to my development process which will save me time and clear the project development process to a non-familiar user.

Implementation

Coding the back-end (C# and SQL)

As mentioned in the early bits of the report, I will be using Microsoft Products on my project. The core of it is C# and Microsoft SQL Database, which are both are provided by an open source environment like Microsoft Visual Studio and Microsoft SQL Management Studio respectively.   
The main goal of my product is to invoke data from the DB and display it in the UI (user interface) and then eventually perform some actions with it. The smart business card, is a business card with a NFC (near-field-communication) chip which as the name says, will communicate with the device when it is significantly close to the targeted device. The process of invoking data happens when the holder of the business card touches the phone (or the smartwatch) of the targeted person. Data is called from the DB and loaded in components of the UI. The UI is an application (whether iOS, Android or Win) which has all the code functionality and providing UI.   
  
C# it’s an Object-Oriented-Language, providing productivity, versatility, designed by Microsoft, providing lots of support and documentation for most of its components. The main advantage of C# is that a part from being very efficient within .NET framework, it is being using in Xamarin framework for developing iOS, Android and Windows native apps, which saves so much time.   
  
Microsoft SQL, a traditional structure of DB, to store data and call it with stored procedures or view - models of the tables.

(draft)

Coding the front-end

I will keep the application simple as my main focus will be providing as good functionality as possible. The UI will be designed based on increasing user’s productivity when using the app. The design will be integrated on the results from research based on what colors are user-friendly, how components should be organized and what styling effects are most friend to the user. Perhaps Gestalt’s Principles will be applied – a good starting point for UI design.

Pros and Cons of the approach undertaken

I believe that the benefits of the implementation process come with the choice of programming languages and research on how user will perceive the application. Along with the simplicity of SQL database management, the fact that Xamarin provides such an easy way to implement native apps for any platform saves so much time and basically allows the creation of 1 product and multiply its functionality by 3.

At this stage of the implementation process, a bad side of the approach is the fact that C# is a programming language which I haven’t got much experience with and some required functionalities such as invoking/saving data to database will be a challenging to learn and understand, however it must be pretty similar to any other OOP language.