ReimburseMe

IEEE Website Requirements Specification Document

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Course Name: BSc (Honours) in Technology Management

Course Specialisation: Business Analysis

Project Supervisor: Joe Molumby

National College of Ireland

National College of Ireland

BSc (Honours) in Technology Management

Declaration Cover Sheet for BSHTM4 Project Submission

SECTION 1 *Student to complete*

Name: Alex Mcgovern
Student ID: X13520487
Supervisor: Joe Molumby

SECTION 2 Confirmation of Authorship

The acceptance of your work is subject to your signature on the following declaration:

I confirm that I have read the College statement on plagiarism (summarised overleaf and printed in full in the Student Handbook) and that the work I have submitted for this assessment is entirely my own work.

Signature: Alex Mcgovern

Date: 9th May 2017.

NB. If it is suspected that your assignment contains the work of others falsely represented as your own, it will be referred to the College's Disciplinary Committee. Should the Committee be satisfied that plagiarism has occurred this is likely to lead to you failing the module and possibly to you being suspended or expelled from college.

Complete the sections above and attach it to the front of one of the copies of your assignment.

What constitutes plagiarism or cheating?

The following is extracted from the college's formal statement on plagiarism as quoted in the Student Handbooks. References to "assignments" should be taken to include any piece of work submitted for assessment.

Paraphrasing refers to taking the ideas, words or work of another, putting it into your own words and then crediting the source. This is an acceptable academic practice provided you ensure that credit is given to the author. Plagiarism refers to copying the ideas and work of another and misrepresenting it as your own. This is completely unacceptable and is prohibited in all academic institutions. It is a serious offence and may result in a fail grade and/or disciplinary action. All sources that you use in your writing must be acknowledged and included in the reference or bibliography section. If a particular piece of writing proves difficult to paraphrase, or you want to include it in its original form, it must be enclosed in quotation marks and credit given to the author.

When referring to the work of another author within the text of your project you must give the author's surname and the date the work was published. Full details for each source must then be given in the bibliography at the end of the project.

Penalties for Plagiarism

If it is suspected that your assignment contains the work of others falsely represented as your own, it will be referred to the college's Disciplinary Committee. Where the Disciplinary Committee makes a finding that there has been plagiarism, the Disciplinary Committee may recommend:

- That a student's marks shall be reduced.
- That the student be deemed not to have passed the assignment.
- That other forms of assessment undertaken in that academic year by the same student be declared void.
- That other examinations sat by the same student at the same sitting be declared void.

Further penalties are also possible including:

- Suspending a student from college for a specified time.
- Expelling a student from college.
- Prohibiting a student from sitting any examination or assessment.
- The imposition of a fine.
- The requirement that a student to attend additional or other lectures or courses or undertake additional academic work.

Table of Contents

Introduction:

This document was created to gather document requirements for a new application which would change how a lecturer would claim expenses. Currently the way in which they claim expenses is dated, where they go on their business trip as normal and keep a copy of all receipts that they would making claims for. On their return they would then fill in a claim form where they would then attach the receipts themselves or scan copies. This is a lengthy process and takes time and I feel that with the right requirement elicitation techniques that a more efficient way of doing reimbursements can be created. In order to do this, requirements will be gathered from a number of stakeholders such as the business owner, lecturers themselves as well as other stakeholders such as developers and the finance departments. Once these requirements have been gotten they will then be detailed within the document below and then be inputted into the IEEE document.

A number of various elicitation and analysis techniques will be used to gather these requirements. Some of these techniques that will be used will be a brainstorming session where we will be able to gather many different requirements that each stakeholder would feel and need that the application would need. Surveys will then be sent to lecturers within different colleges to get a different viewpoint from each so that each colleges claim expense system will be taken into account so that the application will not just be beneficial to one college. Interviews will then take place with the lecturers and a developer in order to get high priority requirements that will be needed right from the offset of the application and will indicate what they feel is needed in the most as well as any problems that might be encountered throughout the project.

Interface analysis will then be used to evaluate the interface types and how the application would operate and a general idea of its layout. This will be done with a use case diagram that will show how the user and the finance department will interact with the system as well as the lecturer themselves that would be the main user of the application. Wireframes would then also be used to show how each page on the application would look. A Moscow analysis will also be used to show the high requirements that will be needed in the application as well as additions that may be added into the project if the budget and timeframe allows.

Business need:

The business need for this application is to change from the current model where lecturers keep a hard copy of documentation to give to the accounts section in order to claim the expenses for excursions that they may do such as attending meetings and seminars. They claim for expenses such as travelling, accommodation and food. With the advancement in technologies an application where they would be able to store the information instantaneously by taking a photo, logging into their account and storing it onto an online database where the accounts section in the college would be able to access the information and then process their requests to refund the money due to them.

Currently the method that the college uses is outdated and with the advancements in technology I feel that this is a much needed update within the college to reflect the times that we live in. By doing this system it will also allow a faster response time in the processing of claims as they will be able to uploaded immediately by the staff instead of the previous method where they would have to wait until they return to process the claim.

With the addition of the application I feel that this would speed up the process for users and will allow them to make expenses on the go or when they need to. With lecturers living a busy life they may sometimes forgot to make claims or may lose receipts so with an online application they would be able to make these claims when they feel like it as everything will be stored on one place for the user to do it.

To ensure that the application is a success I intend to have basic requirements in place:

- Security- I plan to have a username and password login for users to ensure that their information will be kept secure and can only be viewed by themselves or by college administration staff.
- Cloud- I plan to have a database in the cloud where the information will be stored and be able to be viewed and accessed from wherever the staff are to upload the information.
- Excellent GUI- I plan to have a friendly user interface which will make the uploading of documentation easy for the user as well as ensuring that it can be easily found.

Business case:

The business case that I intend on using will be to analyse the information from the elicitation techniques together with cost benefit evaluation to see if the project will be feasible as well as to gather the requirements for the application.

On the application members should be able to use the camera on their phone to take a picture of a receipt where they will then be able to store it or use it to fill in an expense form there and then. On the app they should also be able to see any claims that they have, as well as any pending claims that are still waiting for the approval. If the claim has not been paid in full they are also entitled to see what and what percentage of the claim they had got back.

The lecturers must also ensure that they are following college procedures for making a claim and are making claims within college reasons for reimbursement. If they are not followed or the expenses are deemed to not be relevant the user will not be reimbursed for that expense.

Risks are also involved with this project such as ensuring that an appropriate developer is hired for the job. If they have no previous experience in security or expense expertise they may not be appropriate for the job. This could lead to a longer time for the application as well as cause frustration among stakeholders due to increased costs and long wait time for the application. Some agile methods will be put into place to ensure that if the scope or the idea changes, that it can be managed in the creation of the app.

I intend to have a project sponsor for the idea who will be part of the finance department within the college. I will meet with the sponsor to discuss funding as well as what he feels the scope for the project should be, such as what are feasible ideas that should be implemented and what aren't. Regular progress reports will be given to the sponsor to keep them updated on the information at all steps of the project to ensure that it stays on course.

Stakeholder:

- Stakeholder list
- Business analyst

- Business owner
- Full time lecturer
- Part time lecturer
- Finance department
- Developer
- Accountant
- College
- Admin
- IT department
- Marketers

Importance/Influence Matrix

Importance		
High	Admin Full time lecturers	Finance department Part time Lecturers College Business owner
Low	IT department	Accountant Marketers
	Influence	High

Importance/Influence Matrix Explanation:

The highly important and highly influential stakeholders are located within the upper right quadrant of this matrix. They are the business owner as he is the one who has the final say in the application as well as providing the money for the creation of the project. The finance department is also here as they will be using the application to view the claims that have been made as well as approving them for the users. The part time lecturers are also located here as they will be who the application will be first used and tested on. They will be the main users of the application as they will be the one uploading the expenses for reimbursement. The college is also highly important as it is these who will be allowing for the change in the system and trying the application among its staff.

In the upper left quadrant full time lecturers are also taken into account as eventually the application would be rolled out to them so their initial input into how the application will work will be beneficial. Admin will also play a vital role as they will be in charge of looking after the accounts and the maintenance and ensuring that any use problems with the app would be made aware and solved.

The IT department would also be taken into account for security and other technologies that could be used in the app, they will have little say in how the application will look or work but their input from software used in the college already could be beneficial.

Accountants and marketers are then in the lower left quadrant with high influence as they will be the ones who will market the product. The accountants can also have input on how the app would work as well as functions that may be added to benefit the finance and the account department such as a VAT converter.

Requirements Elicitation

Interviews:

Lecturer Interview:

- Are you currently a full or part time lecturer?
- Do you work in more than one college as a lecturer?
- On average, how much travelling do you do for travelling and work related events?
- Have you ever missed out on reimbursement due to reasons such as no reminder being given, losing receipts etc?
- Is there a long waiting period for the reimbursement to occur? If so would this put you off making a claim?
- How do you feel about the current way in which the expense claim system is done within your workplace?
- Do you feel that receipts should be uploaded automatically from a device with a camera?
- If yes, would you remember to make the claim if the receipt of the image was saved?
- What pages do you feel should exist on the application?
- Do you feel that an website or mobile application would encourage you to make future reimbursements?
- In order of priority from this list, rank in order of priority for the application? –

1. Record transactions of all claims that have been made
2. The ability to save receipts online until being ready to make a claim
3. Push notifications to remind that a claim has to be made
4. To be able to copy a claim form if there are repeated visits being made
5. Live calendar to get notifications about upcoming events

- Would you feel comfortable storing your bank account details on the application in order to speed up the reimbursement service?

Lecturer

Interview 2:

- Are you currently a full or part time lecturer?
- Do you work in more than one college as a lecturer?
- On average, how much travelling do you do for travelling and work related events?
- Have you ever missed out on reimbursement due to reasons such as no reminder being given, losing receipts etc?
- Is there a long waiting period for the reimbursement to occur? If so would this put you off making a claim?
- How do you feel about the current way in which the expense claim system is done within your workplace?
- Do you feel that receipts should be uploaded automatically from a device with a camera?
- If yes, would you remember to make the claim if the receipt of the image was saved?
- What pages do you feel should exist on the application?
- Do you feel that an website or mobile application would encourage you to make future reimbursements?
- In order of priority from this list, rank in order of priority for the application? –

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5. Live calendar to get notifications about upcoming events

- Would you feel comfortable storing your bank account details on the application in order to speed up the reimbursement service?

Developer:

- What is your experience in creating an application for expense reimbursement systems?
- Do you foresee any obstacles with creating a push notification system to remind users to make reimbursements?
- With the addition of bank details being stored, what are the best options to store these details?
- What other requirements do you feel could add benefit to the application?
- What pages do you think should be on the application for easy interface functionality?
- What security guidelines should be followed?

Results

Interview:

Lecturer

Interview location:

Participant A’s home

Date of Interview:

11/04/2017

Time of Interview:

11:00am

Objective of the interview:

To get functional requirements from the interviewee that will make the application user friendly as well as providing requirements that will change the way that reimbursements are currently done in the finance department within a college.

Interview Questions:

Are you currently a full or part time lecturer?

The interviewee is currently a part time lecturer and has been for the past 3 years.

Do you work in more than one college as a lecturer?

He works in two colleges, one in Dublin Institute of Technology(DIT) and the other being Institute of Technology Tallaght. He has been a lecturer in DIT for 3 years and is currently also working as a part time lecturer in ITT on Thursdays and Fridays.

On average, how much travelling do you do for travelling and work related events?

For work related events he has estimated that it can be between 10 – 15 functions a year such as events for new course material and learning days to seminars. He stated that while the majority of them are held in Dublin he also has to travel outside of Dublin to attend these events.

Have you ever missed out on reimbursement due to reasons such as no reminder being given, losing receipts etc?

During this interview he has admitted that he has on numerous occasions lost receipts as he would typically have to hold on to them.

Is there a long waiting period for the reimbursement to occur? If so would this put you off making a claim?

As of right now it varies in both colleges, in DIT it can take anywhere up to one month for me to receive the payment as there is a long claims process for receipts. Tallaght IT is the opposite as this is usually reimbursed within two weeks. On their claim form less information is required but require more more information as to reasoning why.

How do you feel about the current way in which the expense claim system is done within your workplace?

In both colleges he feels that there is room for a new way for claims to be reimbursed. He feels that colleges are embracing technology more and more and that he does not see why the use of technology has not already been implemented. He feels that by the added use of technology such as the ability to log in and have an account page with your information already stored will speed up the process as will be able to be easily viewed by the finance department.

Do you feel that receipts should be able to be uploaded automatically from a device with a camera that can be stored within a database to make the claim their and then or at a later stage? If yes, would you remember to make the claim if the receipt of the image was saved?

He strongly believes that this is the ideal way that this should be done. In a previous company that he had worked for they had used the Concur Expense App by SAP which allowed employees who travelled to make reimbursement claims with an image of the receipt being taken and the reasoning why. This allowed for the claim to be uploaded their and then and usually if he was away on a trip by his return date some claims that they had made had already been approved and the refund process had started.

What pages do you feel should exist on the application?

On discussion on how the app would work, the interviewee felt that there should be a homepage that would then lead them on to multiple pages. From this page they would be able to click on a camera where they would be able to take the snap and save it, there should then be a page where these pictures will be saved by date.

Do you feel that an website or mobile application would encourage you to make future reimbursements?

Although he feels that they website would change and encourage people to make claims, he feels that the mobile application would be the best platform to launch the idea.

In order of priority from this list, rank in order of priority for the application? –

- Record transactions of all claims that have been made
- The ability to save receipts online until being ready to make a claim
- Push notifications to remind that a claim has to be made
- To be able to copy a claim form if there are repeated visits being made
- Live calendar to get notifications about upcoming events

3 Push notification to remind that a claim has been made

1 Record transactions of all claims that have been made

5 Live calendar to get notifications about upcoming events

2 The ability to save receipts online until being ready to make a claim

4 To be able to copy a claim form if there are repeated visits being made

Would you feel comfortable storing your bank account details on the application in order to speed up the reimbursement service?

They agreed that they would store their information from their banks online in so that reimbursements could be approved faster as the finance department would have all the information. However as a requirement they indicated that it would only be stored if there was a secure connection that their information would be safe. Also as a requirement on the application on the phone they wanted an encryption key on their password and a log out timer if the claim is stopped for a period of time.

Participant:

Lecturer

Interview location:

Participant B's office

Date of Interview:

13/04/2017

Time of Interview:

15:00

Objective of the interview:

To get functional requirements from the interviewee that will make the application user friendly as well as providing requirements that will change the way that reimbursements are currently done in the finance department within a college.

Interview Questions:

Are you currently a full or part time lecturer? Do you work in more than one college as a lecturer?

This interviewee is a part time lecturer. They currently work part time in a job and the other half as a part time college. However for the purpose of the interview they have noted that they have been a part time lecturer in more than one college.

On average, how much travelling do you do for travelling and work related events?

He states that due to his prior commitment in employment outside of the college, he attends all work related events so that he can provide the best to his students that he can. On average he says that he will attend an event every 2-3 months whether it is to upskill his abilities or attending events.

Have you ever missed out on reimbursement due to reasons such as no reminder being given, losing receipts etc?

Yes he has as he said that no one would remind him to make a claim. This comes out of his own pocked then.

Is there a long waiting period for the reimbursement to occur? If so would this put you off making a claim?

Currently the waiting time averages around one month to get reimbursed as usually there are a number of applicants who will apply at the same time so there can be a long wait time before the reimbursement approval or not happens. He also says that if he deems the expense to be of a small amount he won't bother to make the claim as the timeframe to get the money back is not worth the time effort that is currently in place.

How do you feel about the current way in which the expense claim system is done within your workplace?

The interviewee feels that although the traditional method has worked for many years that in recent years there are a lot more events happening and therefore the system needs to be changed. He feels that lecturers are constantly on the move doing many different things that an application would speed up and encourage the way that people would make claims.

Do you feel that receipts should be able to be uploaded automatically from a device with a camera that can be stored within a database to make the claim their and then or at a later stage? If yes, would you remember to make the claim if the receipt of the image was saved?

He feels that it would be a major benefit if he was out at a function or seminar where he would be able to take a receipt of the expense and then upload it at a time that was convenient was a great idea. This would allow him to be reminded of the claim and then able to fill in the expense form to get reimbursed at a time that suits them.

What pages do you feel should exist on the application?

On the application he thinks there should be a start-up page where he will then be able to register or log in. From there he should be brought on to a page where he should be able to select what he wants to do next, whether it be to upload an image and make an expense or leave it until later when it is convenient. There should also be an account page where information can be updated.

Do you feel that an website or mobile application would encourage you to make future reimbursements?

In his opinion he feels that the mobile application would be the right platform as it would allow them to make an expense on the go.

In order of priority from this list, rank in order of priority for the application? –

- Record transactions of all claims that have been made

- The ability to save receipts online until being ready to make a claim
- Push notifications to remind that a claim has to be made
- To be able to copy a claim form if there are repeated visits being made
- Live calendar to get notifications about upcoming events

1 Record transactions of all claims that have been made

3 Push notification to remind that a claim has been made

5 Live calendar to get notifications about upcoming events

4 To be able to copy a claim form if there are repeated visits being made

2 The ability to save receipts online until being ready to make a claim

Would you feel comfortable storing your bank account details on the application in order to speed up the reimbursement service?

The interviewee would be willing to supply his bank detail information provided that it was secure and there was regular security checks to ensure that the system was up to date.

Participant:

Developer

Interview location:

College campus

Date of Interview:

16/04/2017

Time of Interview:

13:00

Objective of the interview:

To gather the requirements for the application that could be implemented as well as any challenges that may happen within the application.

Interview Questions:

What is your experience in creating an application for expense reimbursement systems?

From being an experienced developer he has experience in creating systems that are able to store information that can then be approved where they are then able to direct the system to reimburse the user.

Do you foresee any obstacles with creating a push notification system to remind users to make reimbursements?

The developer feels that to have a push notification system would be a stand out advantage for the app compared to other apps on the market. With the addition of a calendar page they would then be able to set a deadline day that the expense will have to be submitted and will then receive weekly reminders to complete the expense form.

With the addition of bank details being stored, what are the best options to store these details?

He feels that a database with a unique password to view the bank account details would be the best option.

What other requirements do you feel could add benefit to the application?

What pages do you think should be on the application for easy interface functionality?

Account, homepage, register, login, database, camera, calendar,expense form and a claims page

How do you feel a calendar page could help users of the application?

From the addition of a calendar page this could be linked with upcoming events to remind users where the events are and how close it is. This can be interlinked with the course timetable to show events that are relevant and can be attended. On the calendar page they would also be able to set reminders for deadlines for expense forms to be completed

Do you foresee any problems with the creation of the application?

During the interview he had mentioned that due to the bank details being stored that security will be the biggest obstacle with doing this application. He said that a firewall would need to be in place to prevent hackers as well as time out sessions for user inactivity. Invalid password entry will also lock the account for a certain time limit and if the password is incorrectly entered 10 times the entire account will be wiped of all information.

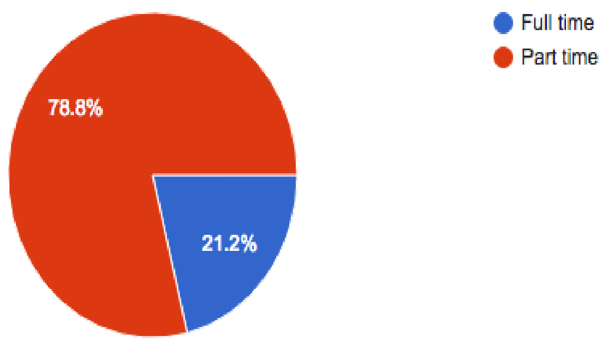
What security guidelines should be followed?

He stated for the app to be accredited that is should follow IOS270001

Surveys:

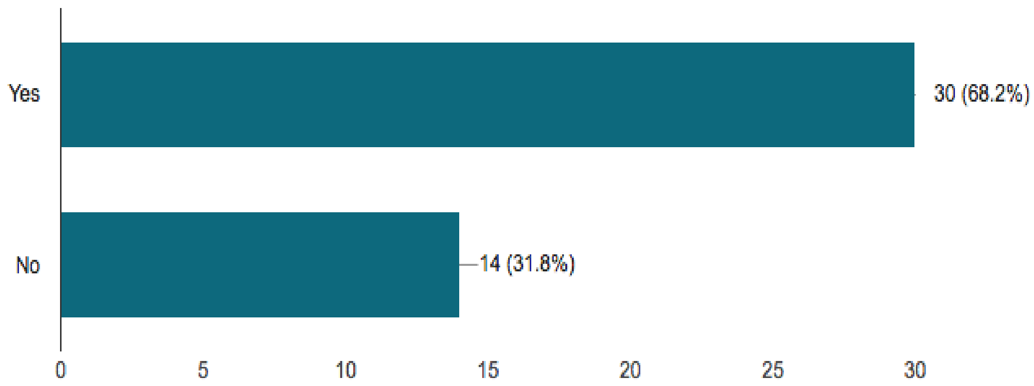
Are you currently a full time or part time lecturer?

52 responses



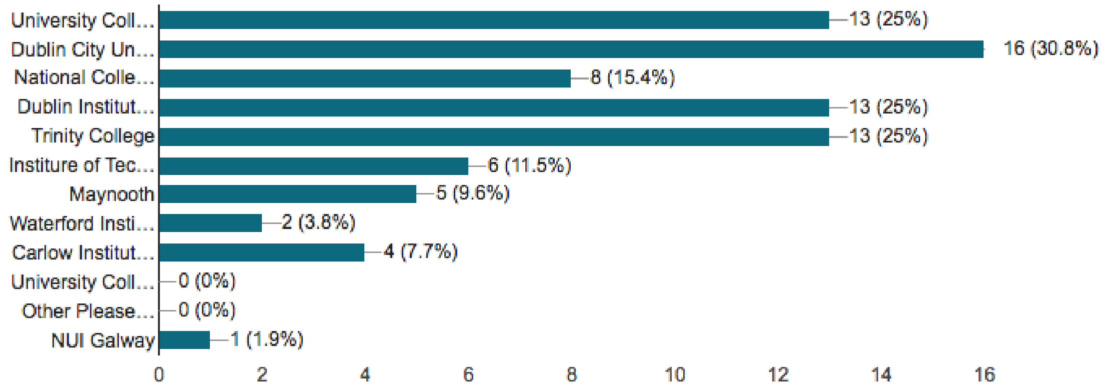
If part time, do you currently work in more than one college?

44 responses



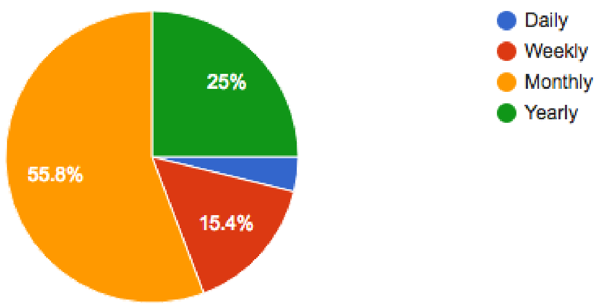
Which college/s do you currently lecture in?

52 responses



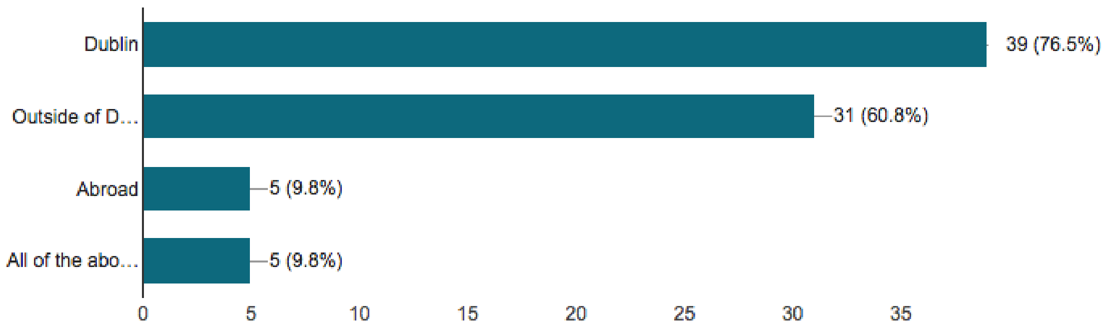
How often do you travel for work related events?

52 responses



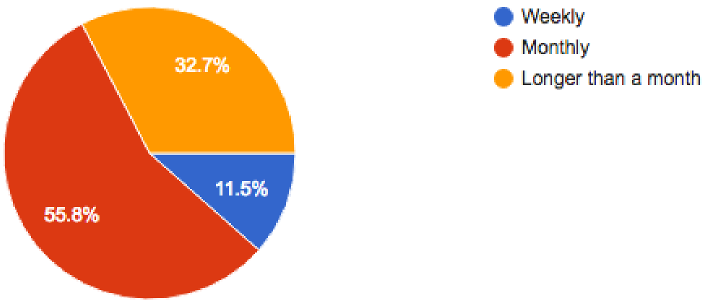
Where do you travel for these events?(For example seminars, training days etc)

51 responses



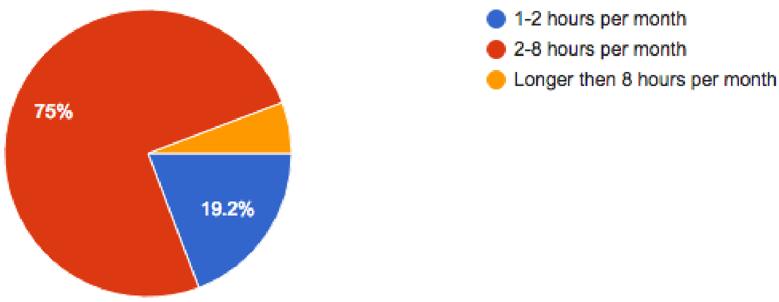
On average how often do you claim expenses?

52 responses



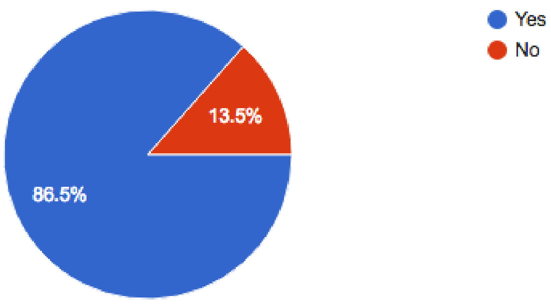
On average, how much time would you spend dealing with these expenses? (Filling in forms, retrieving receipts, submissions and approvals etc)

52 responses



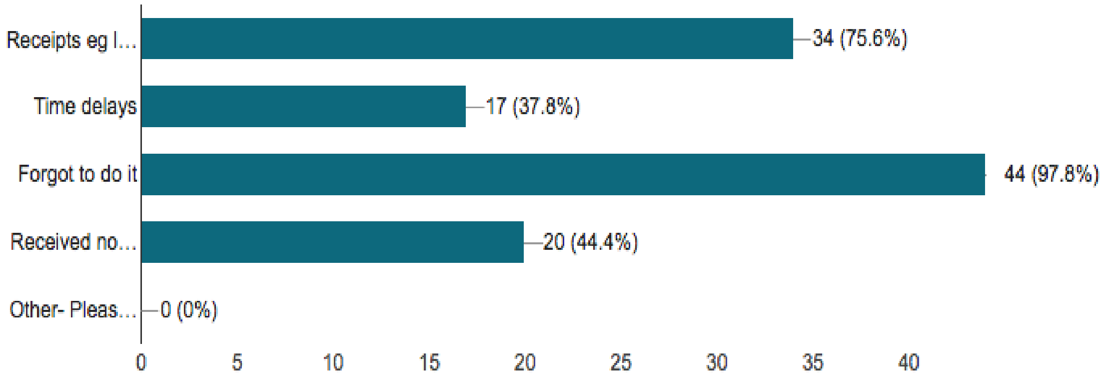
Have you ever omitted to making a claim?

52 responses



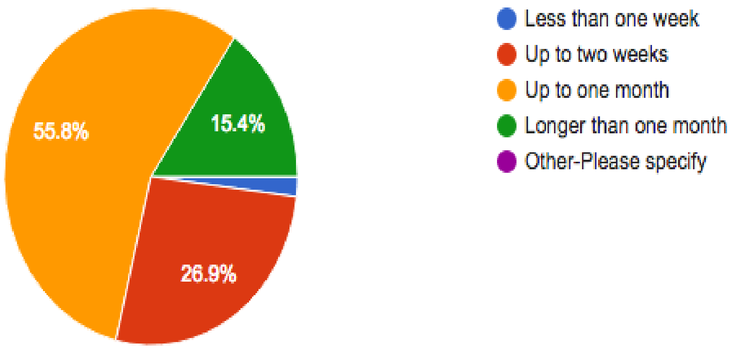
If yes, what where the reasons why?

45 responses



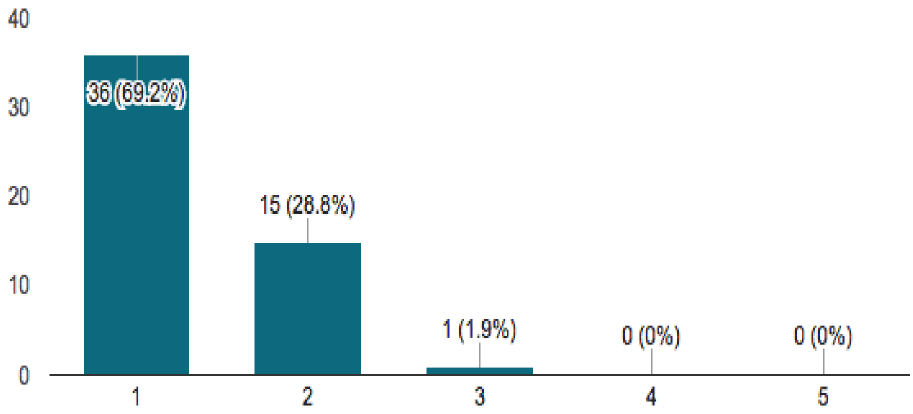
Due to waiting, what is the estimated time that it takes for the expenses to be reimbursed?

52 responses



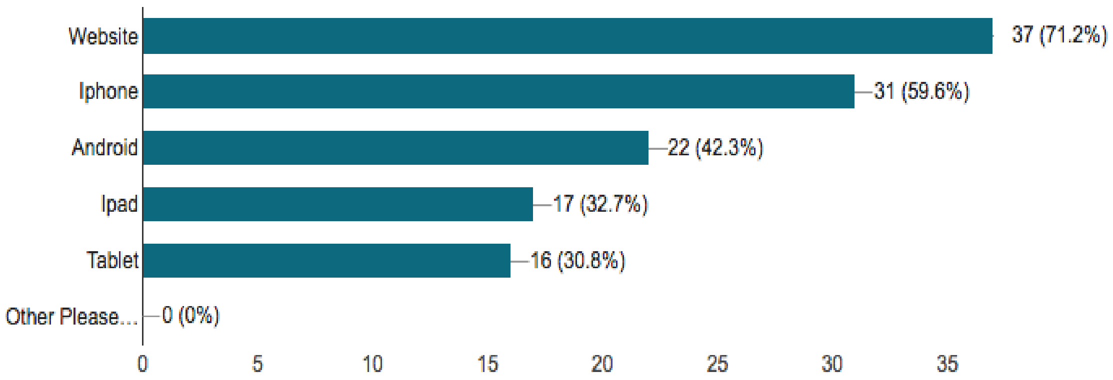
Do you feel there is a need for a new platform?

52 responses



Reimbursements can be made on a number of platforms. Please indicate which are applicable?

52 responses



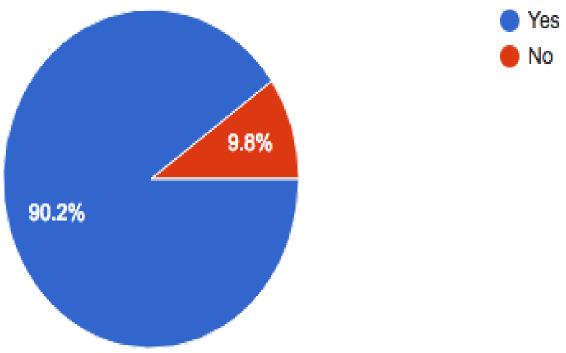
In relation to the above question, please rank in priority?

49 responses

Website Iphone
Website Iphone
Website Iphone
Website
Website
Website
Android tablet
Android tablet
Iphone Ipad
Iphone Ipad
Iphone ipad website
Iphone ipad website

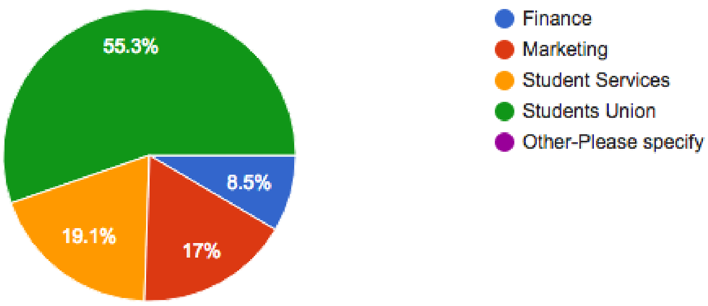
Do you feel that the reimbursement application should be opened to all faculty members and not just lecturers?

51 responses



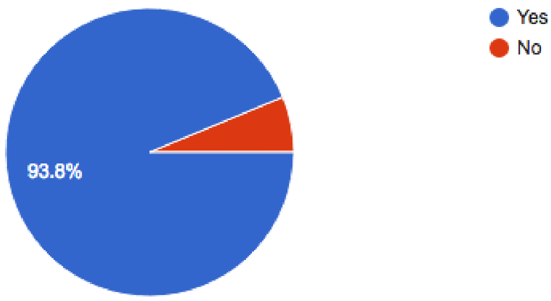
If yes, what departments?

47 responses



For part time lecturers, would you be in favour of your expense claim system, being linked in with other colleges under security controlled parameters?

48 responses



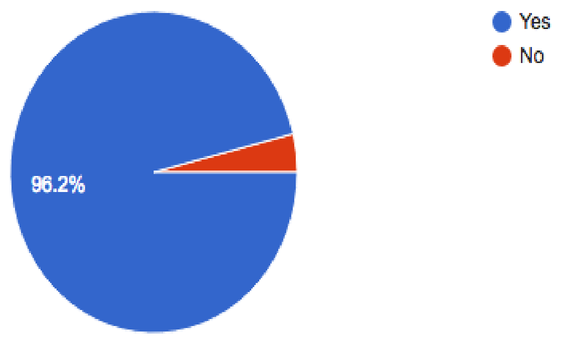
If no, why?

2 responses

That details should be kept separate and held by each college
Separate college security

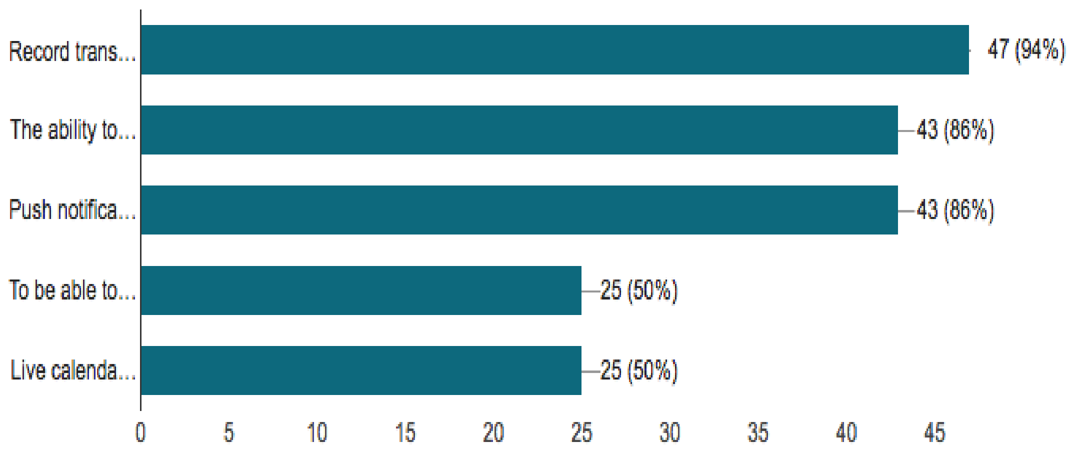
Would you feel comfortable storing your payment details online for future reimbursements?

52 responses



What features would you like included?

50 responses



From the above question, please prioritise the features that you would like to see on the application?

48 responses

Record transactions of all claims that have been made
The ability to save receipts online until being ready to make a claim
Push notifications to remind that a claim has to be made

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1 5 2 3 4

1 5 2 3 4

Record transactions of all claims that have been made
The ability to save receipts online until being ready to make a claim
Push notifications to remind that a claim has to be made

Do you have any other input that you would feel would make the application more user friendly?

9 responses

Currency converter for abroad trips

Calender to input future events to be reminded

Bank details being secure

No

Live calender to track events

To have a notification to inform if the claim has been approved or not

To be able to view the claims on multiple devices and fill in and then upload later if not in internet range

live calender where events update automatically

Database of receipts to upload when ready

Please provide your name and contact details if you would participate in future updates or questions on the application

1 response

eddiedonoghue1118@hotmail.com

Survey results:

https://docs.google.com/forms/d/1VLZikFmKTVj_l_XT5G-kyZ_iU--UUOlqVh_egw-IOfc/edit#responses

The above survey was conducted to find out would the creation of a reimbursement app would speed up the process and encourage all lecturers to make claims to get their own money returned to them no small. From the above survey it was completed by a majority of part time lecturers who either work in one college or multiple. We can also see from the above survey that lecturers do attend a multiple of events each year where they could make reimbursements with 55.8% of the responses making monthly travel for work related. In relation to the above question we can also see that most of this travel happened within Dublin with 39 responses but also a high number of responses from lecturers who travel within different counties within Ireland standing at 31 responses.

During the analysis of the survey it also shows that the way in which the claims process is done can take a significant amount of time to complete with more survey participants stating that it takes between 2-8 hours a month to fill in the forms, find receipts and wait for approval.

Within this time frame, the survey has also showed that 86% of people have omitted to a claim with many reasons indicating that they had forgot to do it, lost receipts to make the claim. With this high percentage it clearly indicates that there is a problem and that a new method is needed to encourage claims to be made with ease, removing the long process that is there currently.

From the survey it is clearly evident that the users would prefer first to have a mobile application as their preferred choice, with the website first. So as a requirement the first platform that will be tested for its user will be the iPhone and Android phones.

Another requirement that was got from the survey is the addition of the application being able to be multi linked with other colleges so that if the lecturer works in more than one college they will be able to make expense claims to multiple colleges off the one account.

Another requirement that was got from the survey is that they would like the application to not just to be open too lecturers, but too also different departments within the college. This is a requirement that could be done once the initial testing of the product has taken place.

On the application itself, users would also provide their bank details to make the reimbursement easier. This would only be done if the right security requirements could be put into place to ensure that their privacy is protected at all times.

The analysis of the survey also brought other requirements that they feel would bring added benefit to the app. Users have stated that they would like to be able to hold a record of all transactions pending and past so that they are able to look at them. They would also like a push notification system where they would be reminded to make the claim. These two requirements were highly ranked and should be deemed as a must have due to the overwhelming response from the participants. Another feature would be to have a database where they would be able to store the images until they were ready to make the claim. This could be an important feature as if they were at a meal they could take a picture of the receipt before leaving the restaurant and then being able to go back later that night to make the claim when they are at home.

Other requirements that may be added into the app at a future stage would be a live calendar where they would be able to see upcoming events, having a currency converter if they were abroad so that they would be able to be refunded at the day of the exchange rate.

Brainstorming:

Brief overview:

A Brainstorming session will be held to bring stakeholders together where they will be able to get different viewpoints of what features and the layout of the application should look like. Each stakeholders will be able to give their viewpoint on what they would expect from the website.

Objectives of the Brainstorming Session:

By doing this session, the stakeholders will each be given a turn to outline their ideas and features that they would like to see on the application as well as the added benefit that it would bring. Since there will be numerous stakeholders attending the hope is to achieve many different requirements that could be implemented into the application. Ideas will be recorded on a whiteboard, as well as then being transferred to a Microsoft word file where they will be stored and later viewed by the business analyst. Here is where they will be classified and ranked into what is important for the application to be a success.

Participants:

Lecturers

Finance department

Developer

Meeting location:

Clondalkin Library

Date of Meeting:

Sunday 15th November 2015

Time of Meeting:

11:00am – 12:30pm

Brainstorming Session Rules:

1) Participants are requested to avoid consulting each other for possible ideas prior to the meeting taking place on the 15th November 2015.
2) All participants should arrive at least thirty minutes before the meeting begins for some light refreshments and to ensure the meeting starts on time.
3) All participants will be allocated specific times to divulge their ideas.
4) During each allotted time in the meeting, all other participants must remain quiet and withhold any comments in relation to the ideas being expressed.
5) Mobile phones must be switched off prior to the meeting commencing.
6) This meeting must remain professional and all participants should stay focused on the tasks which are outlined in the meeting's agenda.

7) Participants will be requested to leave the meeting if the moderator deems their behaviour to be unsatisfactory, no prior warnings will be issued.
8) Any late arrivals will be placed into the last allotted time for expressing their ideas, these individuals should only enter the meeting room when the moderator deems it appropriate to do so.

Results:

Lecturer:

The current way in which lecturers are making claims is through written out expense forms with receipts attached. In terms of changing this they want a system where they will be automatically able to upload a claim or receipt through an application. This would allow them to automatically be able to upload the expense and feel that this is an important requirement that should be added if the application is to be a success.

Lecturers also feel that another requirement would be a currency converter on the application for when expenses are made from abroad. They feel that this would be a beneficial as they would then be able to be reimbursed at the rate at which they paid. This would result in neither the college or the lecturer losing out on monetary value due to the exchange rate being higher or lower. They feel that this would be beneficial as during the brainstorm one had raised concern that they had lost a small amount of money and did not agree with this and felt that with the introduction of the application this would be able to eradicate the problem.

Accountants: Finance

People who also work within the accounts section had also attended the brainstorming session. One requirement that they felt would be beneficial to keep track of what is spent would be for the user to have two options when logging on to the app. Both of these options would be to indicate if the user was looking to be reimbursed for the expense using their own account, or whether they used a business account to pay. By having this function it would speed up the claim reimbursement service for its users.

Another requirement that was got from the session was the ability that the finance department would be able to view the claims that have been made anywhere. If they were too also on travel they would be able to approve the claim from outside the office, which in turn would improve efficiency for the department and increase the reimbursement rate for the lecturers.

The VAT being audited from the app is another requirement that came from the finance in attendance, they feel that since it will be an automated system that will record the expenses, there would be less time for auditing for VAT as it can be easily calculated due to the expenses being done in an organised way and with the amounts being able to be easily added up to calculate the VAT bill.

Finally from the brainstorming session from the finance, was that the application should be clearly able to show who where and why the expenses were submitted. This would be able indicate if the claim will be approved or not as well as where and on what area such as travel, food or accommodation.

Developer:

During the brainstorming session, the developers also had key inputs on what requirements they thought would make the app the new method for reimbursement. One of the requirements would be a push notification system to remind the user to make a claim, as well as informing them of the different stages of the claim. This will keep the user constantly up to date

Another requirement that was gathered from the developer was the inclusion of a database that would store each users receipt in a folder that can be easily accessed by all users to view them at any point. They would be categorised by date so that the most recent claim will always be the first one to be viewed.

Another requirement that was also spoke about during the brainstorm was the ability to upload more than one receipt to an expense. If the trip was for more than one day and the user wanted to upload more than one food expense, that they would be able to do so without the separate need to do a single expense for each one.

During the brainstorming on an account page the developer also pointed out to have a user image uploaded as this will make the account unique and easily identifiable for the finance department when making a claim.

The system must also adapt the IOS2700I guidelines to ensure that it is accredited as being a secure application.

Moscow analysis:

Must

As a user must be able to create an account
As a user must be able to login
As a user must be able to go to the homepage
As a user must be able select the camera tool to upload a receipt
As a user must be able to attach the image to a receipt
The user must then be able to fill in the details of the expense
After the details are filled in the user then must be able to submit the claim
As an administrator they then must be able to view the information and see if it meets requirements and guidelines
If the administrator approves the claim, the money must be reimbursed to the user
If denied, the user then must be informed
Must be able to see between the approved claims and pending claims
As a user they must be able to access the account page
They must be able to upload a picture on to the page
They must be able to view their details
The user must also be able to make changes to their details
They must also be able to update their bank account details if necessary
In the transactions page
The user must be able to view pending transactions
They must be able to click on to view each individual claim
They must be able to view past claims
They must be able to view records of all transactions even if they work in multiple colleges
They must be able to attach a picture of themselves when creating the account
They must also be able to enter their name and details
They must also be able to enter their bank account details
The user must also be able to create a username
The user must also be able to create a password
The administrator must ensure that the username is unique to that user

The user must also be able to change the password
The administrator must also be able to ensure that the password can be changed if forgotten
The administrator must ensure that all the fields are mandatory as all of the information on the register page is needed
The user must be able to enter into all fields when creating an account
The user must not be able to submit unless all details are inputted
The administrator must be able to make changes to the account if needs be
The administrator must be able to authorise the claims

Should

As a user should be able to input the currency in which the expense was paid
They should be able to change the picture if they want too
They should be able to view reasons if the account has not been paid in full or at all
They should be able to see the amount that is pending or approved beside the transaction
The user should also be able to upload multiple receipts if required

Could

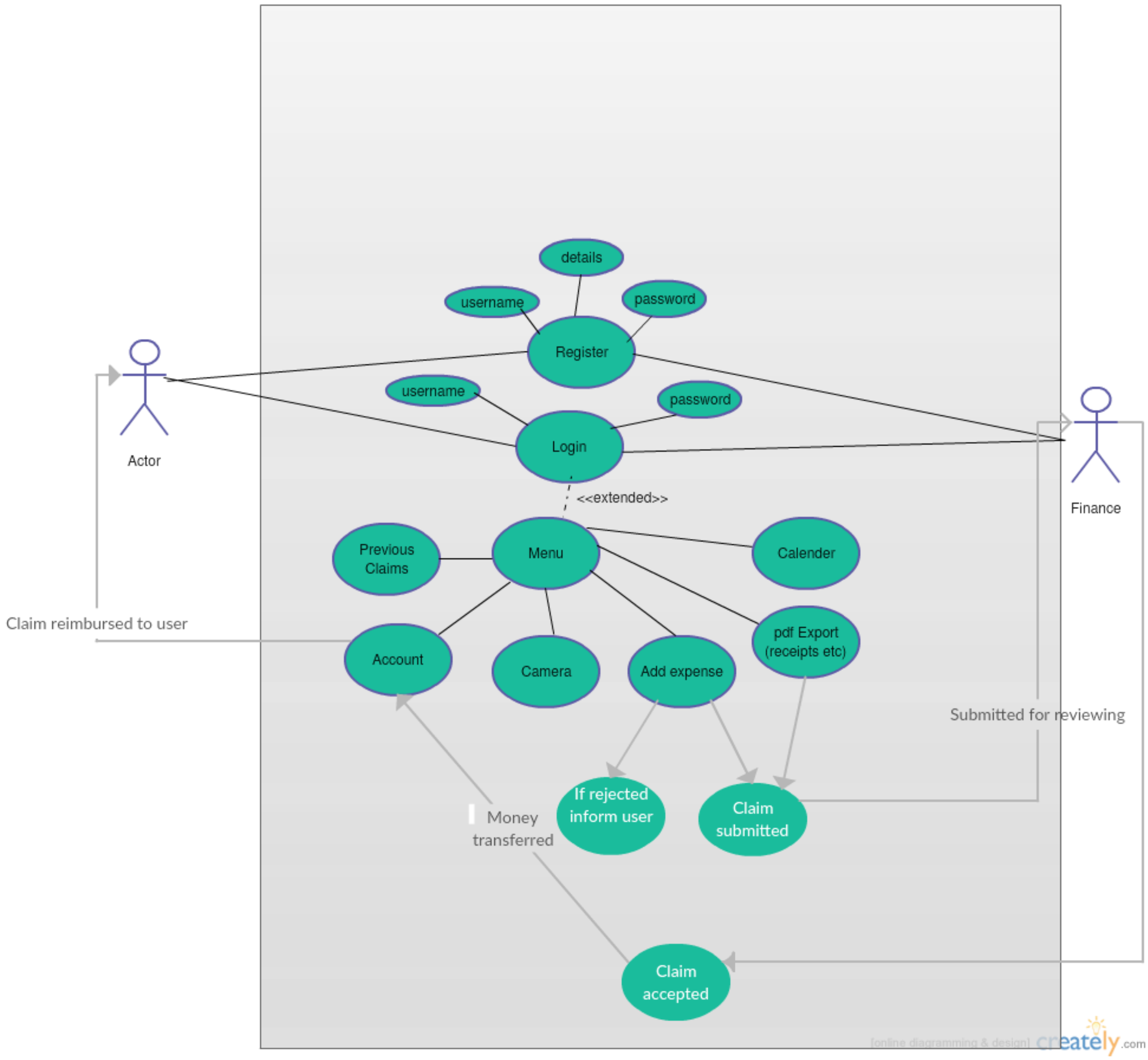
As a user they could be able to have an interactive map to save their location
As a user they could have a map to track mileage for petrol
As a user they could be able to view other claims that may have happened before in that same location
As a user they could be able to copy claims if the claim is being renewed.

Wont

As a user should be able to input the currency in which the expense was paid
They should be able to change the picture if they want too
They should be able to view reasons if the account has not been paid in full or at all

They should be able to see the amount that is pending or approved beside the transaction
As an administrator they will not be able to view the bank details only authorise expenses for the money to be paid.
As an administrator they will not be able to edit the bank details

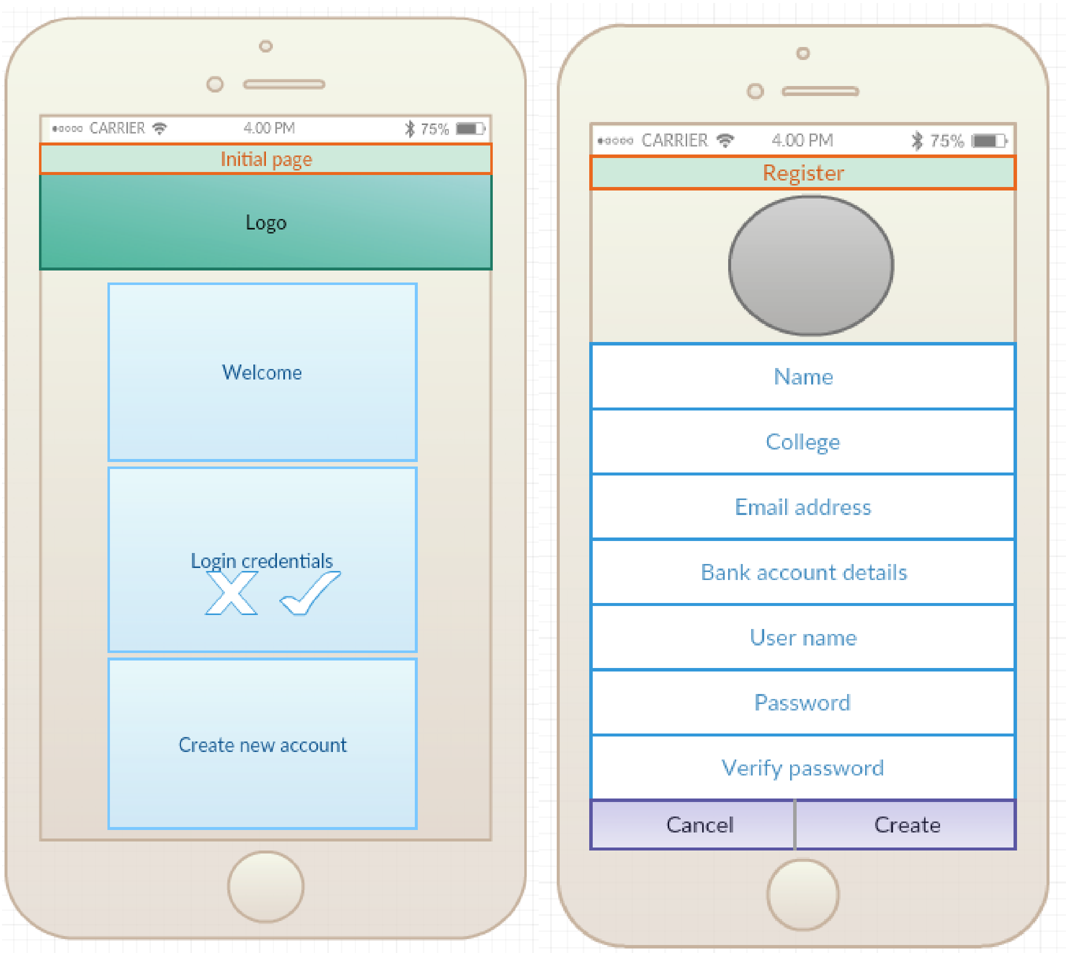
UML diagram:

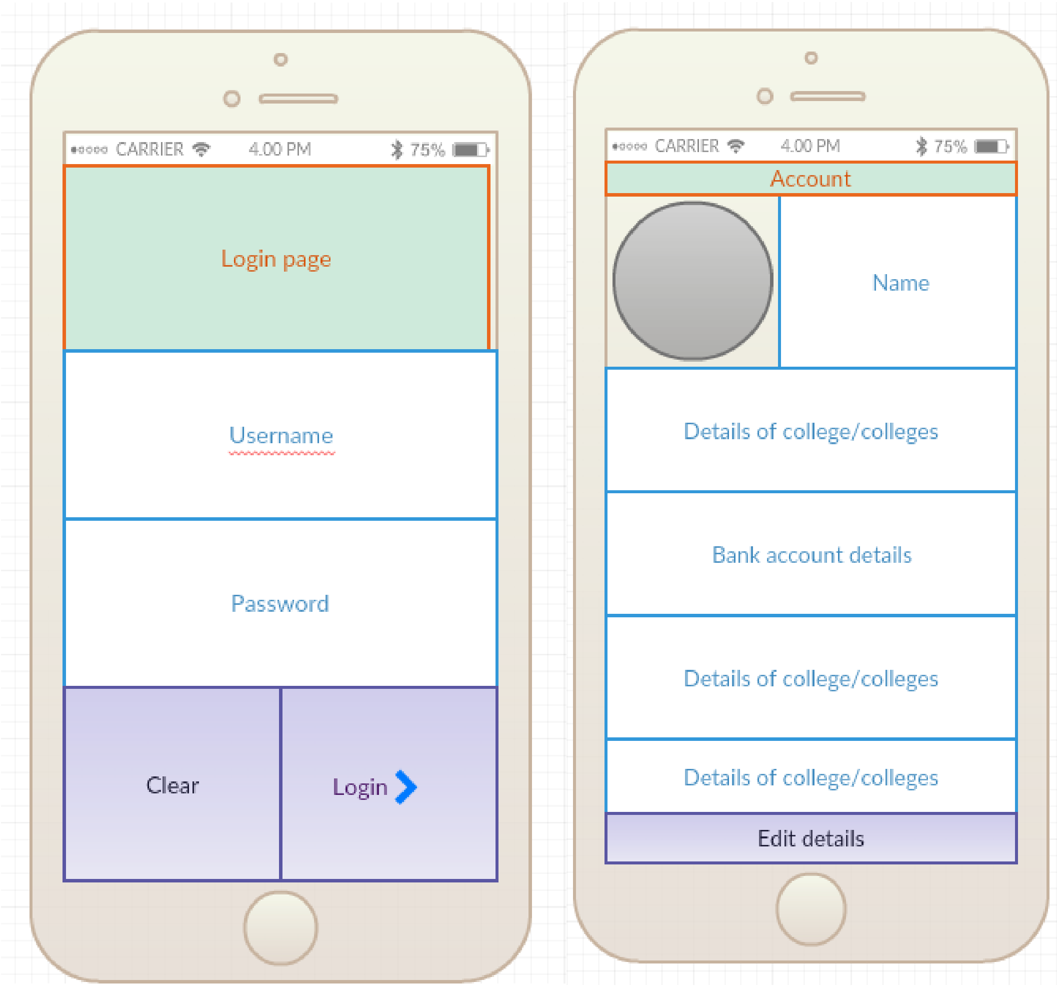


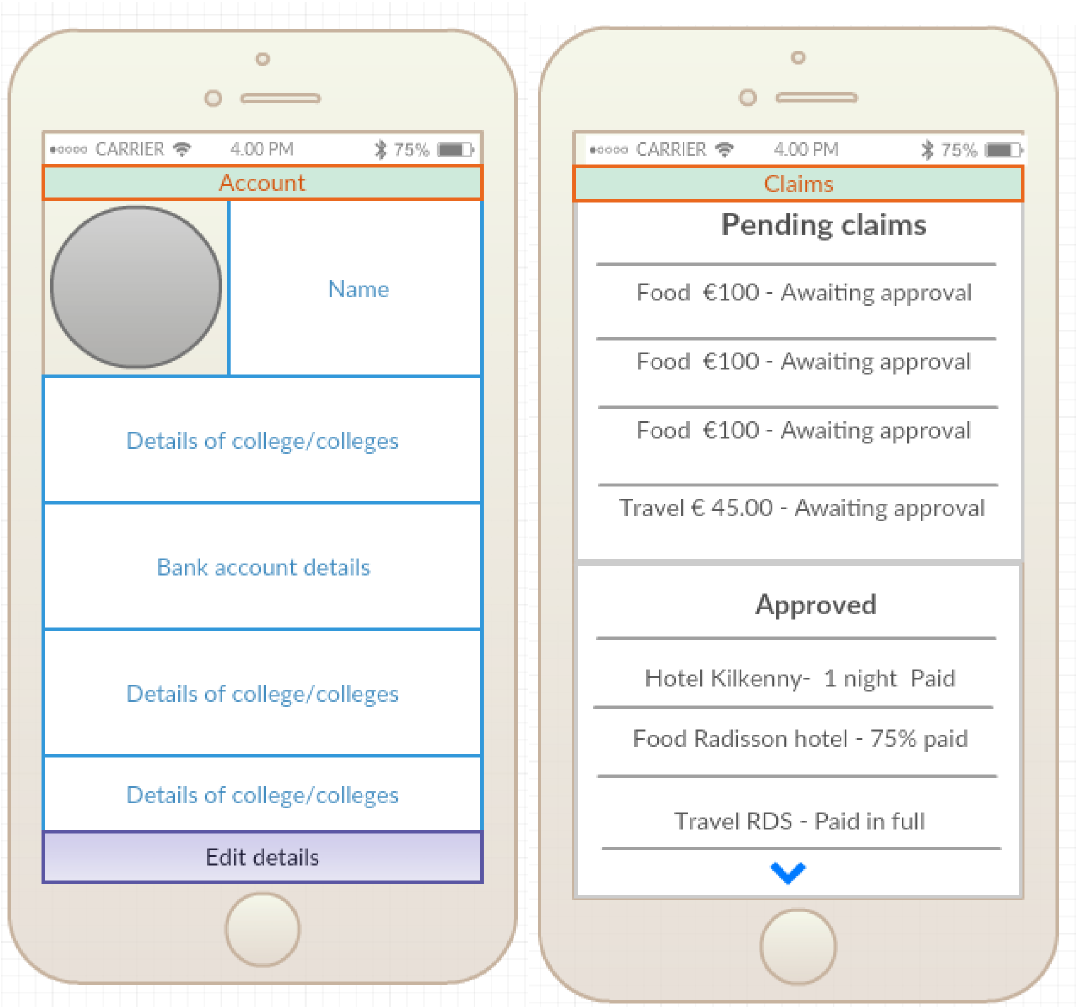
UML conclusion:

The diagram above shows the relationship that will exist between the lecturer using the application and the finance department. The actors are placed on the outer boundary of the diagram. The arrows show what will happen as the user uses the application such as if they were to create an account what steps would then need to be done before the account can be created. This will work the same when as when an expense is added by the user for approval. The finance department will then view the claim and decide if it will be approved or not. By having an account it creates security for the user and ensures that their details are kept private. If someone was able to view any of the information added this would damage the reputation and security of its members so security will play an important role in the success of the application.

Wireframes:


CARRIER
4.00 PM
75%
Initial page
Logo
Welcome
Login credentials
Create new account
CARRIER
4.00 PM
75%
Register
Name
College
Email address
Bank account details
User name
Password
Verify password
Cancel
Create


CARRIER
4.00 PM
75%
Login page
Username
Password
Clear
Login
CARRIER
4.00 PM
75%
Account
Name
Details of college/colleges
Bank account details
Details of college/colleges
Details of college/colleges
Edit details


CARRIER
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Account
Name
Details of college/colleges
Bank account details
Details of college/colleges
Details of college/colleges
Edit details
CARRIER
4.00 PM
75%
Claims
Pending claims
Food €100 - Awaiting approval
Food €100 - Awaiting approval
Food €100 - Awaiting approval
Travel € 45.00 - Awaiting approval
Approved
Hotel Kilkenny- 1 night Paid
Food Radisson hotel - 75% paid
Travel RDS - Paid in full


CARRIER
4.00 PM
75%
Back
Upload
CARRIER
4.00 PM
75%
Database of images
Images sorted by upload date
Upload image to expense form

IEEE DOCUMENT

Purpose:

The IEEE document requirement specifications document is being developed for the ReimburseMe app. This report will clearly set out the functional and non-functional requirements that will be associate with the app. This document must be approved by the business owner before the application begins. An agile element will be adapted so if changes occur throughout the requirement they will be able to be made.

Scope:

The website is being created for a number of stakeholders. It is being created with the lecturers and the finance department in mind. They currently use the traditional method without the use of an application where they will bring in a receipt and attach it to an expense form.

With the addition of the application it will allow them to do it on the go, being able to make expenses the same time that they are taken or later on within the day. By having this application it will allow a good user interface for the user as well as speeding up the way in which claims are processed within

Functional

Requirement	1.1
Identification code	FR1.1
Title	Register link
Description	On the initial page the user should be able to select to create a new account where a form will appear for them to register on to the site. It will allow them to sign up.
Location	Start-up page
Priority	Must Have

Requirement	1
Identification code	FR1
Title	Log in link
Description	The user will enter details to sign into their account where they will be given access to the homepage
Location	Start-up page
Priority	Must have

Requirement	2
Identification code	FR2
Title	Continuous login
Description	The user should be able to be continually logged in for easy access to their account.
Location	Start-up page
Priority	Could have

Requirement	3
Identification code	FR3
Title	All fields must be filled
Description	When signing into the account the user must enter both their unique username and password to gain access to the application
Location	Login page
Priority	Must have

Requirement	4
Identification code	FR4
Title	All details displayed on the account page
Description	The user must be able to view all their details including their name, bank account details as well as details of the colleges that they work in.
Location	Account page
Priority	Must have

Requirement	5
Identification code	FR5
Title	Register page
Description	Here is where the user will input the requirements into all of the fields in order to create the account. All fields will be mandatory such as place of work, name and their bank details so that they can be reimbursed

Location	Register
Priority	Must have

Requirement	6
Identification code	FR6
Title	Register page
Description	On the register account page, the user must have a unique username and password to create their account. This will identify the user in future log in sessions.
Location	Register page
Priority	Must have

Requirement	7
Identification code	FR7
Title	Change account picture
Description	The user should be able to change the picture that they initially uploaded to their account if they wish to do so.
Location	Account page
Priority	Should have

Requirement	8
Identification code	FR8
Title	Add college
Description	If the user begins to lecture in another college or changes they must be able to make changes to their details
Location	Account page
Priority	Must have

Requirement	9
Identification code	FR9
Title	Select college to upload expense

Description	The user must be able to select what college they want to submit the claim too if they are lecturing in more than one college
Location	Account
Priority	Must have

Requirement	10
Identification code	FR10
Title	Attach image of the receipt
Description	When filling in the expense page, the user must first upload the image of the receipt that they will be claiming the expense for.
Location	Expense page
Priority	Must have

Requirement	11
Identification code	FR11
Title	Fill in required fields
Description	The user must fill in all fields on the expense form in order for it to be submitted
Location	Expense page
Priority	Must have

Requirement	12
Identification code	FR12
Title	Submit expense link
Description	The user will submit the expense if all the fields have been entered
Location	Expense page
Priority	Must have

Requirement	13
Identification code	FR13

Title	If not all expense fields entered
Description	The user will be informed that it must be entered before the information will be submitted for approval
Location	Expense page
Priority	Must have

Requirement	14
Identification code	FR14
Title	User selects the camera button
Description	User will be brought to the camera where they will be able to take the picture
Location	Homepage
Priority	Must have

Requirement	15
Identification code	FR15
Title	Image taken
Description	The image will then be taken and the user will click submit where the image will be saved to a database
Location	Camera
Priority	Must have

Requirement	16
Identification code	FR16
Title	Adding multiple receipts
Description	The user must be able to add multiple receipts to a claim if it is for the one trip and the same type of claim
Location	Database
Priority	Could have

Requirement	17
Identification code	FR17
Title	Transactions link
Description	The user must be able to select the transaction link to access the page
Location	Homepage
Priority	Must have

Requirement	18
Identification code	FR18
Title	Pending claims
Description	The user must be able to view the claims as well as the status of the claims
Location	Claims page
Priority	Must have

Requirement	19
Identification code	FR19
Title	Approved claims
Description	The user must be able to see approved claims. They must be able to see the payment they got as well as if the payment was in full
Location	Claims page
Priority	Must have

Requirement	20
Identification code	FR20
Title	Database link
Description	The user must be able to select the database section to access images that they are yet to upload for a claim

Location	Homepage
Priority	Must have

Requirement	21
Identification code	FR21
Title	Select photo
Description	The user must be able to select the photo from the database where they will be able select it to send it to the expense form.
Location	Database
Priority	Must have

Requirement	22
Identification code	FR22
Title	Submit database picture
Description	Once the user has selected the image and click go, the user will then be brought to the expense field with the image attached.
Location	Database
Priority	Must have

Requirement	23
Identification code	FR23
Title	Link to expense form
Description	The user will be able to click the link to be brought to the expense page
Location	Homepage
Priority	Must have

Requirement	24
Identification code	FR24
Title	Cancel button

Description	On the register page the user must have the option to cancel if they decide against making an account
Location	Register
Priority	Must have

Requirement	25
Identification code	FR25
Title	Submit button
Description	The user must have a submit button in order to create the account
Location	Register page
Priority	Must have

Requirement	26
Identification code	FR26
Title	Approve account
Description	The Data administrator must approve the page and verify the account before it goes active for the user
Location	Finance department page
Priority	Must have

Requirement	27
Identification code	FR27
Title	Submit image to expense page
Description	The user must have a button on the database to select the image
Location	Database page
Priority	Must have

Requirement	28
Identification code	FR28
Title	Wrong password on login

Description	If the password is entered wrong multiple times the account will be locked for a certain period of time before the user can try again
Location	Log in page
Priority	Must have

Requirement	29
Identification code	FR29
Title	Push notification
Description	Users will be reminded with a push notification to remind them to make the claim
Location	Calendar page
Priority	Could have

Requirement	30
Identification code	FR30
Title	Claim view
Description	The administrator must be able to approve claims from the expenses that have been uploaded.
Location	Claims page
Priority	

Requirement	31
Identification code	FR31
Title	Approved claim
Description	If the claim is approved, the administrator must then be able to authorise the refund of money to the users bacnk account
Location	Claims page
Priority	Must have

Requirement	32
Identification code	FR32

Title	Live calendar
Description	The user would be able to see a live calendar with events they attended or will be attending
Location	Calendar page
Priority	Could have

Requirement	33
Identification code	FR33
Title	Change details
Description	The user must be able to change their details on the account page
Location	Account page
Priority	Must have

Requirement	34
Identification code	FR34
Title	Reset password or username
Description	The administrator must be able to change the password or remind the user of their username.
Location	Log in page
Priority	Must have

Non-functional requirement

Security

Requirement	35
Identification code	FR35
Title	System log out
Description	The system must log out after inactivity for a certain period of time
Location	Homepage
Priority	Must have

Requirement	36
Identification code	FR36
Title	Full availability
Description	The system must be accessible at all times for the user
Location	All pages
Priority	Must have

Requirement	37
Identification code	FR37
Title	Capacity
Description	The system must be able to deal with multiple expenses from the user or multiple of users
Location	Expense page
Priority	Must have

Requirement	38
Identification code	FR38
Title	Response time
Description	The system must have a fast response time for loading pages for the user
Location	Every page

Priority	Must have

Requirement	39
Identification code	FR39
Title	Reliability
Description	The system must be reliable for the users. They should be able to input information into all of the fields as well as ensuring that the app does not crash during it being used.
Location	Every page
Priority	Must have

Requirement	40
Identification code	FR40
Title	Scalability
Description	The app must be able to withstand large use, if there is a high volume of users that are submitting expenses that the system will be able to cope with the demand.
Location	Expense page
Priority	Must have

Requirement	41
Identification code	FR41
Title	Security
Description	The app must require the right username and password for an account before granting access for the user
Location	Log in page
Priority	Must have

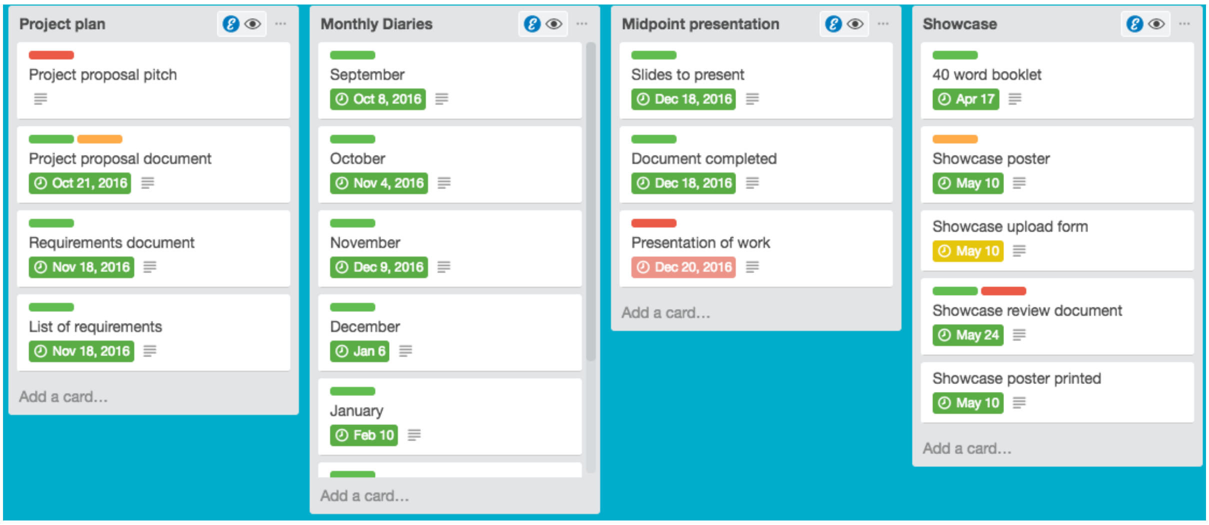
Requirement	42
Identification code	FR42
Title	Security checks

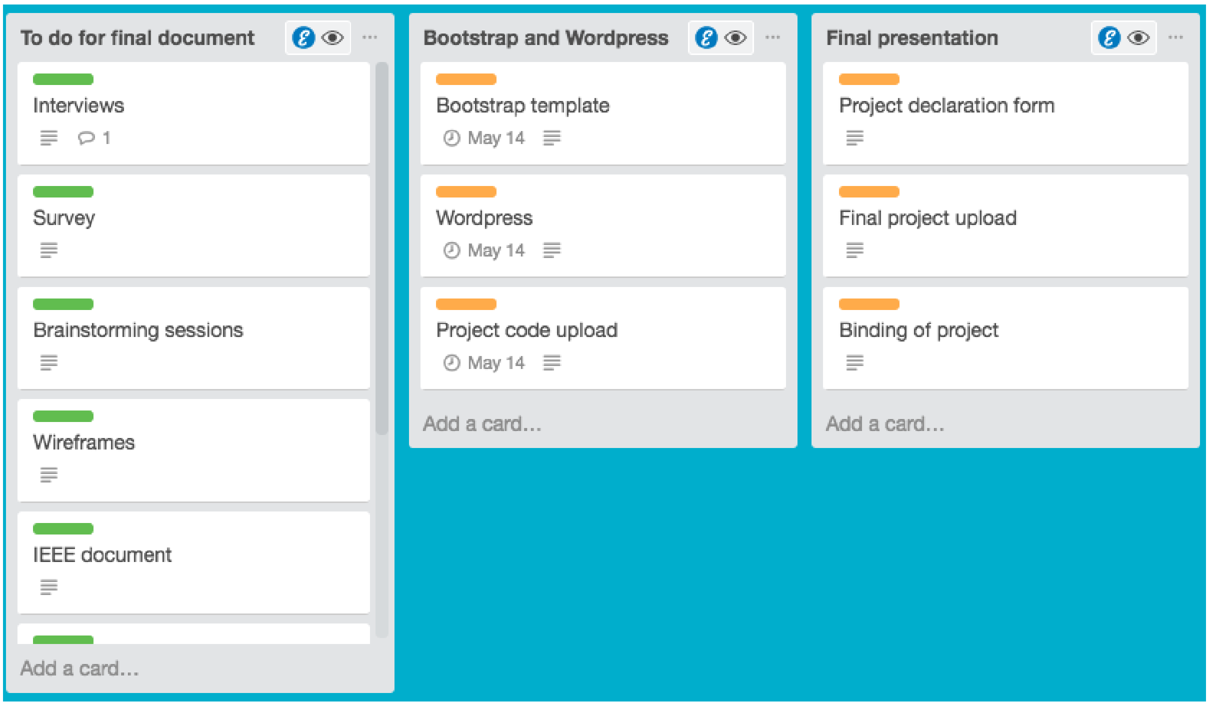
Description	There must be monthly security checks to ensure that the apps security is up to date for cyber-attacks.
Location	All pages
Priority	Must have

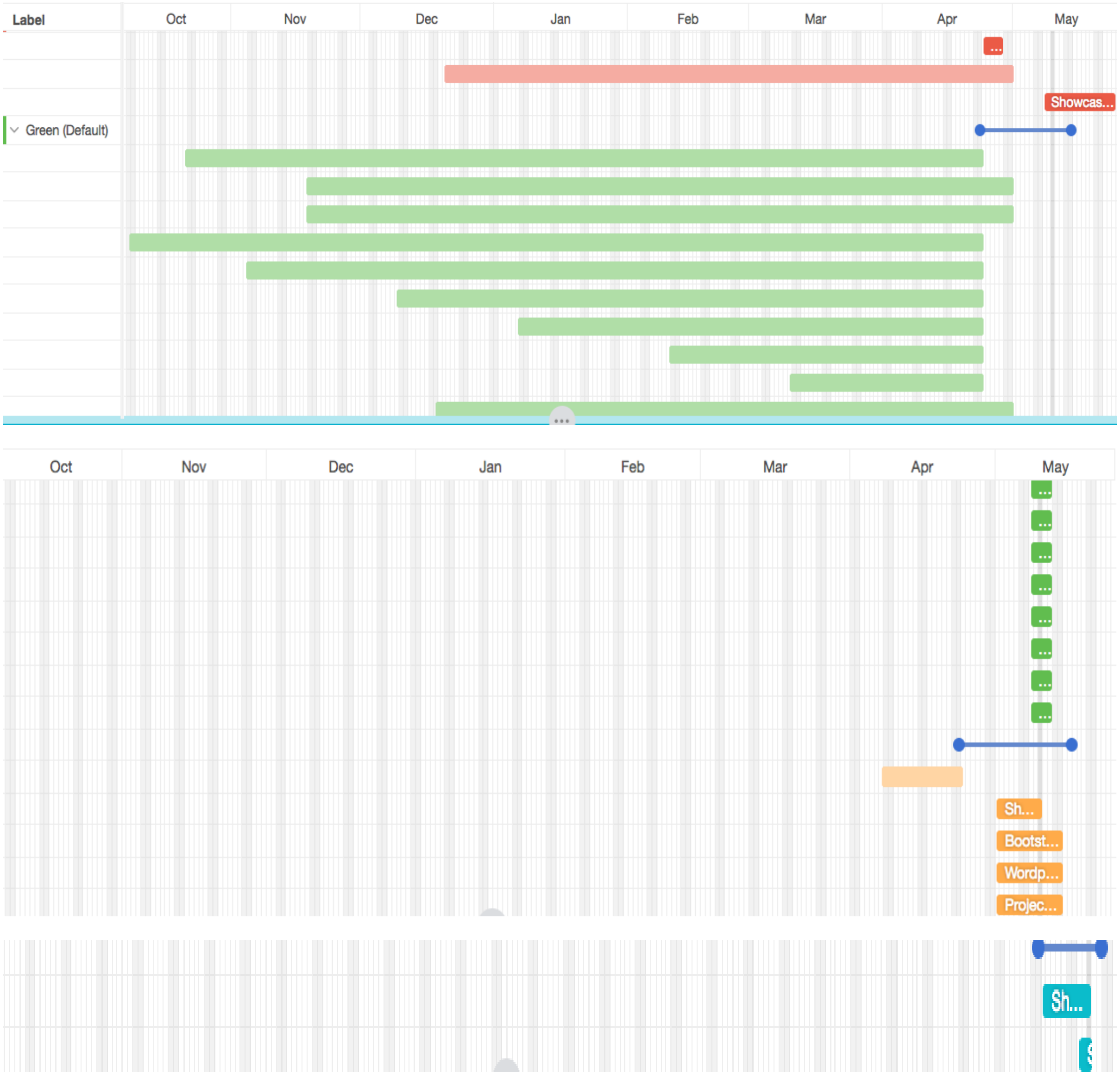
Requirement	43
Identification code	FR43
Title	Data integrity
Description	If there are multiple log in failures the data must be wiped so that the users information and bank account details are kept secure
Location	Log in page
Priority	Must have

Appendices:

Trello:







Above is the timeframe that was set out on Trello for the work to be completed. The diagram shows what work was to be done and when it was to be done. Trello was a great management tool as it allowed me to view what work had to be done and to stick to deadlines throughout the project to ensure that the work was being completed.

Project proposal

Objectives:

The primary objectives of this application is to change the way in which college lecturers claim expenses for travel and accommodation from the college. The main objective is to meet with the stakeholders to identify what exactly they require from the application in order for it to work and be successful. The application will need to run smoothly between both the finance department and the lecturers to ensure that the information is easily translated between both parties to ensure that the lecturers get paid and that there is a clear record of the expense that can be easily found.

The main objective of this project is to create an online,mobile application that will allow college lecturers to be able to upload their online expenses compared to the traditional way in which they would normally keep receipts and give them to the college.

The objective of this project is to provide the stakeholders with the benefit of an application that will improve the way in which lecturers are reimbursed, as it will provide a quick and efficient way to upload their expense claims almost immediately, where previously they would have to hold on to their receipts until they come back to the college to claim..

Background:

Traditionally within colleges when lecturers go on business trips outside the college they will normally claim expenses for travelling as well as accommodation and food. In order to do this, they had to keep a hard copy of all receipts where they could then be giving back to the colleges where they would then have to wait to claim expenses back.

In talking to lecturers before choosing my final year project I had asked them their opinion on this and if they would like a new method where they would be able to do everything online. On feedback they said an online application where they would be able to upload a digital copy of the receipts instead of having to keep a hard copy would be an easier method as they would be able to be stored on an online database where they could be easily viewed by both the college lecturer who is claiming the expenses as well as the finance department within the college.

After doing online research I found that not many colleges have adapted an online expense claiming system for its lecturers and I feel that the way in which technology has had a major impact in the teaching in the classroom, that lecturers should also be able to move away from the traditional method and be able to do it online, in the same way that they teach lecturers using online resources.

Define detailed requirements:

This will then be going in depth into the information that is required in order to complete the project. It will involve eliciting requirements from the stakeholders and this will be doing by using techniques such as interviews, surveys, focus groups and meetings. This information will then be able to be analysed to provide an understanding of what is needed.

Sequencing deliverables:

I plan on setting out goals and deadlines in order to keep the flow of the project continuous. By having these deadlines, it will allow me to have the right and adequate information ready for each deliverable as they fall due. I will be able to show these tasks by setting out the key dates in which they can be completed which will be shown in the project plan.

Risks:

Like every project that is going to be undertook, there will be risks involved. I will try to figure out these risks from the outset as to keep them to a minimal as well as any problems that may occur throughout the project. Being able to meet with stakeholders is the biggest risk as this is where the biggest requirement elicitation gathering will occur. I must ensure that the information I get is relevant to the project, staying on track as well as ensuring that the times suits all parties involved.

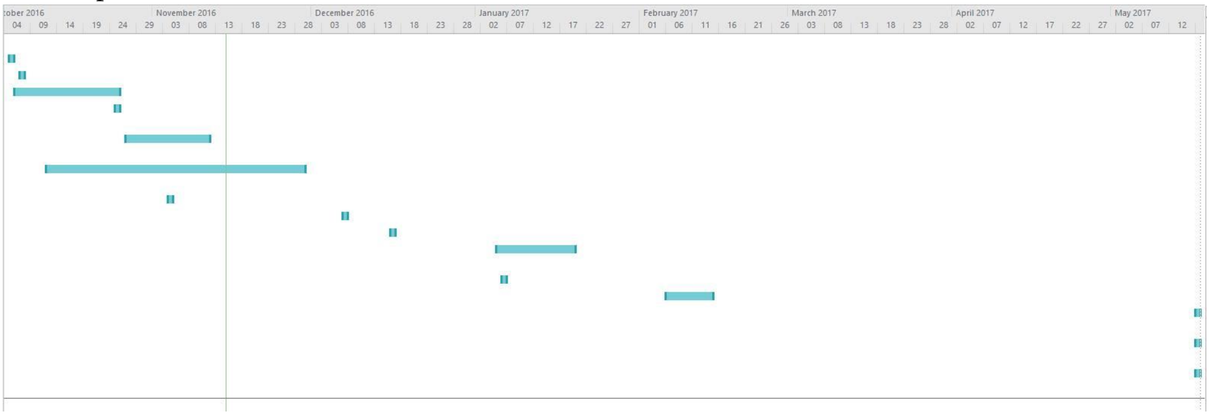
Scope creep is also another major risk that can be involved in the project, this is where as the projects grows the requirements from the different stakeholders such as the lecturers, college administration staff of the accountants may require greater expectations than what were first discussed in the initial stages.

Technology details:

- Apple macbook pro
- Hp Inkject 410
- External harddrive-Toshiba
- Dropbox
- Google form
- Creately
- MySql
- Cloud
- Bootstrap

Project Plan

Below is a Gantt Chart and Work Breakdown Structure which will show the list of tasks and projects that will need to be completed in order to make sure the project will stay on track for its completion date.



Task Mode	Task Name	Duration	Start	Finish
	Project pitch	1 day	Wed 05/10/1	Wed 05/10/16
	Reflective journal	1 day	Fri 07/10/16	Fri 07/10/16
	Project proposal	14 days	Thu 06/10/1(	Tue 25/10/16
	Review of project proposal	1 day	Tue 25/10/16	Tue 25/10/16
	Prelimary requirement elicitation	12 days	Thu 27/10/16	Fri 11/11/16
	Prelimary requirement analysis	35 days	Wed 12/10/16	Tue 29/11/16
	Reflective journal	1 day	Fri 04/11/16	Fri 04/11/16
	Reflective journal	1 day	Wed 07/12/1	Wed 07/12/16
	Midpoint presentations	1 day	Fri 16/12/16	Fri 16/12/16
	Semester one exams	11 days	Thu 05/01/17	Thu 19/01/17
	Reflective journal	1 day	Fri 06/01/17	Fri 06/01/17
	Showcase	7 days	Mon 06/02/1	Tue 14/02/17
	Final project documentation	1 day	Wed 17/05/17	Wed 17/05/17
	Software & Documentation upload	1 day	Wed 17/05/17	Wed 17/05/17
	Project presentation	1 day	Wed 17/05/1	Wed 17/05/17

Evaluation

When the information has been gotten through different sources such as interviews, surveys and meetings, I then plan on being able to have a draft prepared of what the prototype should look like. This will then be able to be given to stakeholders to ensure that the requirements in which they felt were necessary to make the application work are being used and that it will be easy functionality for the clients.

When the prototype is ready it will then be compared to similar systems to see if the right technologies are being used to capture the required information and if they are being stored in the right database. This will be able to show if any improvements can be made as well as if the application is heading in the right track to be viable.

Special resources:

I plan on using BABOK2 in gathering information for deliverables as this will set out a template in order to follow to ensure that I am on the right track and gathering the right information to ensure that the deliverables are being met appropriately and that the right requirement elicitation is being gotten.

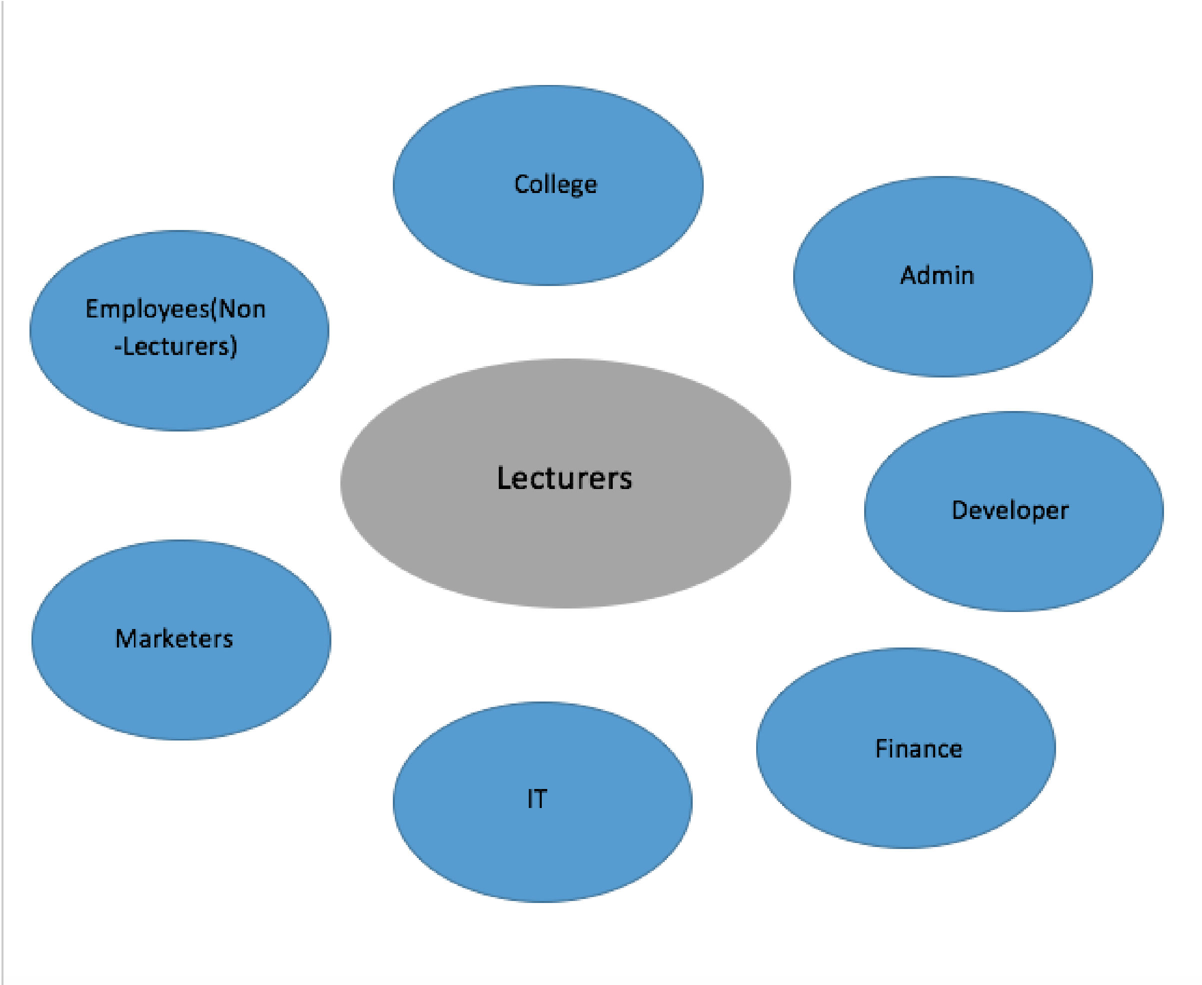
Preliminary requirements elicitation

Introduction:

Before I begin to gather the requirements for my project, I first intend to have a plan in place so that I know of the elicitation techniques that I will be using to gather the information. I intend to gather the requirements for my application that will be an online expense claiming system for lecturers where they will be able to upload receipts and document information online instead of keeping a physical copy which is currently being done in NCI. By gathering the right elicitation techniques from the outset this will in turn make it easier to prepare and receive accurate information from stakeholders.

Stakeholders:

- Lecturers
- College
- Admin
- Developer
- Finance
- IT
- Marketers
- Employees (non lecturers)



In the centre of this diagram is the lecturers who are the main stakeholders within this project as they are the reason that the application is being invented. The outer layer is all the other stakeholders who will have an impact on the functions and the design of the application but will also be end users in the project.

Requirement Elicitation techniques:

Brainstorming

Brief overview:

I plan to brainstorm as I will be able to get a group of people together and will be able to get different ideas that may have not previously being thought of that can be implemented into the app. The different viewpoints will be able to give me a clear indication of any features and functions that they feel should be included in the application.

Objectives of brainstorming:

For the Brainstorming session, I will have a whiteboard with a central idea. I will have an independent moderator that will document all the different ideas on the whiteboard. This will give me better understanding of what could be included in the application. All off the ideas put forward in the session will be documented by the moderator. These comments will then be addressed after all the requirements have been gathered. Theses can then be analysed.

Surveys:

A survey will be created and distributed to members within the National College of Ireland as well as other colleges within Ireland. I plan on getting a minimum of 100 surveys from both full time and part time faculty as to get a through reflection from all lecturers on their opinions on what should be included. By using this elicitation technique it will allow me to reach a large number of lecturers from all over the country.

Sample questions:

- Do you feel that there is a need to change from the traditional method to an online based application?

  Yes No
- How often do you claim expenses from the college?

  Weekly Monthly Never
- If previously claimed, how long is the waiting period to receive expenses back?

  Up to 7 days Less than 2 weeks More than one month

Interviews:

Brief Overview

For the interviews I plan on doing them with the stakeholders that have been identified. I plan on conducting multiple interviews as to get the viewpoints from different stakeholders that will be needed to make the application successful with an ease to use between both the lecturers and the finance department within the college. This will be done by conducting interviews with lecturers themselves, the finance and the IT department.

Sample interview questions (Finance):

Do you feel that this process would speed up the time in which you will be able to reimburse payments?

How would you like the documentation to be uploaded so that it is easy accessible?

How do you find the method that is currently being used?

Focus groups:

In the focus groups I plan to have a minimum of 5 people in the group, where they will be chosen from the stakeholders that are identified. In this group I intend to find out the requirements that will be needed by the different stakeholders to ensure that the right requirements are gotten from all in order to make the application easy to use from the client to the end user. The focus groups will be scheduled at a time that suits everyone and in a venue that is convenient for all.

Requirements workshop:

The workshop will be done to obtain the functional requirements as well as the non-functional requirements. By achieving what these are it will give a clear indication on what is needed to build the application as well as ensuring that a good GUI is developed for its users. By doing this with the stakeholders it will ensure that requirements are gotten from each, ensuring that no key requirements are missing.

Journals:

Student name: Alex McGovern

Programme: BSHTM4

Month: September

This month I was able to find a solution to an idea which I feel would solve a problem between students who find it difficult with a particular part of a project or assignment. Students who are struggling will have an online resource where they will be able to communicate with students from other courses within the college itself or other colleges to ask questions where a student who may be more knowledgeable in that area will be able to comment and supply notes or slides to help said student.

Throughout this month I found similar ideas that had been done such as Stackflow which is a website that allows coders to ask programming queries and receive answers from other programmers. On the basis of this concept I have adapted it too suit students from all colleges where students will come together to help one another.

On reflection of doing this idea I feel that it is a unique idea that would be able to benefit students who are struggling by allowing them to look up the information and interact with other students to help and solve the problem rather than just asking the lecturer for guidance. It allows them to use their own initiative to find a solution to the problem that they are having.

I felt that I was successful in identifying the main stakeholders that would be needed to interact to make this idea feasible but struggled to find the rest of the stakeholders who may not play a key role but have a role within the project.

On reflection I also feel that I need to make the website unique in so that it may stand out to competitors in so that it won't be copied easily.

October:

At the beginning of the month due to missing the project pitch, I went to visit Eugene O'Loughlin on the advice of Eamon Nolan to discuss my idea. After meeting with Eugene we decided that the idea could be chosen but on further reflection on my own time I decided to change the idea to on an online expense claiming system for lecturers in the college. Due to me still being sick I requested an extension on the project proposal which I have been doing.

I was able to identify the main stakeholders that would be involved in the project and whose advice I would need in order to bring the application together. A Ghannt Chart was also created in order to prepare myself for the deliverables and how long I would need to complete them which is shown within the work breakdown structure. Although I am not sure of all the relevant tasks that will have to be completed throughout the project, the work breakdown structure has the main deliverables that are needed to ensure that I keep on top of the project.

I was also assigned my supervisor Joe Molumby which I was happy about as I have previously had Joe as a lecturer in second year and we have always been friendly to each other, so I know that he is approachable and would answer questions for me anytime that I need it. I plan to organise my first meeting with him where I will be able to discuss what I intend to do for the following month as well as get information for the Preliminary Requirements Specification. By doing this document I will have decided on what elicitation techniques I will be using such as brainstorming, focus groups, interviews and surveys. I will begin to prepare the questions for these so that they will be ready to send out.

So far the only problem that I have come across is being unwell and being behind on projects, but feel that I am getting better and that I will be able to do what is required of me for the project.

I

November:

Throughout this month I have still been sick with both shingles and nerve damage occurring from it which has delayed me in doing what is required again. Although I caught up with the majority of the workload, I was also able to have my meeting with my supervisor. I found this extremely helpful as he focused me on my idea and gave me a clear outset of what was needed. Throughout the month I had the brainstorming session where it was a group of 3 where a name was thought of for the project and well as some of the functional requirements. In this month I had also finished my proposal as well as worked on my preliminary requirements elicitation, where I was able to identify my stakeholders as well as figuring out what role they would play in the development of the application. The elicitation techniques that I would be using such as interviews and surveys were also decided to ensure that the right techniques where used to get the right information.

December

For the month of December not much college work was done due to having four other assignments to complete. During the month I had looked at some requirements that would be needed for the project. I had also not met my supervisor as I was sick but had intended to meet Joe. During this month I had also looked at my Gant chart to see what stage I was at and what part of the projects had been completed. I had finished my document for upload for the midpoint presentation as well as the slides but could not attend the midpoint presentation due to being sick.

January:

In January after the exams the focus had been put back on to the project. I had looked back over the project from the midpoint and began to work on the survey questions. In February I did however get shingles again which once again put me behind the rest of the class. The survey questions were drafted and were then put aside until meeting with my supervisor. During this time I had also a conversation with a lecturer from another college about the app and what he wanted and he had agreed to do an interview with me.

February:

February I had been in contact with Eamon over the missed midpoint and we had agreed that I would not redo the presentation and would instead only be marked on the document as it was already too late to redo it. This had given me the drive to get back on track with the project, I had arranged interviews with two lecturers and a developer. Sample questions were then drafted. I had also met with Joe this month where he had given me the mark for my presentation and brought me through what else needed to be done. We had discussed the sample questions for the survey and then the survey was distributed.

March:

In march we had started the booklet for the showcase and got our LinkedIn photos taken. During this month replies for the survey were coming in and they were being analysed. During this time I had also prepared the final interview questions and had arranged the interview for when it would suit them. As well as doing the project during this month we also had two assignments due which once again slowed the project down. This resulted in us reviewing the Gant chart and making a Trello to keep on track of the work.

During this month all the survey responses were received, the interviews were completed. The showcase poster was completed and sent off. All the functional and non-functional requirements were also gotten. Journals were all completed and finished. Moscow analysis was completed and conclusion along with UML diagram and conclusion.

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