

An IT Software Development Internship: Programming Project at Red Jungle

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Abstract

The poster is the internship experience of a third year of the Bachelor of Computing Systems (BCS) at Eastern Institute of Technology (EIT) in the second semester of 2016. A software development evaluation project was undertaken with Xamarin now part of Visual Studio.

The company, Red Jungle, are looking at developing Cross platform mobile apps. The aim of this Internship was to evaluate the different platforms: Xamarin.Forms, Xamarin.Android, Xamarin.iOS and Universal Windows Platform (UWP). This evaluation has made it possible for Red Jungle to begin their Cross Platform mobile app development.

ITPR7.290 Project - Semester Two 2016 RedJungle
Exceptional Software

Student: Andrew Percy | Academic Supervisor: Kim Hagen-Hall | Project Sponsor: Gerard van de Ven

The Internship
Red Jungle are looking at developing Cross platform mobile apps with Xamarin, now part of Visual Studio. The aim of this Internship was to evaluate the different platforms: Xamarin.Forms, Xamarin.Android, Xamarin.iOS and Windows Universal Platform. This evaluation has made it possible for Red Jungle to begin their Cross Platform mobile app development.

Learning about Xamarin
Four solutions were coded from the same Balsamiq mock ups. This would allow a comparison of what code was reusable and what code was not reusable.
Coding could be with C# only or C# with a layout designer, the iOS story board designer was good all scenes, segues on the one page.
There was no layout designer for Xamarin.Forms, all layout code had to be done with out a layout designer making it much slower.

The UWP application
Splash Screen | Login Screen | Dashboard

About Red Jungle
Red Jungle is a small bespoke software company developing software solution with the ASP.NET Model-View-Controller (MVC) framework. Using a number of extensions like AngularJS. As two teams they create and maintain web sites, applications and mobile apps.

Methodology Used
Agile Scrum Development as three week sprints.
Developing Prototypes in manageable modules, stressing the user interface.

The Project Solutions
Solution 1 | Solution 2 | Solution 3 | Solution 4

Findings
Coding four projects at once is time consuming.
Coding one project at a time is faster.
Non user interface (UI) code can be reused.
A UI designer saves time coding a project.
Menus should be platform specific.

Conclusion
For a simple user interface Xamarin.Forms is the perfect solution.
For more complicated User interface Xamarin.Android, Xamarin.iOS and Universal Windows Platform is the better solution.
Red Jungle have begun coding with Xamarin.Android, this supports the findings.

References
Red Jungle www.redjungle.com
Xamarin developer.xamarin.com
Xamarin developer apple.com/apple
Visual Studio visualstudio.com
System.Android and Design Patterns KENDALL, J

Tech and Tools used
Xamarin | Visual Studio | Xamarin.Android | Xamarin.iOS | Universal Windows Platform

Time Line

1 Introduction

A 45-credit internship or project must be completed in the final semester of their third year of the BCS degree at EIT. The IT internship helps the student to become familiar with the working environment and help to prepare them for the future in IT.

The intern had an interview before starting with Red Jungle this determine suitability for the evaluation project.

2 Intern Integrated Learning

Interns are given an opportunity to learn while in a IT software work environment complementing the study already completed at EIT and expanding work related learning.

Evaluating the Xamarin programming environment for Red Jungle in Napier, valuable experience was gained in the IT environment complementing his studies, capping off the BCS degree and preparing him for the working environment.

3 Methodology Used

Agile Scrum Development as three week sprints.

Developing Prototypes in manageable modules, stressing the user interface.

4 Findings

Coding four projects at once is time consuming. Coding one project at a time is faster. Non-user interface code can be reused. A user interface designer saves time coding the project. Menus should be platform specific.

5 Conclusion

For a simple user interface Xamarin.Forms is the perfect solution. For more complicated User interface Xamarin.Android, Xamarin.iOS and Universal Windows Platform is the better solution. Red Jungle have begun coding with Xamarin.Android, this supports the findings.

6 References

Red Jungle www.redjungle.com/

Systems Analysis and Design Kendall, K;Kendall,J