

Requirements for a Dublin Fire Brigade website

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Declaration Cover Sheet for Project Submission

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- expelling a student from college,
- prohibiting a student from sitting any examination or assessment.,
- the imposition of a fine and
- the requirement that a student to attend additional or other lectures or courses or undertake additional academic work.

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Synopsis

This document is part of a final year project at the National College of Ireland. It was created by a fourth year student from the BSc (Hons) in Technology Management programme. The aim of the project is to elicit, manage and analyse the requirements for a website for Dublin Fire Brigade. This will be done by using specific business analysis techniques to elicit requirements from the main stakeholders involved in the project.

Having worked in Dublin Fire Brigade as part of my work experience at second level education, they were immediately considered as a possible client for my final year project when the project brief was released. The project was explained to the people at Dublin Fire Brigade and they asked if the project could be conducted around the requirements for a new website to represent the organisation.

About Dublin Fire Brigade

Founded in 1862, Dublin Fire Brigade serves 1.2 million people throughout Dublin City and County Dublin. As Ireland's largest fire brigade, Dublin Fire Brigade operates 12 full-time stations as well as 2 part-time stations. The organisation employs an estimated 900 people and is the country's only fire brigade to provide an emergency ambulance service.

Project Proposal

Objectives

The main objective of this project is to elicit, manage, and analyse the requirements needed to develop a new website for Dublin Fire Brigade and present the findings and results in this document. The proposed new website will be designed with a view to replace the existing Dublin Fire Brigade website(s). At the moment there is a main Dublin Fire Brigade web presence on the Dublin City Council website as well as a number of other websites related to Dublin Fire Brigade and the different services they provide. The new website aims to integrate these websites into one and at the same time improve on these websites in terms of quality of content, layout/design and ease of navigation.

The main aim of the new website is to provide visitors to the site with a wide range of information related to Dublin Fire Brigade and the services they provide. As the website represents an emergency service, it is important for it to achieve these aims. The elicitation of requirements will be done through the use of business analysis techniques to elicit requirements from all the key stakeholders involved in the development of the website. These techniques include brainstorming sessions, focus groups, interviews, observation, document analysis, prototyping, benchmarking, requirements workshops, and surveys/questionnaires amongst others. Once the requirements have been elicited, the objective is to manage and analyse these requirements accordingly based on techniques used in business analysis. The requirements will be managed and analysed by organising, grouping, verifying, validating and prioritising each requirement.

The aim of this requirements specification document is to provide the website developers with all the requirements for the new website as well as the necessary information needed to understand what the new website will do and how it will do it.

Background

There are a number of reasons why Dublin Fire Brigade, and in a particular a new website for Dublin Fire Brigade, were a suitable client to base this requirements document around. I myself have experience in trying to find information online about Dublin Fire Brigade and the services they provide. When searching for this information on the internet I found the main page for Dublin Fire Brigade, this page was located on the Dublin City Council website. I discovered that, for a visitor to the Dublin City Council website, it took five clicks to get from the home page to the Dublin Fire Brigade page. When I did get to the Dublin Fire Brigade page I noticed quickly that it was difficult to navigate around the website. The layout of the website was unappealing, with no real structure to it, which made it difficult for to find relevant information.

It was also apparent that, as well as the page on the Dublin City Council website, Dublin Fire Brigade had a number of separate websites for the other areas of their organisation. For example, there is a separate website for Dublin Fire Brigade training, a separate website for Dublin Fire Brigade's "Fire Safety 4 Kids", and there is also a wealth of information about Dublin Fire Brigade on the Irish Fire Services website. This was surprising and somewhat confusing, and so other Irish fire brigade websites were researched to see how Dublin Fire Brigade's website ranked in comparison.

When comparisons were made between Dublin Fire Brigade's website and Cork City Fire Brigade's website, the Cork City Fire Brigade website was found to be superior in almost all areas. The Cork City Fire Brigade website is easy to navigate, is designed well and has all the relevant information on one website. It was evident that there was a lot of potential for the Dublin Fire Brigade website to improve. As well as the Cork City Fire Brigade website, other Irish fire brigade websites were studied and compared to Dublin Fire Brigade's website. It was discovered that the Dublin Fire Brigade website was also inferior to many smaller Irish fire brigade websites such as Limerick's and Kildare's. Dublin Fire Brigade's website also lacked in quality and presentation when compared with the websites of Merseyside's Fire Service and West Midlands Fire Service in England. This is the main reason the conclusion was made that Dublin Fire Brigade needed a new website, where visitors could find all the necessary information on the services provided by Dublin Fire Brigade on one easy-to-use website.

I also got an insight into some the IT projects Dublin Fire Brigade were working on when I did work experience with the organisation in secondary school. This experience captured my interest in the organization's constant efforts to increase efficiency within the organisation. A new website for the organisation is an appropriate technical solution for an existing problem and a solution that will certainly increase efficiency as well as increase user satisfaction.

Technical Approach

The approach for this project will be focused on creating a requirements specification document. Initially, the approach will be to elicit all the necessary requirements needed to create a new website for Dublin Fire Brigade. These requirements will be elicited from all the key stakeholders involved in the project. The requirements will be elicited using requirements elicitation techniques such as brainstorming, interviews, questionnaires, document analysis, estimating, prototyping, and benchmarking. Research will count for a huge portion of this project.

Once the requirements have been elicited, the approach will then turn to managing and analysing each requirement. This will be done by documenting the results of the requirements elicitation techniques. Requirements will then be managed and analysed using certain business analysis techniques such as a MoSCoW Analysis. Once the requirements have been elicited, managed and analysed they will be documented in this requirements specification document. The document will show developers everything that is required of the new website, from how it will look to how it will function.

Special Resources Required

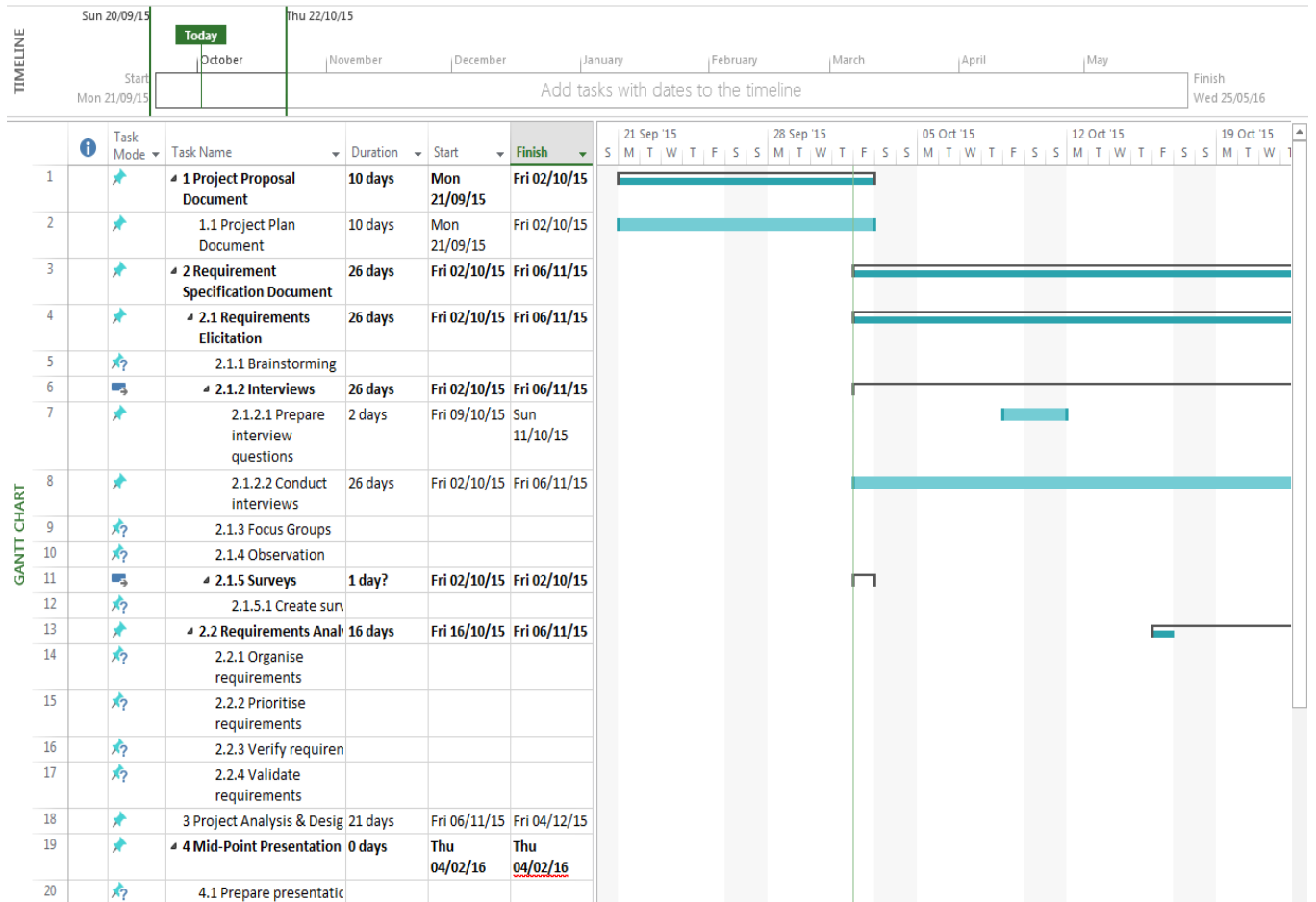
The most important resources for this project will be the computers in NCI and the software installed on these computers. Microsoft Office will be used to write up reports and create visuals of the requirements and data elicited throughout the project.

Microsoft Project will be useful when creating a project plan and a Gantt chart.

The college library and the many resources it provides will be used a lot throughout the duration of the project. The library is a great source for finding useful academic reading on any subject matter and it will provide great information throughout the course of the project. A personal laptop will be used at home as well as in college. Wireframes and mock-ups of the website will require a tool such as Balsamiq to be created.

Project Plan

Below is a screenshot of the Work Breakdown Structure and Gantt chart that was created using Microsoft Project. It identifies the tasks that must be carried out and shows a visual representation of the time they will take to complete.



Evaluation

The requirements specification document will be used as an evaluation test upon completing the project. In order to get an understanding of whether or not requirements were successfully managed throughout the project each requirement must be validated and evaluated. All requirements must fulfil its goals and objectives and meet the needs of the stakeholders. Once each requirement has been validated it should be of value to the stakeholders and add to the overall objective of the project.

Stakeholder Analysis

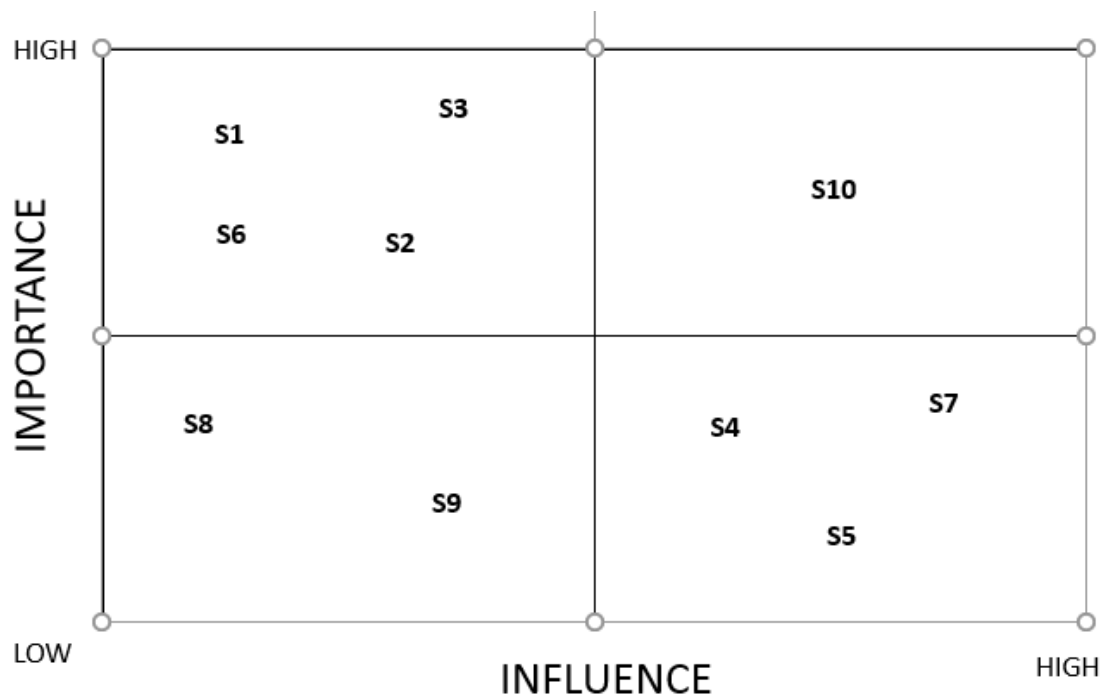
Stakeholder List

- Dublin Fire Brigade
- Dublin City Council
- IT Department in Dublin Fire Brigade
- Communications Department in Dublin Fire Brigade
- Minister for Health
- Department of Finance
- Project Manager
- Website Developers
- Website Testers
- SME's (Subject Matter Experts)
- End Users

Legend

Stakeholder	Key
Dublin Fire Brigade	S1
Dublin City Council	S2
IT Dep. Of Dublin Fire Brigade	S3
Minister for Health	S4
Department of Finance	S5
Project Manager	S6
Website Developers	S7
Website Testers	S8
Subject Matter Experts	S9
End Users	S10

Importance/Influence Matrix



Requirements Elicitation Techniques

Interviews

Description

Interviewing is a type of requirements elicitation technique used by business analysts to elicit requirements from either one stakeholder or a group of stakeholders together. Interviews can be conducted in a formal or an informal manner. Typically, in an interview, the interviewee asks the participant a number of questions and documents the responses. Interviews are widely used by business analysts as they are an effective way of eliciting requirements from stakeholders.

Advantages/Disadvantages

Interviews are generally carried out in a face-to-face manner, allowing the interviewee or business analyst to build a trust with the stakeholder and make the stakeholder feel valued and involved in the project. This personal contact is a huge advantage in requirements elicitation as it creates an atmosphere in which the stakeholder feels more comfortable expressing their true desires and interests for the project. Another benefit to interviewing is that feedback is instant, the business analyst does not have to wait for results to come back.

One disadvantage of interviewing is that it is considered to be a time consuming practice when compared with other requirements elicitation techniques. A lot of research and preparation must be carried out for a successful interview to take place.

Interview

Date: 08/02/16

Time: 9.00 am

Location: Dublin Fire Brigade Headquarters

Participants: Brian (IT Department in Dublin Fire Brigade)

Objectives: As part of the requirements elicitation process, a one on one interview with Brian from the IT Department in Dublin Fire Brigade will be conducted. The main objective for this interview is to acquire as much information as possible from the interview by asking well thought out questions and documenting Brian's responses. The interview will be documented by using the record feature on a phone to get an audio recording of the full interview. Notes will also be taken. The interview with Brian will provide the opportunity to build a relationship with an important stakeholder in the project. It will allow me to build a trust with my stakeholder. This trust is very important for effective requirements elicitation

as it will make the stakeholder feel involved in the project and in turn encourage them to answer questions openly and freely. Making the interviewee feel comfortable and relaxed during the interview is important to and this will be a personal objective for this particular interview. As well as recording audio and taking notes, observations will be made on the body language of the interviewee. This will help get a better understanding of what the interviewee wants from the project and whether or not he is content with the progress of the project so far. Because this particular interview is with a member of the IT Department in Dublin Fire Brigade, this will be a key interview in terms of eliciting requirements for the more technical side of the project.

Brainstorming

Description

Brainstorming is an effective requirements elicitation technique. It works by focusing on a particular topic and then coming up with ideas and thoughts around that topic.

Brainstorming sessions work best when a group is taking part in the brainstorming together as opposed to an individual brainstorming without the help of others.

Advantages/Disadvantages

There are many reasons to conduct a brainstorming session as part of a requirements elicitation process. The biggest advantage of brainstorming is that it allows you to elicit many different ideas in a relatively short period of time. Another benefit of brainstorming with a group is that it encourages creative thinking from members in the group. In a brainstorming session every idea must be discussed and documented.

The one downside of brainstorming, is that participation from some members can become limited for a number of different reasons. People can become shy and not willing to express their true thoughts when they are working as part of a group, interpersonal politics can prevent some people from participating in the session, and groupthink can often occur in brainstorming sessions.

Brainstorming Session

Date: 23/01/16

Time: 10.00 am

Location: Dublin Fire Brigade Offices

Participants: End Users (People who have experience using the existing website)

Objectives: A brainstorming session will be conducted with some potential end-users of the new website. These people are members of the public who will potentially be using the new website in the future. These end-users or members of the public will account for a lot of the visitors to the site in the future, therefore this will be an important session in finding out what they would like to see on the new site. During this brainstorming session, the existing Dublin fire Brigade website will be open, either on a laptop or on a projector screen at the top of the room. Participants will be guided through the website and asked to discuss what they would like to see on the new website as well as where they feel the existing website could be improved upon. The main objectives are to create a non-judgemental environment where all participants are encouraged to speak up and think creatively. If this can be achieved, then the brainstorming session will be successful. The plan is to keep the size of the group relatively small, between 4 - 7 people, as larger groups can be difficult to manage

and the likelihood of groupthink occurring increases with a larger group of participants. The session will be documented by drawing a mind map of all the ideas discussed during the session. The mind map will be created on a whiteboard if it is available or alternatively on a notepad or a sheet of paper.

Questionnaires

Description

A questionnaire is a requirements elicitation technique that is used to elicit information from a group of people. It is a series of clear and concise questions that can either be closed ended or open ended questions. Closed ended questions are questions with a number of pre-selected answers that the participant must choose an appropriate answer from. They tend to be easier to analyse than open ended questions as there are only a certain amount of possible answers for the participant to choose from. Open ended questions are questions that leave more room for the participant to express their true feelings and opinion on a certain topic. It is important to get the right balance between closed ended and open ended questions in any questionnaire.

Advantages/Disadvantages

Like all requirements elicitation techniques, there are advantages and disadvantages to questionnaires. The main advantage of using a questionnaire to elicit requirements is that questionnaires make it relatively easy for a substantial amount of information to be collected from a large number of people in a short amount of time. Another reason I have chosen to elicit requirements using questionnaires is because they are not expensive to carry out and the results can be easily analysed. There are a number of tools on the web that make analysing the results of questionnaires even easier, tools such as Google Forms.

The biggest disadvantage to using questionnaires to elicit requirements is that there is no way to tell how truthful a participant is being when conducting the questionnaire, therefore it is fair to say questionnaires may lack an element of validity.

Questionnaire

Date: 27/01/16

Participants: End-users, after using the existing site

Objectives: The objective of this questionnaire is to elicit requirements from end-users of the existing Dublin Fire Brigade website. Before taking the questionnaire, each participant will be asked to spend a couple of minutes navigating through the existing website. The end-users of the new site will be one of the most important stakeholders in this project, therefore it will be incredibly important to listen to their opinions on the existing website. The questions in this questionnaire will be designed in a way that will give me a good idea of the overall view of the existing website and where it can be improved upon. 30 copies of the questionnaire will be sent to various members of the public, in the hope of receiving between 15 and 20 responses.

Document Analysis

Description

Document Analysis is a form of requirements elicitation techniques that involves studying available documentation on existing systems, memos, existing guidelines, procedures and other relevant systems or information. According to the Business Analysis Body of Knowledge (BABOK) there are three stages to a document analysis. These stages are the preparation stage, the document review stage, and the wrap-up stage.

Advantages/Disadvantages

The main advantage of carrying out a document analysis is the fact that it gives you the means to cross-check requirements from other elicitation techniques such as interviews and questionnaires.

The biggest downfall of a document analysis is that it can be time consuming to find relevant information when there is not an existing system already in place.

Objectives

A document analysis will be performed on the functional requirements of the existing system. The existing system in this case is the existing Dublin Fire Brigade website. The main objective here is to study the website in detail, taking note of what kind of work went into creating the website. The aim is to find areas where the existing system can be improved upon as well find areas of the existing system that work well.

Prototyping

Description

Prototyping helps us to identify user interface requirements. It gives us an opportunity to get a visual idea of what the finished product could look like and how it could function. Prototyping allows us to visualise requirements as well as get an idea of how the final product will feel and flow. Building a prototype is an iterative process.

There are two main types of prototyping; known as 'functional scope' and 'usage throughout system development lifecycle'. A functional scope generally shows a wide view of the entire system's functionality. A usage throughout system development lifecycle prototype or "throw-away" prototype is created at the beginning of a project using basic tools and is usually discarded once the final system or product has been developed.

Advantages/Disadvantages

The biggest advantage of prototyping is that it allows users of the system to actually see the future systems interface, rather than coming up with their own idea of what it will look like based on written descriptions. It also allows for early feedback from key stakeholders in a project.

The downfall to prototyping is that it can be quite time consuming. It can also lead to unrealistic expectations in terms of the scope of the project and how the system will function.

Objectives

A functional scope prototype for the 'Home' page of the new Dublin Fire Brigade website will be created. This prototype will be created in the hope that it will give my stakeholders a visualisation of how the new website will look, feel and function.

Benchmarking

Description

Benchmarking is used to measure an organizations systems or processes against organizations that are leaders in the market. Benchmarking shows us what the 'best-in-class' practices are in developing a system or process and allows us to implement these practices into our own systems and processes. The systems that organizations use to benchmark their own systems against are usually very well developed and are proven to be successful.

Advantages/Disadvantages

Benchmarking can be an excellent elicitation technique when it is used to give us new ideas, methods and tools to be used in the development of our own systems. Benchmarking also minimises risk, this is because when we benchmark we are studying tried and tested ideas and methods and implementing them into our own development.

The main disadvantages of benchmarking as a requirements elicitation technique are that it can be time consuming and it can also restrict innovative solutions and ideas.

Objectives

Benchmarking will be used to study the websites of some other Fire Brigades, and compare them with the Dublin Fire Brigade website. The Dublin Fire Brigade website will be benchmarked against the Cork City Fire Brigade website, the Merseyside Fire and Rescue website, and the West Midlands Fire Service website. By studying these websites, it will give me ideas and strategies that can be used to improve the Dublin Fire Brigade website. The reason these three websites in particular are being used in the benchmarking process is because they are all superior in quality, layout and functionality when compared with the existing Dublin Fire Brigade website.

Presentations

As part of this project, a number of presentations will be made, including a mid-point presentation in February as well as a final presentation in May. The purpose of these presentations is to showcase the work and progress that has been made in the project. The requirements for these presentations to take place include a suitable software program to create the presentation (e.g. PowerPoint) as well as data and results to discuss during the presentation. Before a presentation is made it will have to be rehearsed and practiced. This brings forth the requirement for a suitable time and location to conduct rehearsals. A number of visualisation tools will be used, such as Excel and SPSS, to show visual representations of data and information during my presentations.

Supervision Arrangements

The supervisor for this final year project is Ron Elliott. Meetings between myself and Ron will occur regularly throughout the course of the project. These meetings are a great help as they give me a chance to reflect on my work and discuss the direction I want to go with my project. It is also always good to have a second opinion on different ideas I might have for my project. In order for these meetings to take place, we must firstly, pick a time that suits both of our schedules. We also must find a suitable location for the meeting to take place. All relevant information with me such as work in progress must be brought to these meetings on since the last meeting. Preparations must be made in order to be ready to document any suggestions Ron may have for the project.

Journals

Progress made on the project must be reported and discussed at the end of each month in a document called a reflective journal. The reflective journal is a good way of keeping track of your progress throughout the project. It also gives opportunity to reflect on the work done so far and the work that needs to be done. All entries into the reflective journal can be found in the appendix of this document.

Results/Analysis

Interviews

Results

Below are the answers that Brian, from the IT department in Dublin Fire Brigade, gave to the questions asked in the interview. Note that the questions are in bold font, while Brian's answers are in italic.

Do you want the look and feel of your site to be flashy or would you like it to be a simpler and clean site?

Brian: *"We would like the site to be information based, with the main purpose of the site being to provide people with information on us as an organisation as well as the services we provide. Therefore, we would like the new website to be simple, well laid-out and easy for visitors to absorb the information on the site."*

Who is your intended audience for the site?

Brian: *"The public are our main intended audience, since they will be the most likely and regular visitors to the site. We want to make the site easy for the people of Dublin and other areas to find information on the website. We would like a section of the website to be dedicated to fire safety. We would also like to have a section on the website dedicated to the external training we provide. This section of the website will be aimed at companies and organisations who are interested in the training and courses we provide."*

What is the primary 'action' a visitor to your site would take? Would they be making a purchase, becoming a member or searching for information?

Brian: *"The main reason someone would visit the site is to search for information. Therefore, it is important for the site to be easy to navigate and find information. We would also like to make it possible for visitors to pay for water charges through the website."*

Would you expect the site to provide links to social media pages? For example, a link to the Facebook page, a Twitter feed?

Brian: *"Ideally, we would like to have a link to our twitter account or even a live feed of our twitter account on the home page of the website. Our Twitter is quite active and is where a lot of people go to find real-time information about ongoing occurrences in Dublin Fire Brigade. Therefore, it would be more important for us to have a Twitter feed on the site. We would also like to have a link to our Facebook page somewhere on the site, without making it a very big or noticeable feature."*

Are you required to use any specific colour schemes on the website? Such as the light blue colours used on the Dublin City Council website.

Brian: *"Yes, we would like to use the same colour schemes as the Dublin City Council website. Although the website will be separate from the Dublin City Council website we would still like the look of both websites to remain similar. We would like to see official logos on the website."*

Will you require any specific any specific programming needs? Such as a search function on the site.

Brian: *"Yes, we do require a search function on the website. There is a search function on the existing site, but it is used as the main way to navigate through the site. So, although we would like there to be a search function, we also want the site to be easy enough to navigate through that it is not needed as much as it is currently needed on the existing Dublin Fire Brigade website."*

Will you have a need for any secured transactions on the site? Such as e-commerce. Or will the site be more focused on providing information?

Brian: *"Yes, we would like for users to have the option of paying for their fire charges online on the new website. It is important for us to keep up with technology and we feel this will be a key feature of the new website. We are constantly trying to increase efficiency within the organisation and this new feature would be a great opportunity to do just that."*

What form of payment will users be using to pay for their fire charges on the site?

Brian: *"We would like to give our users the option of using either PayPal to pay their fire charges or alternatively using a credit or debit card directly."*

Analysis

Having interviewed Brian, a member of the IT department in Dublin Fire Brigade, I was able to get a sense of what Dublin Fire Brigade would like to see on the new website and some of the requirements they have for it. From talking with Brian, I got the clear impression that they would ultimately like for the website to be clean, well laid-out and easy to navigate. One requirement Dublin Fire Brigade have for the website is that there is a section on the site dedicated to Fire Safety. They would also like for there to be a section dedicated to the external training and courses they provide. With regards to a social media presence on the new website, Dublin Fire Brigade want a live Twitter feed on the home page, linked to the Dublin Fire Brigade Twitter account. They also want a link to their Facebook page on the home page of the new site. The colours on the new site must match the colours on the current Dublin City Council website. Dublin Fire Brigade require there to be official logos on each page of the site. It is also a requirement for there to be a search function on each page of the website. Finally, from my interview with Brian, I have elicited the requirement for there to be an option for visitors to the site to pay for their fire charges online. Dublin Fire Brigade would like this to be possible via either PayPal or directly from a credit or debit card.

Brainstorming

Results

The visual representation of the results from the brainstorming session that took place on the 23rd January can be seen in the mind map that I created below. Throughout the session, I navigated through each page on the existing Dublin Fire Brigade website and asked the participants to discuss what they liked about the page, what they didn't like and what they would like to see on the new website.

I elicited a number of requirements from this session, from what pages' people would like to see on the site to what sort of social media presence they would like to see on the site.

Analysis

I feel as though I achieved all of my objectives that I set out before conducting this brainstorming session. I was successful in creating a non-judgemental environment, which made people feel more comfortable expressing their ideas. The brainstorming session was attended by myself and 4 members of the public or potential users of the Dublin Fire Brigade website. I managed to successfully document the work that was done in the brainstorming session.

Questionnaires

These are the results to the questionnaire that was conducted. Before taking the questionnaire, participants were asked to spend 2-3 minutes browsing the existing Dublin Fire Brigade website if they had not already visited the site before.

1) How satisfied are you with the existing Dublin Fire Brigade website?

- 41% of participants said they were “somewhat satisfied”
- 35% of participants said they were “neutral”
- 12% of participants said they were “very dissatisfied” and 12% said they were “somewhat satisfied”

2) What was your primary reason for visiting the website?

- 35% of participants said they were “looking for information about how to contact Dublin Fire Brigade
- 29% of participants said they were “just curious”
- 12% of participants said they were “looking for information about jobs at Dublin Fire Brigade”
- 12% of participants said they were “looking for information about Dublin Fire Brigade training”

3) How often do you visit the website?

- 53% of participants said they had “visited once before”
- 26% of participants said they had “2-3 times before”

4) Which of the following statements are true? Select all that apply.

- 33% of participants said they “had no specific agenda in mind when visiting”
- 28% of participants said they “were able to find exactly what they were looking for”
- 28% of participants said they “were not able to find what they were looking for”
- 22% of participants said they “were able to find a part of what they were looking for”
- 6% of participants said they “were able to find something better than what they were looking for”

5) How useful did you find the Dublin Fire Brigade Twitter feed feature?

- 41% of participants said they found it “extremely useful”
- 35% of participants said they found it “somewhat useful”
- 24% of participants said they found it “very useful”

6) How useful did you find the 'Frequently Asked Questions' section of the website?

- 44% of participants said they found it “somewhat useful”
- 28% of participants said they found it “very useful”
- 22% of participants said they didn’t find it useful

7) How useful did you find the 'Careers in the Fire Brigade' section of the website?

- 53% of participants said they found it “very useful”
- 29% of participants said they found it “somewhat useful”
- 18% of participants said they didn’t find it useful

8) How useful did you find the 'Major Emergency Planning' section of the website?

- 44% of participants said they found it “somewhat useful”
- 31% of participants said they didn’t find it useful
- 25% of participants said they found it “very useful”

9) How useful did you find the 'Ambulance Service' section of the website?

- 33% of participants said they found it “very useful”
- 33% of participants said they didn’t find it useful
- 28% of participants said they found it “somewhat useful”

10) How useful did you find the 'About the Fire Brigade' section of the website?

- 53% of participants said they found it “somewhat useful”
- 29% of participants said they didn’t find it useful
- 18% of participants said they found it “very useful”

11) Please rate the website based on its quantity of content.

- 41% of participants said it was “good”
- 24% of participants said it was “below average”
- 18% of participants said it was “average”
- 12% of participants said it was “poor”

12) Please rate the website based on its layout/design.

- 39% of participants said it was “average”
- 33% of participants said it was “below average”
- 28% of participants said it was “good”

13) Please rate the website based on its quality of content.

- 33% of participants said it was “average”
- 28% of participants said it was “below average”
- 22% of participants said it was “good”
- 11% of participants said it was “poor”

14) Please rate the website based on its ease of navigation.

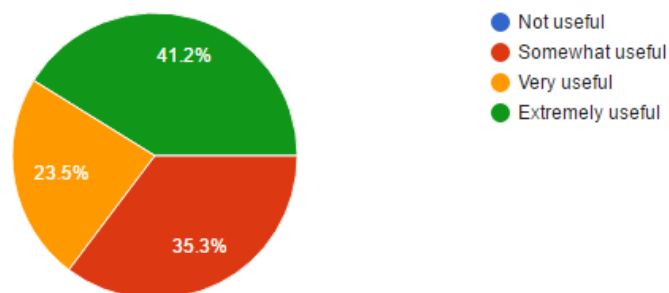
- 41% of participants said it was “poor”
- 29% of participants said it was “average”
- 18% of participants said it was “below average”
- 12% of participants said it was “good”

15) How likely are you to recommend the website to a friend or colleague in the future?

- 35% of participants said they were “very unlikely”
- 29% of participants said they were “somewhat unlikely”
- 24% of participants said they were “neutral”
- 12% of participants said they were “somewhat likely”

Sample result from Google Forms:

How useful did you find the Dublin Fire Brigade Twitter feed feature?
(17 responses)

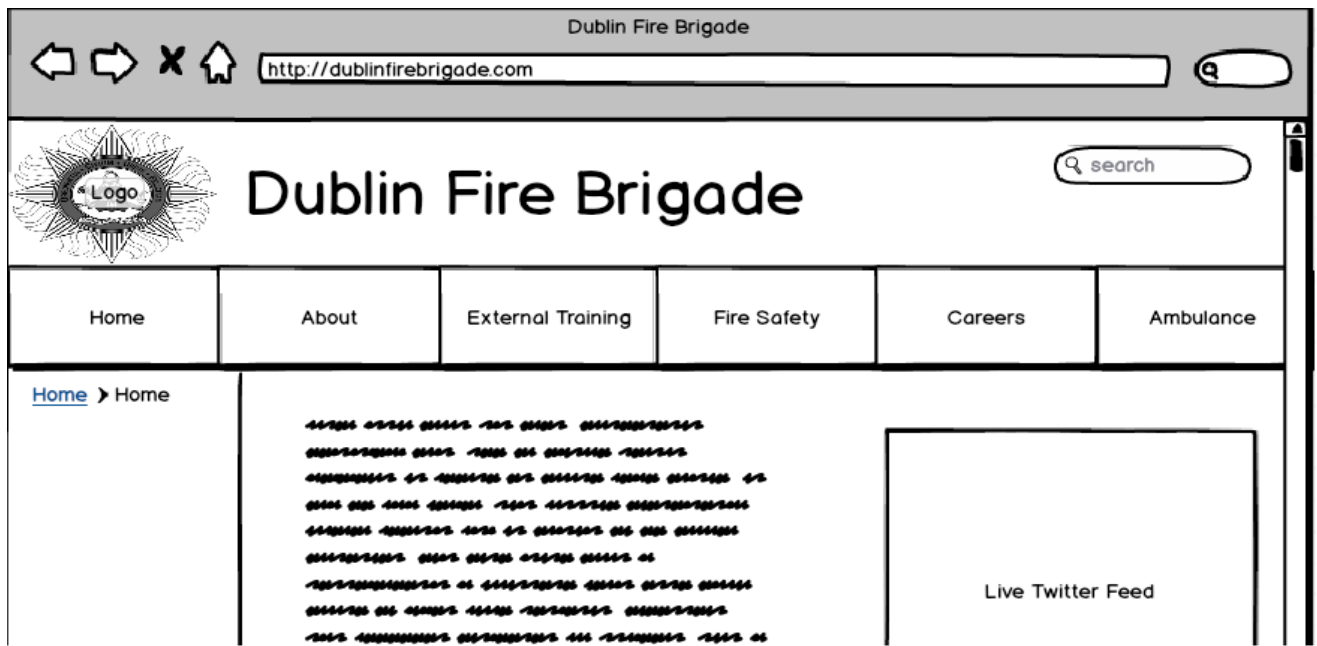


Prototyping

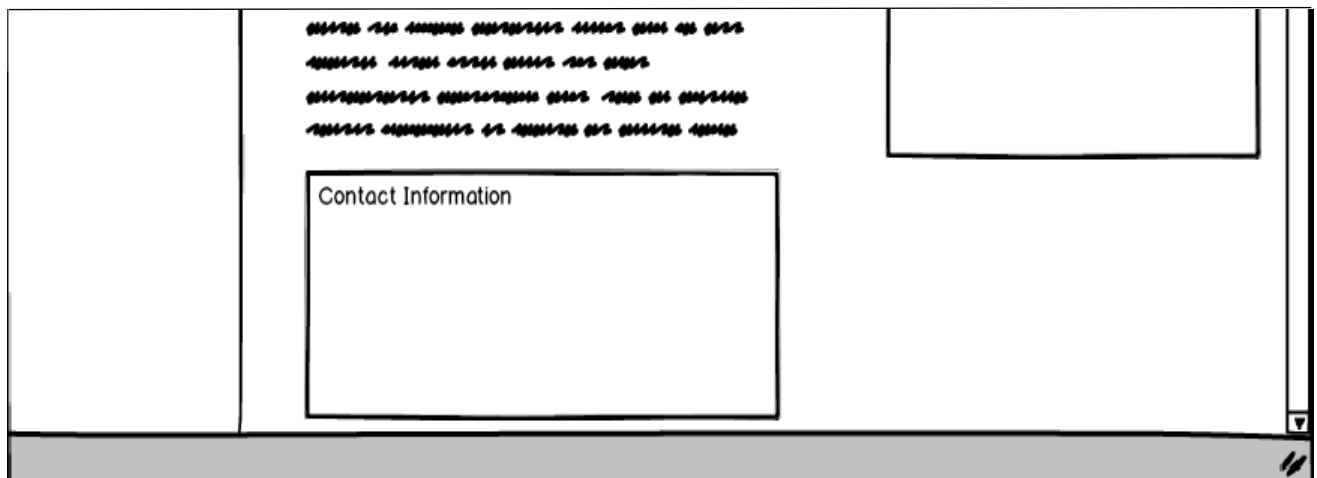
Wireframe

Below is a wireframe/mock-up of what the 'Home' page of the website should look like. It gives the developer an idea of the overall layout of the website. This was created using a tool known as Balsamiq.

Top of Page



Bottom of Page



Document Analysis

Functional specifications of existing system

Due to it being part of the Dublin City Council website, the existing Dublin Fire Brigade website uses the same colour schemes as the Dublin City Council website. The predominant colours on the site are blue and white. The website consists of 5 main pages. The main pages are the 'Home' page, the 'Major Emergency Planning' page, the 'About the Fire Brigade' page, the 'Ambulance Service' page, and the 'Careers in the Fire Brigade' page.

The home page of the existing site consists of:

- Brief background of Dublin Fire Brigade and the services they provide
- Live Twitter feed linked to the Dublin Fire Brigade Twitter account
- Brief description and photograph of some of the senior management within the organisation
- Information about the Fire and Emergency Operations Plan Section 26 Public Consultation
- Information about Fire Brigade Charges
- FAQ's
- Six quick links to other areas of the site
- Four main links at the top of the page. These are "Major Emergency Planning", "About the Fire Brigade", "Ambulance Service", and "Careers in the Fire Brigade"
- Dublin Fire Brigade contact information
- Search functionality

The "Major Emergency Planning" page consists of:

- Live Twitter feed linked to the Dublin Fire Brigade Twitter account
- Link to the Major Emergency Plan 2015
- Information on planning for major emergencies
- Dublin Fire Brigade contact information

The “About the Fire Brigade” page consists of:

- Live Twitter feed linked to the Dublin Fire Brigade Twitter account
- Information on headquarters and fire stations
- Information on manpower and operations
- Information on the regional control centre
- Information on the ambulance service
- Information on other duties
- Information on how the Fire Brigade is financed
- Dublin Fire Brigade contact information

The “Ambulance Service” page consists of:

- Live Twitter feed linked to the Dublin Fire Brigade Twitter account
- Information on the background of the ambulance service
- Information on paramedic vehicles
- Information on paramedic training
- Dublin Fire Brigade contact information

The “Careers in the Fire Brigade” page consists of:

- Live Twitter feed linked to the Dublin Fire Brigade Twitter account
- Information on whether or not the Fire Brigade are currently hiring
- Link to publicjobs.ie
- Information on jobs at Dublin fire Brigade
- Information on what qualifications are needed
- Dublin Fire brigade contact information

Benchmarking

Extensive study was carried out on the websites of Cork City Fire Brigade, West Midlands Fire Service and Merseyside Fire & Rescue Service. When studying these three sites and comparing them to the existing Dublin Fire Brigade website, notes were taken of some of the key features that of each site. These could potentially be used to enhance the new Dublin Fire Brigade website. Some of these key features have been listed below:

Cork City Fire Brigade website

- Layout of the home page (clean, simple, easy to read and easy to find what you are looking for)
- Option for visitors to change the text-size on the website
- Live Twitter Feed
- Option for visitors to enter e-mail address and enter the Cork City Fire Brigade mailing list

West Midlands Fire Service

- Excellent use of graphics, pictures and slideshows on the home page
- Strong social media presence with links to Instagram, LinkedIn, Pinterest, Facebook, Twitter, YouTube, and Flickr accounts

Merseyside Fire & Rescue Service

- Option for visitors to change the text-size on the website
- RSS live news feed on the home page
- Links to Twitter, Facebook, and YouTube accounts
- Option for visitors to change the background colour of the website

MoSCoW Analysis

A MoSCoW Analysis is a way of prioritising requirements. This MoSCoW Analysis will show the website developers what requirements must be met, should be met, could be met and won't be met. Before being categorized, each requirement is looked at in detail in terms of its importance to the project and whether or not it can realistically be met. This was done for each requirement for the new Dublin Fire Brigade website and the results can be seen below.

Must Have

These requirements are crucial to the success of the project. If these requirements are not met the project will be considered a failure. These are the 'must have' requirements for the Dublin Fire Brigade website:

- 'Home' page
- 'Fire Safety' page
- 'External Training' page
- 'Careers' page
- 'About' page
- 'Ambulance Service' page
- Live Twitter feed connected to Dublin Fire Brigade Twitter account
- White/light blue colour schemes
- Official logos
- Search function on each page
- All collected data must be saved and maintained in a database

Should Have

These requirements are not critical to the success of the project but they are considered to be of high importance and should be included. If these requirements are not met in time for the initial launch of the website, then they should be included in future updates and/or patches. These are the 'should have' requirements for the Dublin Fire Brigade website:

- Link to Dublin Fire Brigade Facebook page
- Online payment of fire charges
- Payments of fire charges to be made via PayPal or directly from a credit/debit card
- 'Frequently Asked Questions' section

Could Have

These requirements are desirable and are not critical to the success of the project. These requirements will be considered and possibly met if there is enough time and resources available to do so. These are the 'could have' requirements for the Dublin Fire Brigade website:

- Option for users to alternate between different text-sizes
- Option for users to be added to a mailing list by entering their e-mail address

Won't Have

These requirements have little or no effect on the outcome of the project. They offer little in terms of value to the project. Although they won't be included in this release of the website, they could be considered for future releases. These are the 'won't have' requirements for the Dublin Fire Brigade website:

- Option for users to alternate between bright/dark background colours

Conclusion

The main aim and objective of the project was to elicit, manage and analyse the requirements for a Dublin Fire Brigade website. This objective was achieved. The requirements elicitation process was a very successful stage of the project. The studying and following of the business analysis techniques described in the Business Analysis Body of Knowledge (BABOK) was a key factor in the success of the elicitation process.

A good working relationship was established with Dublin Fire Brigade and the other important or key stakeholders involved in the project. Requirements were gathered from key stakeholders using business analysis techniques such as interviews, questionnaires, brainstorming, document analysis, prototyping, and benchmarking. Once elicited, the requirements were managed into a full list of requirements and analysed using techniques such as a MoSCoW analysis. A lot of valuable experience was gained from carrying out this project, experience that will be critical in future projects, both academic projects and projects in the working world.

There were no major setbacks throughout the course of the project. Progress was briefly stunted at the beginning of the project, when a lot of thought was being put into whether to focus on the requirements for a mobile application or a website. Once, this was overcome and the decision was made to focus on the requirements for a website and not an application, productivity and work on the project increased enormously.

In conclusion, the project was a success. Requirements were successfully gathered, managed and analysed through the use of business analysis techniques described in the Business Analysis Body of Knowledge. Information and findings were documented accordingly. The proposed new Dublin Fire Brigade website could potentially have a positive impact on the public's view of the organisation as well as increasing efficiency within the organisation.

Appendix

Full List of Requirements

1. 'Home' page (Non-Functional)
2. 'Fire Safety' page (Non-Functional)
3. 'External Training' page (Non-Functional)
4. 'Careers' page (Non-Functional)
5. 'Fire Charges' page (Non-Functional)
6. 'About' page (Non-Functional)
7. 'Ambulance Service' page (Non-Functional)
8. Live Twitter feed connected to Dublin Fire Brigade Twitter account (Technical)
9. White/light blue colour schemes (Non-Functional)
10. Official logos (General)
11. Search function on each page (Functional)
12. 'Frequently Asked Questions' section (Non-Functional)
13. All collected data must be saved and maintained in a database (Functional)
14. Link to Dublin Fire Brigade Facebook page (Technical)
15. Online payment of fire charges (Functional)
16. Payments of fire charges to be made via PayPal or directly from a credit/debit card (Functional)
17. Option for users to alternate between different text-sizes (Technical)
18. Option for users to be added to a mailing list by entering their e-mail address (Functional)
19. Option for users to alternate between bright/dark background colours (Technical)

Monthly Reflective Journals

October

Student name: Niall Crosbie

Programme: BSc in Technology Management

Month: October

My Achievements

It was difficult to progress much with my project this month with all the confusion over the specifics of our project. I met with my supervisor Ron Elliott to discuss and try to clarify what work needed to be done. I also met with Eugene O'Loughlin to discuss similar matters. I contacted my client Dublin Fire and Ambulance Service and agreed to meet up with some of the important stakeholders within the organisation, although dates for these meetings have yet be finalised.

My Reflection

Overall I feel disappointed with the uncertainty surrounding the project specifics set out by the college. I have not let this get me down or let it affect my work too much and have tried to keep doing as much work as possible. I feel my meetings with Eugene and in particular with Ron have helped me greatly and I look forward to meeting with them over the coming month.

Intended Changes

Next month, my work will be focused on requirements elicitation. This will involve meeting with important stakeholders and gathering all the necessary requirements for the project. I will meet with my project supervisor Ron a number of times throughout the month to discuss the project and listen to what suggestions or advice he may have and incorporate them into my project.

November

Student name: Niall Crosbie

Programme: BSHTM4

Month: November

My Achievements

This month, I made some good progress on my project. I decided that, instead of focusing on the requirements for an application, I would focus on a new website for Dublin Fire Brigade. After a couple of discussions with my supervisor Ron Elliott and some thought I decided that I was a lot more knowledgeable in what it takes to build a website than an application. I am now more comfortable to move forward with my project and confident in my decision. I also created a number of documents that will help me with my requirements elicitation. I created a survey, that will help me to understand the requirements some of the employees of Dublin Fire Brigade have for the new website. I also prepared some interview questions for an interview I have arranged with the head of IT in Dublin Fire Brigade. We have also been made aware that there will be a meeting next Thursday regarding a new grading rubric and marking scheme for our projects which will help to clear up some of the uncertainty surrounding the project thus far.

My Reflection

I feel I have made a good decision in changing the direction my project was going by focusing on a website rather than an application. I feel this decision will prove to be a success later on in the project and I am pleased I put so much thought, with the help of Ron, into the decision.

However, I would have liked if we were given a grading rubric earlier in the year as it would have made it easier to work on the project so far and would have given the work I have done better direction.

Supervisor Meetings

This month, I met with my supervisor on four separate occasions. I spoke with Ron once every week throughout the month to discuss the progress I am making. The main topic we covered in these meetings was my decision to change the direction of my project. Ron was great in helping me to decide what way I wanted to go with my project. He helped me to identify my strengths and weaknesses and helped me to focus on a project that would be suited to my strengths. I look forward to meeting with Ron next month.

December

Student name: Niall Crosbie

Programme: BSHTM4

Month: December

My Achievements

This month, I began to carry out some of the techniques for eliciting the requirements for the website. I used the Business Analysis Body of Knowledge (BABOK) to learn about the different techniques I could use to gather requirements. I picked out a number of techniques that I felt would be useful for my project. I prepared a number of interview questions for an interview that I will have with the head of IT in Dublin Fire Brigade. I created a questionnaire, to be filled out by some of the staff in Dublin Fire Brigade. I also carried out a brainstorming session, in which I elicited a number of requirements for the website. This month, I was also able to get used to using Joomla, which is a tool similar to WordPress for creating websites. A friend of mine has used Joomla a number of times before and showed me how to use it. This will be of great help to me when I start to create my personal project website in the coming weeks. We were also given a walkthrough of the grading Rubric my Eugene O'Loughlin.

My Reflection

I felt, the talk Eugene had with us about the grading Rubric was very helpful. It made it easier for me to see how the marks for the project were broken down and which areas I should be concentrating most of my work on. Although, I would have preferred if we were given this talk earlier in the year.

Supervisor Meetings

I met with Ron on a number of occasions this month to discuss the project. The meetings were a great help to me personally, Ron advised me on some work to do over the coming weeks, such as prepare interviews/questionnaires. I will be sending Ron the work I have completed and I look forward to hearing his suggestions for improving my work.

January

Student name: Niall Crosbie

Programme: BSHTM4

Month: January

My Achievements

Over the course of January, I made some very good progress on my project. I managed to get a lot of work done with regards to my requirements elicitation. I created two questionnaires, one of which I sent to employees in Dublin Fire Brigade. I also arranged and set up an interview with one of my stakeholders, an employee in the IT department of Dublin Fire Brigade. Upon arranging the interview, I then drew up some interview questions that I hope to ask the stakeholder. The interview will take place on Tuesday 9th February. The latter part of the month was focused on preparing my mid-point presentation and the progress report that must accompany it.

My Reflection

Overall I am happy with the work that I have done this month. Despite the fact that the beginning of the month was taken up with exams, I managed to make some excellent progress. I am happy with the direction my project is going.

Supervisor Meetings

I met with my supervisor once this month. The meeting went well, Ron gave me tips on what sort of questions I should put on my questionnaires and what interview questions I should ask my stakeholder.

February

Student name: Niall Crosbie

Programme: BSHTM4

Month: February

My Achievements

Over the month of February, I made some good progress on my requirements specification document. I also added some new content to my personal website, as well as adding colours and themes. I put a lot of effort in to researching different requirements elicitation techniques than the ones I had previously used in order to add them to my document. I spent a lot of time this month, documenting the results of the requirements elicitation techniques I had already carried out such as interviewing, brainstorming, questionnaires and document analysis. Once I had documented the results of these techniques, I analysed the results in order to elicit the requirements my stakeholders have for the new website.

My Reflection

I am very happy with the progress I made in the month of February. Since it is coming closer to the end of the project I have been working really hard on my final documentation and website. I am happy with the work I have done thus far and the work I still have to do.

Supervisor Meetings

I met with my supervisor Ron once during the month of February. The meeting was successful from my point of view as I was able to take on board the advice Ron had to give me for the final stages of my project.

March

Student name: Niall Crosbie

Programme: BSHTM4

Month: March

My Achievements

March was a busy month in terms of work load for the project. Most of the month was spent working on my final document. A lot of work was put into analysing and managing the requirements that I had elicited. My personal project website was also worked on heavily throughout the last month.

My Reflection

March was an important month in this project, as it is getting closer to the final document deadline. I am very pleased with my document and website at the moment. Both are really starting to come together and I look forward to completing them in the next month.

Supervisor Meetings

Ron was very helpful throughout the month in guiding me in the right directions. There were times when I was unsure about where I should focus my attention to next and Ron was hugely helpful with the advice he offered. Meetings became more frequent as the deadline is fast approaching and I thoroughly enjoyed showing Ron my progress at each meeting.

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