1: Introduction

Integrated Project Members: James Churchill, Fraser Wright, Rachel Queen and Ben McManus

Code of Conduct

It is important when working in a group that everyone can work well together. It is common for personalities to clash, arguments to transpire and disagreements to occur. So we have decided to come up with a ‘Code of Conduct’ to help avoid such issues. It states the following:

* Each member must treat one another with the utmost respect
* Any issue that a member has must be brought up in one of the daily meetings to try and come to a solution
* All members should treat the project with the highest professionalism
* Members should attend all meetings arranged. Group leader should be alerted in advance if you cannot make/running late for meeting
* Members must learn to compromise when brainstorming/suggesting ideas etc

Project Scenario

For this project, we have been asked to play a team of consultants working for GCU Web Dev Limited. Our task is to design a mobile website for a famous Scottish Photographer – Colin Prior. He currently has a web site that showcases his photography and products, however, he would like to expand his online presence with a fully functional mobile version of his website. More specifically, he would like to implement QR codes and short URL’s to his printed materials that link to the mobile web site. So in order to do this, we must provide a specification report and a working prototype that incorporates all of the requirements for this project.

Functional Requirements

* QR codes should link to mobile website
* Shortened URL’s should link to mobile website
* Mobile website should be usable on all mobiles/tablets
* Gallery should include all available photos and link to the shop
* User should be able to purchase Colin’s products directly from phone
* User should be able to shift from one web page to another
* Website should be appealing to users
* Mobile website should provide more specific information about the photograph being scanned
* Mobile website should include links to forms of social media (facebook, twitter etc)
* Should provide a Japanese version of mobile website
* Project should be implemented with dropbox, so colin can edit files on laptop and see effects in the prototype

Non-Functional Requirements

* Website should not be complicated for user to navigate around
* Website should be appealing to user
* Response time for accessing website and each web page should be no longer than 5 seconds
* Website should be available 24/7

For the above requirements, we have been asked to use a number of different technologies/software applications to complete them.

The prototype uses the following technologies:

* HTML, CSS and JavaScript for the front-end
* Java for backend processing
* JQuery mobile JavaScript library to act as the mobile display framework
* Google App Engine as the delivery platform
* Source code control and project coordination is accomplished using Github

As a group, we are familiar with some of the technologies above but are expected to get to grips with technologies we aren’t so comfortable with.

Daily meetings will be arranged for us to get together and discuss everything related to the project. This includes tasks that we are expected to have completed each week, issues that occur during the project and how we will solve them, ideas/brainstorming and generally just making sure we are on top of things throughout the project. We are also expected to keep minutes of what goes on in the meetings. We decided we should meet up every Wednesday in one of the labs. We also agreed to keep in contact via Facebook and text. It is extremely important for groups to keep in contact as it means we will be more organised throughout the project.

Planned Lifecycle for Project

SCRUM

The methodology we are using is the SCRUM approach. There were a number of reasons behind this decision. Firstly, due to its strict iteration rules, the quality of deliverables is increased. It also copes well with any changes needing to be implemented, helps us be in more control of the project schedule and issues can be solved through the daily meetings we have as a group. As well as the many other advantages to this approach, we feel this methodology suits the project we will be doing very well.

This approach will also allow us to separate requirements into tasks that are known as the product backlog. These tasks can then be entered into what is known as the sprint backlog where we can then enter the “sprint” and each task is “time boxed” into 24 hour periods over 30 days.

This lifecycle works well with small teams all contributing to a single task at one time. Therefore this lifecycle is ideal for our team size. This is all shown on the following diagram.



Roles and Responsibilities

It is important to divide the workload evenly amongst each team member. We decided to illustrate this via a Gantt chart:

|  |  |
| --- | --- |
| *Tasks* | *Names* |
| **Planning** |  |
| ***Technical Proposal*** |  |
| (a) Document the existing infrastructure |  |
| How to configure Eclipse to develop AppEngine projects | Fraser |
| How to use Google Guice in an App Engine project | Fraser |
| How to set up and use (the modified version) of the image gallery | Fraser |
| How to configure jQuery Mobile with a custom look and feel | Fraser |
| Provide solutions to the following problems |  |
| (b ) specify how to produce & export QR codes & short URLs | James |
| (c ) Link from QR codes to pages of your mobile site. | James |
| (d ) The design of the pages. | James |
| (e ) Modify the prototype’s image gallery | Rachel |
| (f) Specify how you will link to Colin’s desktop shop. | Ben |
| (g) Several “use cases” of your site | Rachel |
| (h) Content Management | Ben |
| (i) Specify how you will include social media integration | Ben |
| (j) Investigate how QR codes can be prettified | James |
| ***10% extra credit solutions*** |  |
| (a) Investigate internationalisation on a mobile site | Fraser |
| (b) Investigate how Google analytics can be incorporated | Rachel |
| (c ) Add a Buy button on gallery pages | Rachel |
| (d) integrate one of Disqus | Ben |
| (e ) implement a method for generating QR codes with transparent backgrounds | James |
| (f) integrate the prototype with Dropbox | Ben |
| Test Specification Report | Rachel |

The above chart clearly outlines exactly who will be carrying out which part of the project. Although the project tasks have been distributed to different members, it will not be solely done by that one team member. We will constantly help out one another and offer advice whenever needed. The daily meetings will primarily be used to go over each task done by the member to ensure it is done correctly and sufficiently. If an issue is raised about one of the tasks, we will all come together to try and think of a solution. So everyone will be involved in just about all aspects of the project.

Anything else….

2: Objectives

The Objectives for the project come in the form of specific Deliverables;

Deliverable Date Due

readme.md on Github 23/01/2013

Technology Documentation Draft (Technical Proposal) 30/01/2013

Project Plan on GitHub 6/02/2013

Presentations, date tba (around week 6) 20/02/2013

End of Project Submission 3/03/2013

Finished Prototype

Documentation Guide

Evidence of project management on GitHub

Self and Peer Assessments

Presentation/Demonstration

Readme.md on Github

The readme file on Github will contain basic information about the project; project client, start date, end date, what the project is about and the members of the project.

Technology Documentation Draft (Technical Proposal)

This document will contain solutions to the Requirements that the client Colin Prior wishes to be resolved and included in the project.

Project Plan on GitHub

The Project Plan will contain the details of the actions that will be undertaken to complete meet the requirements. These details will general include; What will be done, how will it be done and who will do it.

Presentations, date tba (around week 6)

This deliverable will take the form of a presentation (Power Point, Word Notes, Images) rather than a single document. This will present our Project Team’s Proposal to the rest of the Teams.

Finished Prototype

This will be a fully operating prototype that will meet the Requirements stated, by the client, in the Case Study Document. The prototype will fulfil these requirements by using the proposed solutions from the Technical Proposal Document.

Documentation Guide

The Documentation Guide will contain all the associated documentation that comes along with planning, designing & implementing a mobile site/app. This will be for example the Requirements Specification Document, Analysis & Design Documentation, Work Breakdown Structure etc.

Evidence of project management on GitHub

This deliverable will contain all the files that relate to the organisation of the project team to the associated tasks within the project. These can take the form of meeting minutes, Gantt chart, correspondents between team members etc.

Self and Peer Assessments

This will be a single document that will reflect each Team Member’s efforts within the project as well as the Team Member’s opinions of the efforts of each of their colleagues.

Presentation/Demonstration

A presentation (Power Point, Word Notes, and Images) that will demonstrate the Project Teams finished Mobile Site that will satisfy all the stated Requirements from the client Colin Prior.

3: Planning

Planning is arguably the most important part in any software development project, as it is vital for ensuring the success of the project. For this project, the group has decided on the agile development cycle known as 'SCRUM', therefore we must build a plan around this lifecycle accordingly.

Due to the nature of this project lifecycle, it is important to organise the project components into parts which can be tackled concurrently (i.e. eliminate all dependents before proceeding to next phase).

To plan effectively for this project, the group will produce a set of documents including:

* A concise set of requirements drawn from the project specification
* A Gantt chart detailing all objectives and any dependencies they have on other sections
* A set of use case diagrams detailing all interactions which may occur in the proposed system
* A work breakdown structure detailing who will do what section(s) of the project

To produce the requirements, the group has studied the project specification and drawn a set of requirements from this (see Introduction section). The first set of requirements were decided as the most critical to the success of the project, and have therefore been added to the 'functional requirements' section (meaning they are essential to make the system work as planned. Other non-essential requirements have been included within the non-functional requirement section, as these were deemed desirable but not essential for the project to be a success.

From these requirements, the group has produced a Gantt chart detailing all deliverables and the estimated time to implement each section. Due to the nature of the SCRUM lifestyle however, these timeframes are subject to change as required.

To produce the use case diagrams for the project, the group will analyse all requirements set out in the above section, and create a list of actors and functions that will be required to perform the functions listed in the requirements. It is critical that this part is done accurately as the later parts of the development will rely on the diagrams produced at this stage in order to be successful.

A work breakdown structure will be implemented as the project progresses. Due to each project member having similar skills, tasks will be allocated based upon each group member's current workload, unless another member volunteers for a certain task. A basic task list has already been created, however, there is still freedom for each member to swap tasks if desired.

4: Implementation & testing

To implement the project we will be using a variety programmes depending on what will be implemented at that point. The development environment we are using for the web side of the project will be Macromedia Dreamweaver 8. We will also be using notepad ++to edit and improve the website to make it look more appealing and so it is similar in colour scheme and layout to the desktop version of the website. To translate the use case diagrams to actual code we will be using NetBeans IDE 7.2.

To test the system we will use a pre-planned testing table to gain the expected results when, for example, we scan the qr code or click to go to a specific page on the website. The table will show what test will be carried out, what the expected result is and what the actual result is once the test has been carried out. We will use this method of testing to make sure the system is rigorously tested.