National College of Ireland
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Help2Connect

Final Report

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Executive Summary

The objective for this software project was to create a fully functional online helpdesk to assist people in their daily struggles with technology. The idea was to save people time, create a community and increase everyone's level of IT knowledge.

Technology is growing at a rate of knots these days and it doesn't show any signs of slowing down. People of all ages are using smartphones, tablets, laptops, computers etc. everyday.

Unfortunately, technology isn't perfect and many people suffer issues with their devices on a day to day basis. Users have issues such as a draining battery, broken screens, a damaged motherboard and other hardware problems. They also struggle with software glitches, devices not turning on and simply not knowing how to use their machine.

Help2Connect is a huge help to these people instead of them searching for hours on the internet or travelling from place to place to get a solution to their problem. With Help2Connect, people can simply fill out a form of what their issue is. They are then given advice on the trouble that they are having either via comments or useful links/Chatbot. Unfortunately, I could not get the recommender system working which would provide useful links.

Users can simply create an account and login to the website. Once this is done, they post any problems that they are experiencing or they can comment on other users issues to give them support. They can also use the Chatbot to navigate the website.

The useful links would've been very helpful for those wanting an immediate solution or for people looking for a shop that'll repair their device. Example: If someone is having an issue with their iPhone, an Apple Premium Reseller would be suggested as a place to go to get their iPhone fixed. Hopefully I can get this issue resolved in the near future.

1 Introduction

1.1 Background

Previous Ideas:

At the beginning of the semester I looked to get an idea for my project. I thought of ideas such as a holiday website, a social network visiting Canada website and an online helpdesk.

I was torn between the visiting Canada website and the online helpdesk which both, I felt had potential.

There was more interest in the former idea as it is something I would like to do in the future. The online helpdesk on the other hand was inspiration I took from my internship which was IT Support.

Finding Inspiration:

In my internship we supported companies who outsourced their IT to us so we took care of it and managed it for them. I took a lot of the calls on the helpdesk and logged the tickets for them. My idea was to have an online helpdesk where people can fill out a form and post it to the website. Here they can get useful links to their issues, get support from other users or be given options as to how to sort out their technical problems.

The Pitch and the Idea:

I originally chose to go with the visiting Canada idea but after the pitch, the lecturers felt that the online helpdesk would be the better plan. They gave me some guidance as to how I could develop the helpdesk further and make it more complex. I now know what direction I'm heading in and have a solid idea of what I'm looking to achieve.

1.2 Aims

The aim of the project was to develop a Web application that allows a user to fill out and submit an online form explaining the problem that they're experiencing. The user is then given suggestions on how to solve the issue either through suggestive links or other users giving them advice. Customers are able to help each other with useful links or advise from past experiences. These posts are left on the website for future references.

Help2Connect is a big help to today's world. More and more people are using technology, many of which are inexperienced and are getting frustrated with problems.

For the development of the website, I used PHP for the language and Cloud 9 as the platform. Along with these, I used HTML, CSS, JavaScript and JSON for the programming. PHPMyAdmin is what I used for storing the data such as users accounts information and the post/comments that were being submitted.

The system has a Chatbot which is available for users to talk to once they've logged in. The Chatbot can direct them to various areas of the website and even to a few useful links. I couldn't get this fully developed unfortunately so it is quite basic at the moment.

PHPMyAdmin was used for storing customer's data and allowing them to create an account & sign in.

There were no costs to setting up and running the website. The application has potential to make money through advertisements and sponsors.

1.3 Technologies

1.3.1 Research

With my time in Support IT, I got a good sense of what an ideal online helpdesk needs and doesn't need. Many improvements can be made with IT Support websites that are around today. Very few sites offer a place where users can go to post issues on any given IT device. The Interface for the helpdesk sites are rarely user friendly and have a lot of room for improvement. I also found that with sites such as StackOverflow and Bugzilla, there were features and functionality that weren't there that could be.

As someone who works with IT every day and assists customers with their Apple products when working in Compu b, I believe that a website which provided answers for people's technical issues would be hugely popular. Nowadays, users spend hours trying to find a solution to their problem and become very frustrated.

1.3.2 Requirements

It was necessary to have a well-designed and fully implemented login system which allows users to sign up and create a new profile on the system. This was successfully achieved as users can now make accounts, sign in and out as they please.

It was also very important to have the ability to post forms on the website along with allowing other users to comment on these posts. The idea was to make it simple to post form and add comments to answer queries. This was somewhat achieved, however, I struggled to make a connection between the post and comments. This is something that needs to be corrected.

Having a Chatbot was another significant part to the web app in order to solve user's issues. While I was able to add a Chatbot, it didn't have the full functionality that I would like. More work needs to be added to it. However, the site was designed nicely and simple for users to navigate.

1.3.3 Implementation

The application was deployed on Cloud9 which will make it live for everyone to use online. Therefore, the website will be available to anyone with an internet connection. The web app will be deployed on a secure server where it will be live continually, securely and consistently.

For coding the website, I will be using PHP, CSS and JavaScript which I have used previously for past projects. For my database I will be using PHPMyAdmin which will allow me to setup and store each user's data.

There will a backup of the website's code in case of disaster. I will continuously push the code to GitHub after every significant change. I will have the code stored in a non-live version also so that I can go back to it if something goes wrong with the live version.

1.4 Structure

The user is invited to sign into their profile or to create a new account if they do not already have one. The interface is nicely laid out with a simple and neat design. It will attract people to create an account on Help2Connect.

Once signed in, the user is presented with the home page. Here, they can navigate to post forms, utilise the Chatbot, view other posts, contact us and navigate between pages. Any part of the website can be reached from this point.

Once the user clicks on the 'Post Form' button, the user is brought onto the page to fill out the form. Here, the user fills out all information regarding their issue and can then post it to the website. It is then live for others to see.

The Contact page allows users to send a message to the admin if they are experiencing any difficulties or have any queries.

By going onto the Posts page, users can view posts viewed by other users. Here, they can comment on the post.

I had also planned to have a rating system to allow users like/dislike other's users comments if they found useful or not.

2 System

2.1 Requirements

2.1.1 Functional requirements

Fill out form. This is the main purpose of the online helpdesk as users need to have the ability to post their issue. This is the most important function.

Post forms on the website and allow other users to view them. This will display the user's issue and enable other people to post suggestions.

Register an account on the website and be able to sign into it. This will allow users to have a profile and contact other users.

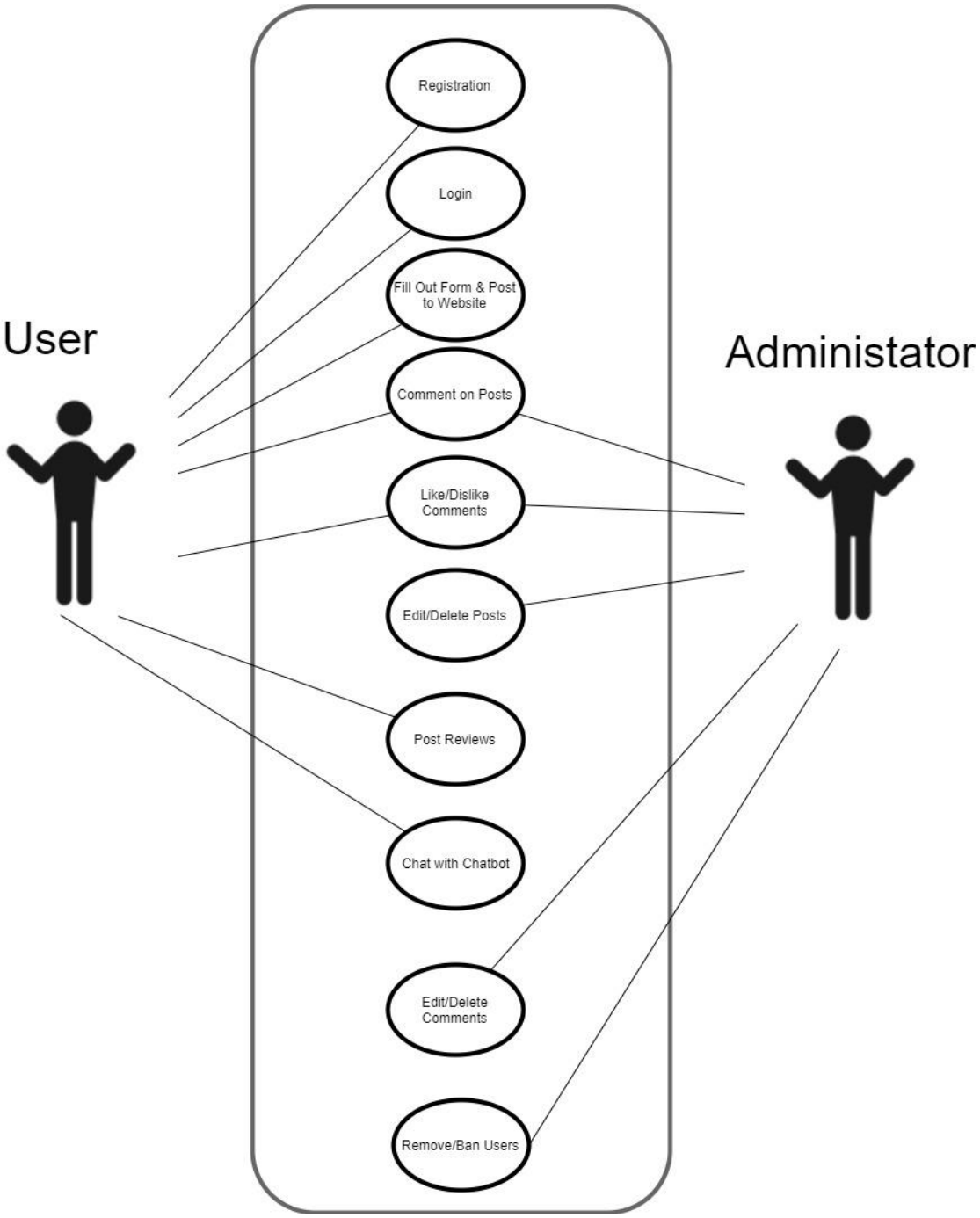
Comments section. Here, people can answer queries posted by other users.

Chatbot. Giving people the option to use a Chatbot in order to find their solution.

Recommender System. After filling out a form, the user will be given recommendations to other websites which may solve their issue. Example: A user may be given a link to Stack Overflow if their query has already been posted there. Hopefully I will be able to get the recommender system working in the near future as well as rating the comments.

Rate comments. If a particular comment works for a lot of people in terms of fixing their issue, users can give it a thumbs up to indicate that it works.

Use Case Diagram



Requirement 1: User Registration

Description & Priority

This requirement is essential to the website as it is the only way of uniquely identifying each user so that they can post forms, save information, reply to posts, rate comments and so on.

Use Case

Registration

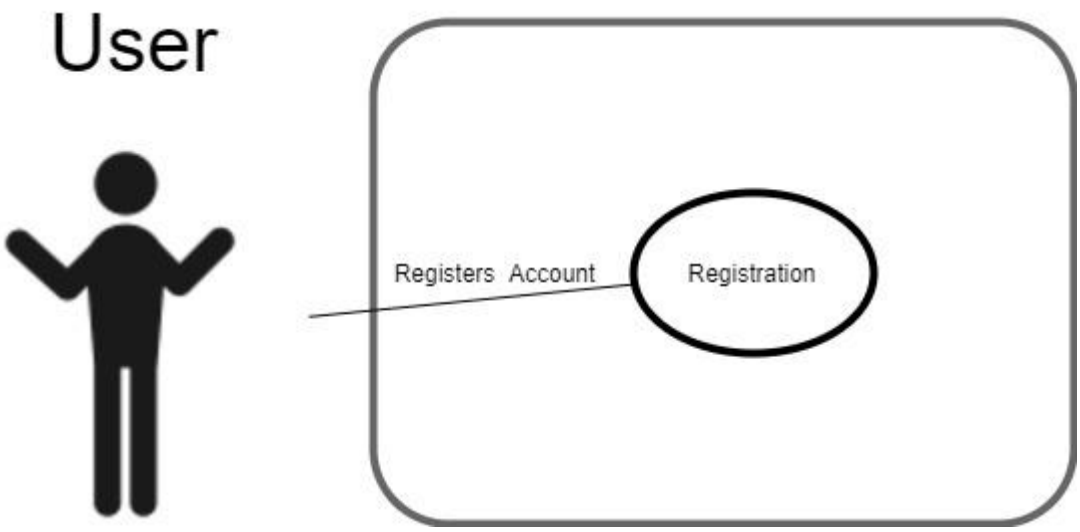
Scope

The scope of this use case enables a user to register an account on the website in order to post queries and issues.

Description

This use case adds another customer account to the application.

Use Case Diagram



Flow Description

Precondition

User must be connected to the internet, have a valid email address and valid phone number.

Activation

This use case is activated when the user clicks onto the website and is prompted to log in or register.

Main flow

1. The new user enters in their information to create an account.
2. The information entered is stored in the database.
3. The user can now post forms, leave comments, use Chatbot, etc.

Alternate flow

A1: If the email address or password is invalid, they will be asked to re-enter their information.
The use case continues at position 1 of the main flow.

Exceptional flow

Not applicable

Termination

The system terminates once the account has been registered.

Post condition

The user can enter the application, post queries, leave comments, chat with Chatbot and rate replies.

Requirement 2: Post Form

Description & Priority

This requirement allows users to post their issues ad queries to the online helpdesk. This is the essence of the website as it is the main objective for the helpdesk.

Use Case

Form Posting

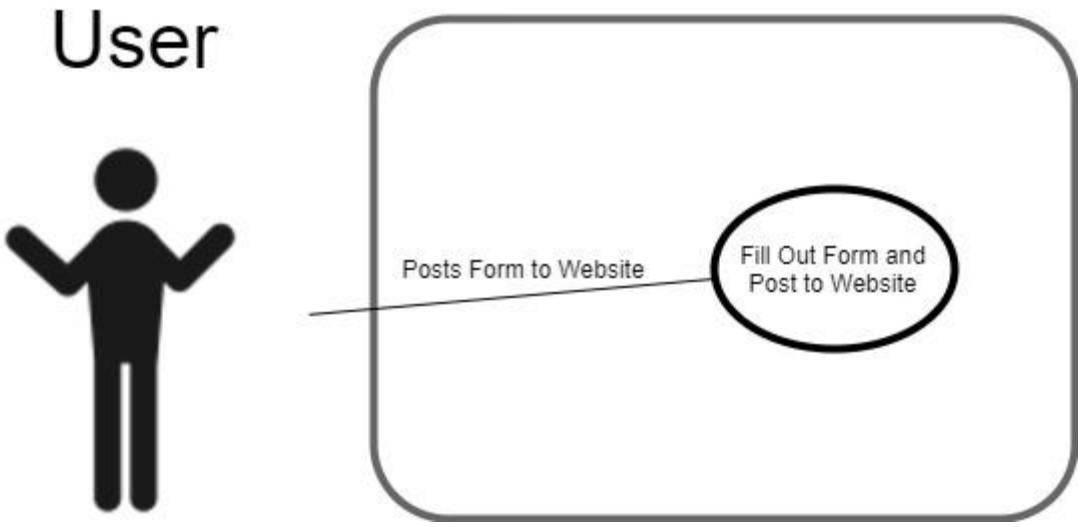
Scope

The scope of this use case is to allow users post their queries/issues to the online helpdesk in order to find a solution to their problem.

Description

This use case posts forms onto the website and allows other users to view them.

Use Case Diagram



Flow Description

Precondition

The user registers/signs into their account and chooses to post a form.

Activation

This use case is activated when the user clicks onto the issues and queries section of the website. Here they will be asked to fill out a form which will then be posted to the website.

Main flow

1. The user fills out their form, explains their issue and posts it to the website.
2. The information entered is stored in the database.
3. Other users can now view this post and will be allowed to reply on it in order to help solve the problem.

Alternate flow

A1: If this form has been posted before, the user will be brought to this post.

1. The use case continues at position 3 of the main flow

Exceptional flow

Not applicable

Termination

The system terminates once the form has been posted.

Post condition

Other users can now view this post and will be allowed to reply on it in order to help solve the problem. The user will also be given recommended links to help find the answer.

Requirement 3: Post Commenting

Description & Priority

This requirement allows users to comment on other people's posts. This is necessary as it helps the user who is experiencing an issue, find a solution.

Use Case

Commenting

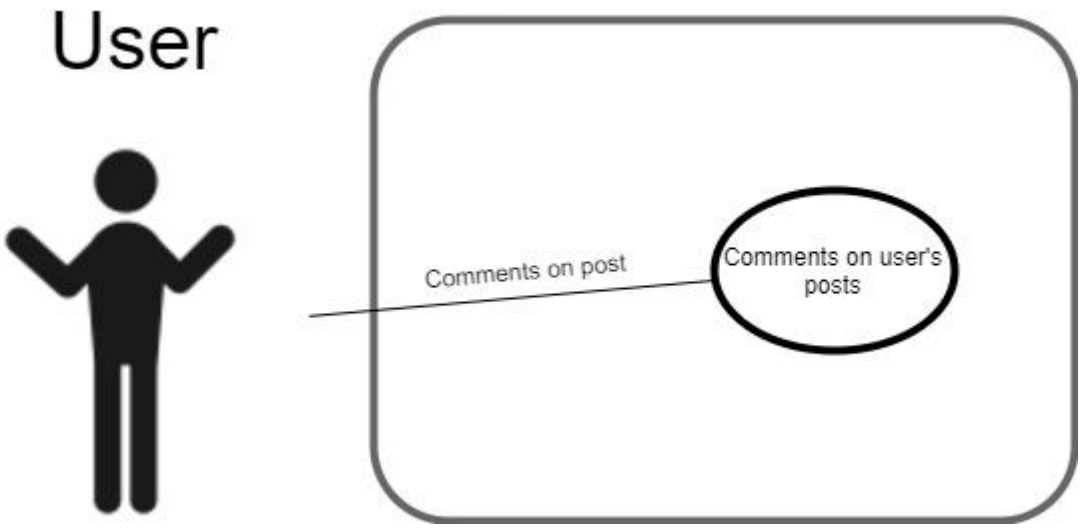
Scope

The scope of this use case is to allow users to comment on other people's posts. This will help user's find the solutions to their issues.

Description

This use case adds comments onto user's posts in order for them to read potential answers.

Use Case Diagram



Flow Description

Precondition

User signs into the website and finds the post on the website. They will then have the ability to comment on the website.

Activation

This use case is activated when the user clicks onto a form that has been posted by another user.

Main flow

1. The user signs into the website and searches a particular post.
2. In the comment section, the user replies to the person's query.
3. The information entered is stored in the database.

Alternate flow

A1: If the user types a comment but closes the window before posting it, the comment will not go into the replies.

Exceptional flow

If the user uses any foul language or is in anyway abusive, the comment may be taken down by the administrator.

Termination

The system terminates once the comment has been posted.

Post condition

Other users can now view this comment on the replies section of the form. They can either like or dislike the comment if they feel that it is of help.

Requirement 4: Edit/Delete Post

Description & Priority

This requirement allows the administrator to make changes to a user's post on the website. Unfortunately, I was not able to add this function into the website but will look at doing so in the near future.

Use Case

Editing Posts

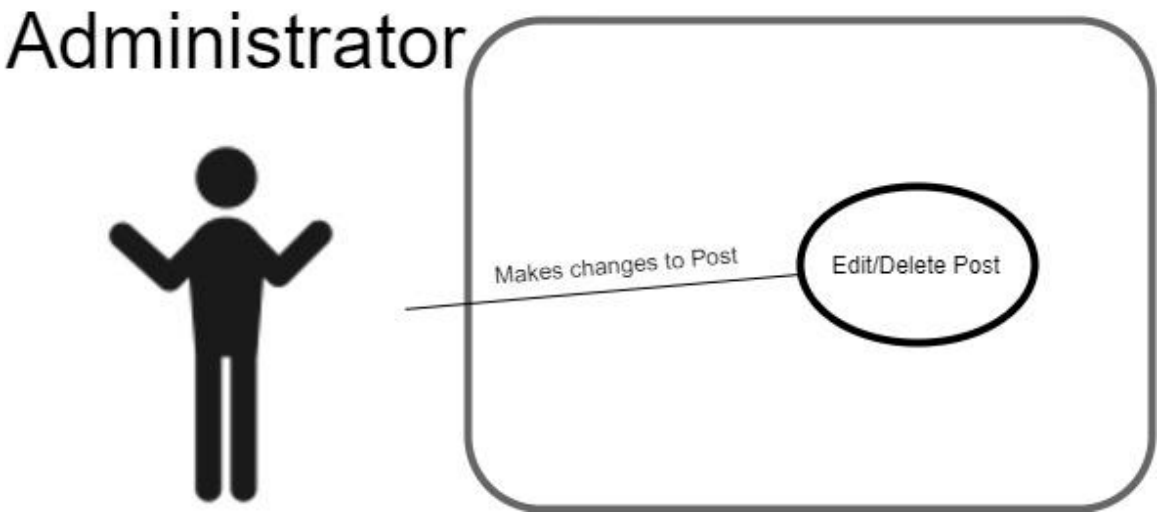
Scope

The scope of this use case is to give the administrator the ability to edit or delete a user's post if they see fit.

Description

If a post or comment on the website is not suitable or has any abusive language in it, the administrator will be able to edit/delete it.

Use Case Diagram



Flow Description

Precondition

Administrator signs in as admin and goes to the specified post which may have been reported. Here, the administrator can edit/delete the post.

Activation

This use case is activated when the administrator clicks onto the edit/delete part of the post which only the admin can see.

Main flow

1. The admin signs into the website and searches a particular post.
2. In the edit/delete section, the admin can then make changes that they see fit.

Alternate flow

A1: The admin may decide that the post does not need to be changed.

Exceptional flow

Not Applicable

Termination

The system terminates once the post has been edited/removed.

Post condition

The post will either be edited to meet the policy requirements of the website or it will be removed.

Requirement 5: Chatbot

Description & Priority

This requirement allows the user to chat with a Chatbot on the home page in order to find a solution to their problem or be directed to a possible answer.

Use Case

Chatting with a Chatbot

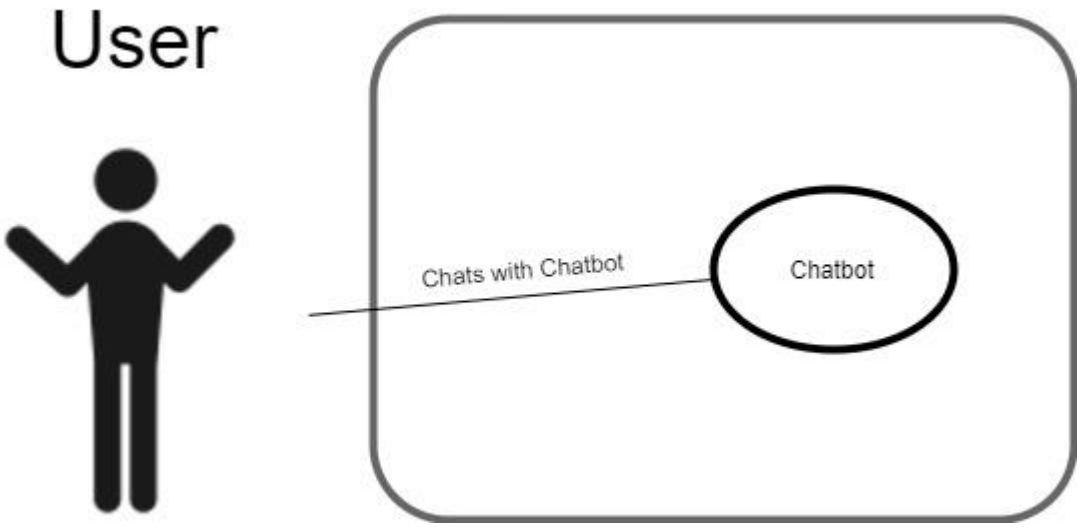
Scope

The scope of this use case is to give users the option and ability to chat with a Chatbot to find a solution to their issue.

Description

When the user signs into the website, they will be directed to the home page where they will be prompted with a Chatbot to chat to.

Use Case Diagram



Flow Description

Precondition

User signs into their registered account and is prompted with a Chatbot on the bottom of their screen.

Activation

This use case is activated once the user has signed in and begins typing in the Chatbot window.

Main flow

1. The user signs into the website, is prompted with the Chatbot and begins typing in the Chatbot window.
2. The Chatbot will respond to the user with potential solutions to their query.
3. The user will then click on the link given by the Chatbot.

Alternate flow

A1: The user may be given a link by the Chatbot to post a form if it cannot find an answer to their issue.

Exceptional flow

Not Applicable

Termination

The system terminates once the user leaves the Chatbot window.

Post condition

The user will be given a link or multiple links to get their issue sorted.

2.1.2 Data requirements

The data in the database is encrypted to protect them against any malicious users trying to leak them. This stops user's personal information from being stolen.

The user's information that is stored in the database is inserted into tables to keep it neat and tidy. Therefore, data such as Email, Name and Password is laid out in a table format in the database (PHPMyAdmin).

2.1.3 User requirements

From the customer's perspective, the website must assist them in finding the solution to their problem without having to search online for hours or going into

multiple tech shops. Users need to create an account and sign in to the website when submitting their forms or replying to other people's queries.

The system is simple for the user to understand without any complications or delays. This is to avoid customers being discouraged from using the website.

2.1.4 Environmental requirements

For each user's privacy, the application ensures that emails and passwords are stored securely. The data is safely saved in PHPMyAdmin where the data is kept from harm.

If anyone experiences any difficulty with the website or has any questions, there is a Contact Us page on the website which users can fill out.

2.1.5 Usability requirements

The application is simple and easy to use for every user as the site has a very smooth design. It is important that it has this as avoiding congestion and overloading is essential.

2.1.6 Non-Functional Requirements

Performance/Response time requirement

The aim was to create an app that will have rapid response times while still maintaining a high quality standard. This was achieved.

Availability requirement

The application is deployed on Cloud9 which makes it live for everyone to use online. Therefore, the website is available to anyone with an internet connection. The web app is deployed on a secure server where it is live continually, securely and consistently.

Recover requirement

There is a backup of the website's code in case of disaster. I have been pushed the code to GitHub after every significant change. I also have the code stored in a

non-live version also so that I could always go back to it if something ever went wrong with the live version. The code is on my laptop and external hard drive.

Robustness requirement

The website is designed to cope with any errors during execution and cope with erroneous input. Cloud 9 insures robustness for the website.

Security requirement

The website has a secure login system to post forms which prevents access of trolls or bots. As there is no payment required at any stage on the website, I don't' have to worry about any potential payment fraud.

Reliability requirement

The website is consistent throughout and is the same for every individual user. It is essential that it remains up and does not crash.

Maintainability requirement

Ensuring the website is up to date, keeping users informed of any new bugs or potential virus' going around and how to prevent them. The website is maintained continuously throughout.

Extendibility requirement

There is some potential for extendibility in the project. For example, the website could also be made as an Application for iOS and Android in the future. Sites like Stack Overflow and Bugzilla may want to work alongside it also.

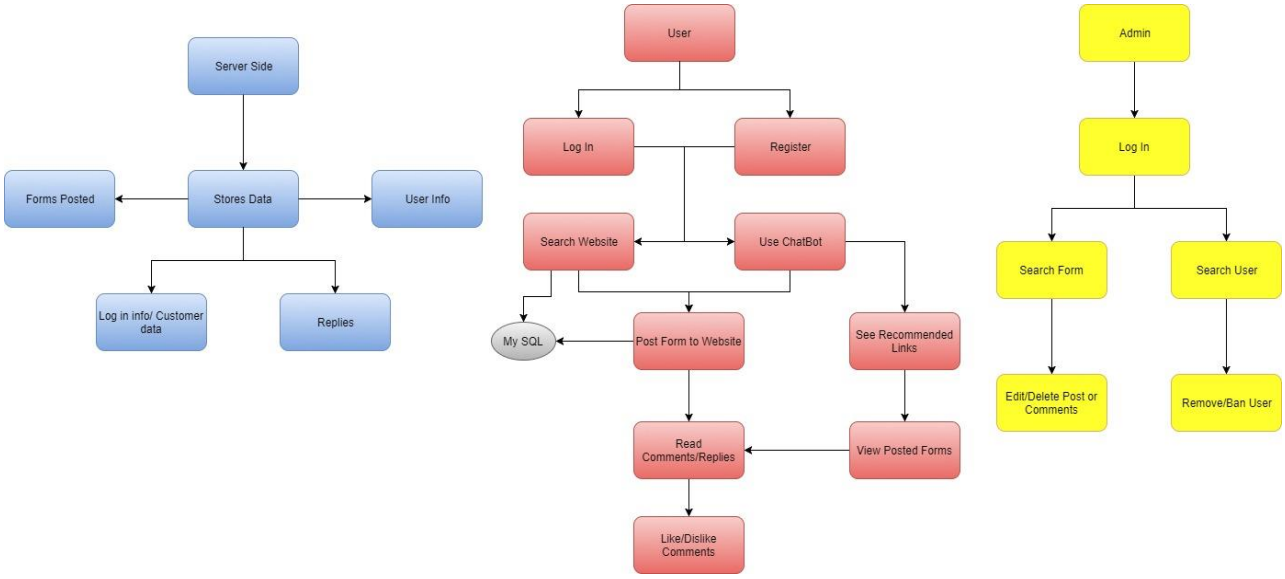
Reusability requirement

The application can be used for a number of other potential websites. Features like a login system, a Chatbot and forms are useful for other websites.

2.2 Design and Architecture

Here is the block diagram that was created using draw.io which outlines the system's structure. The diagram has been separated into three different sections,

user, admin and server side. This architecture was chosen as it is easy to read and nicely displayed. It shows how the application will work and what it will be doing.

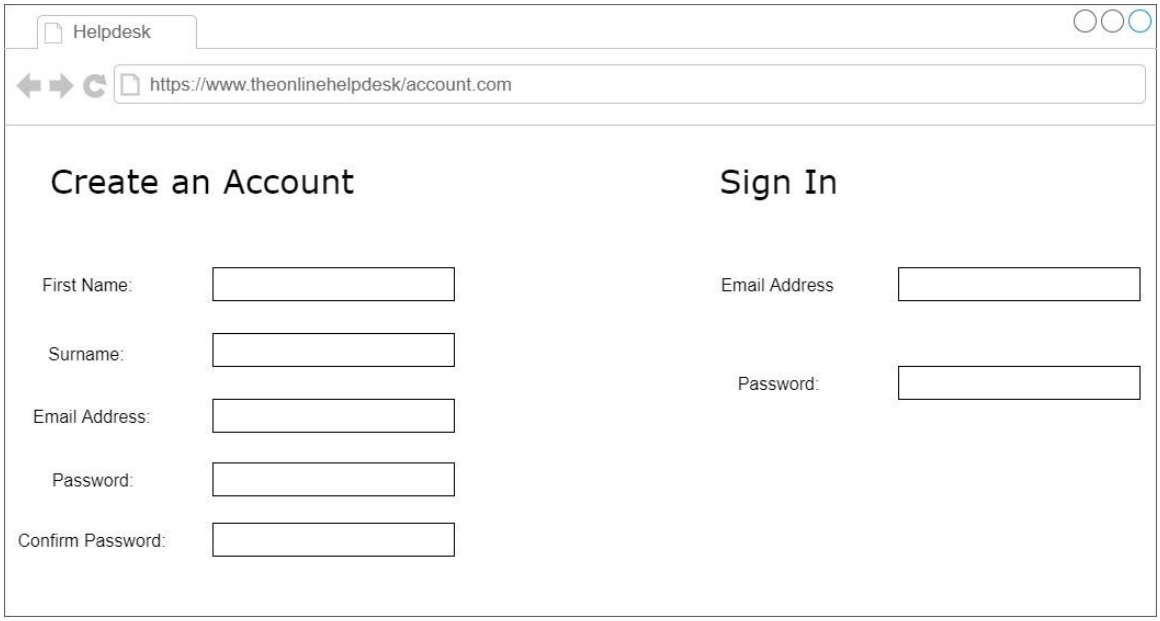


2.3 Graphical User Interface (GUI) Layout

Sign in page (First Page)

This page will be displayed once the user arrives onto the website and goes to sign in or create an account. The information they provide will be stored and encrypted in the database.

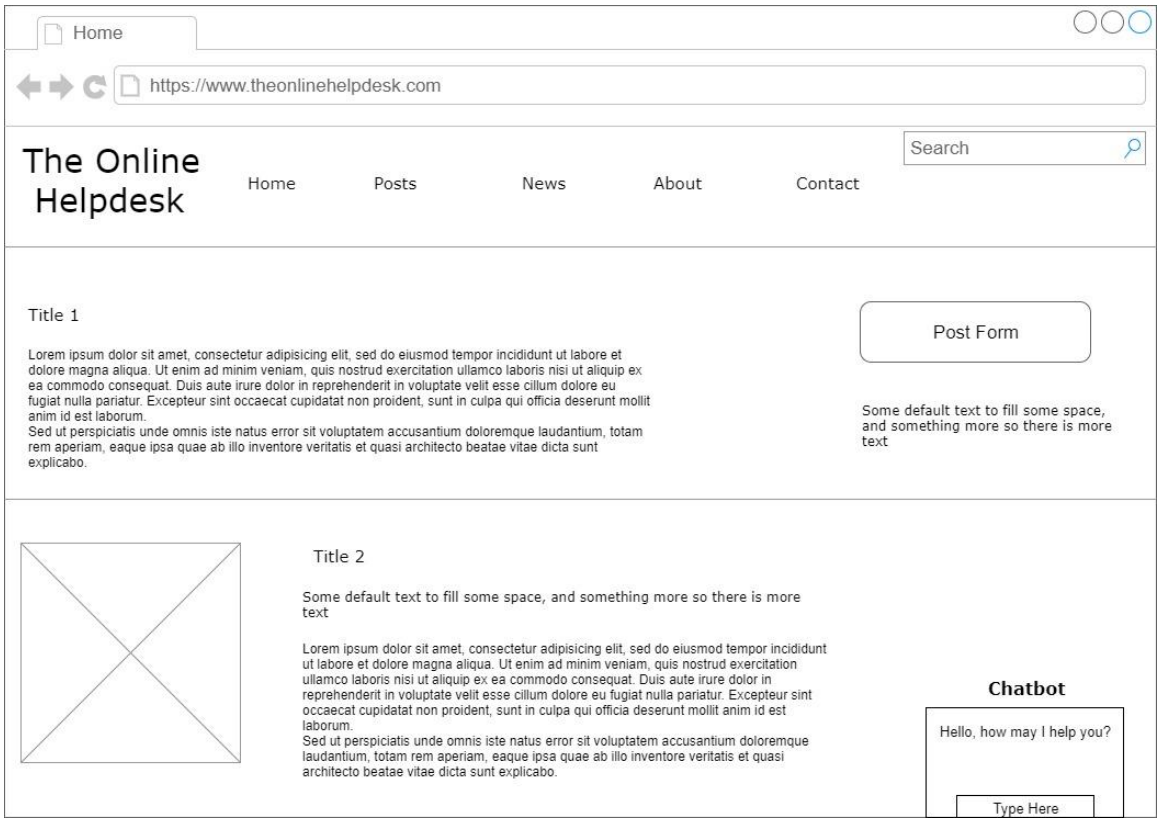
This was changed slightly as the sign up and login forms are on separate pages, however the idea of it remained the same



The index page (After signing in)

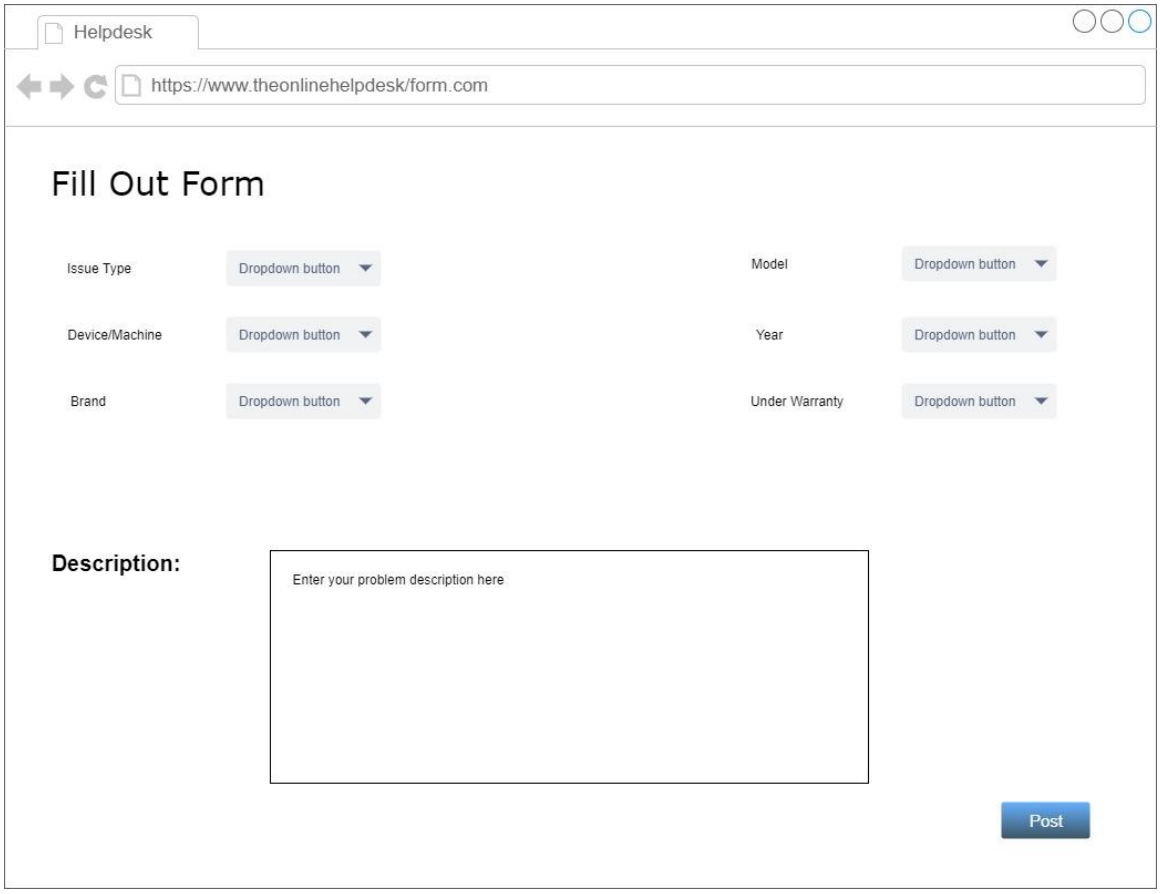
After signing in, the user is presented with the home page. Here, the user can post forms, utilise the Chatbot, view other posts and navigate between pages. Any part of the website can be reached from this point.

This was also changed as I decided to add in a landing page to the website. There is still some similarities however.



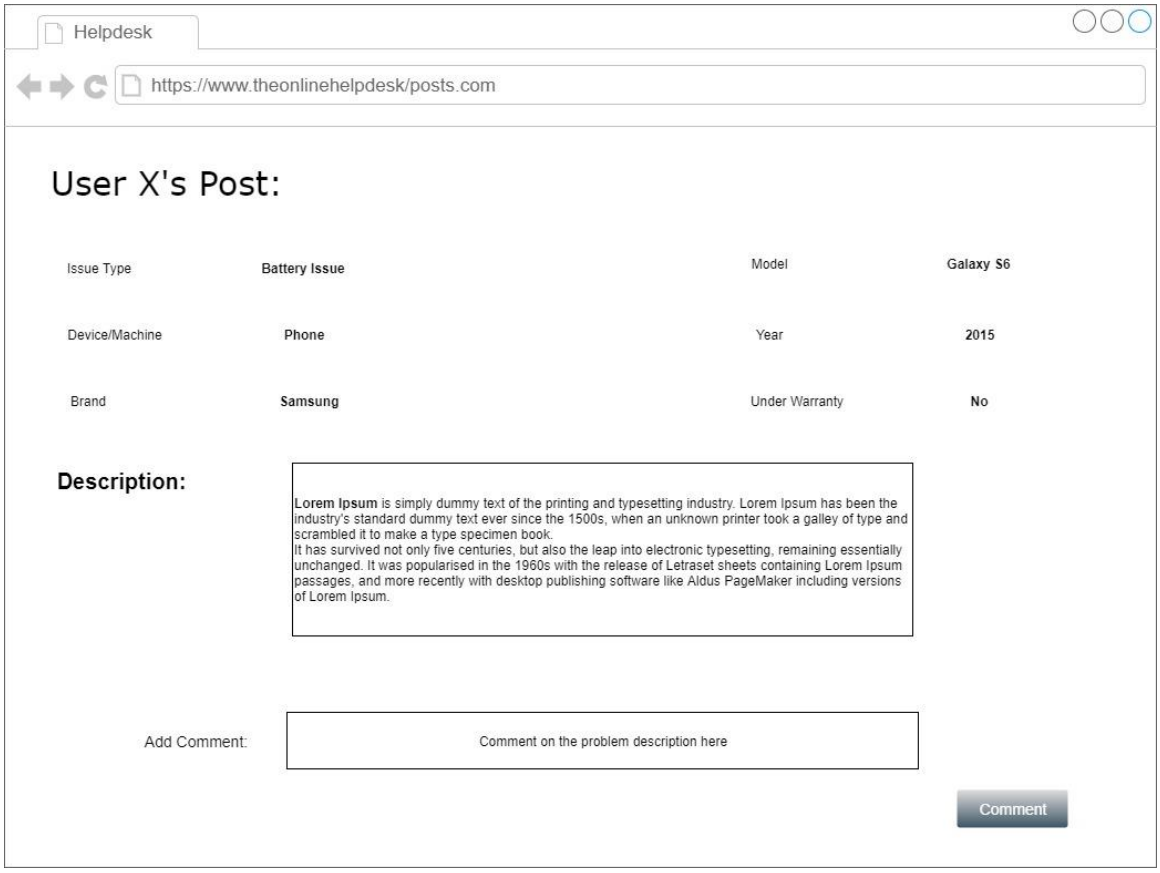
Post Form (After Index Page)

Once the user clicks on the ‘Post Form’ button, the user is brought onto the page to fill out the form. Here, the user fills out all information regarding their issue and can then post it to the website.



Post Comment (After viewing post)

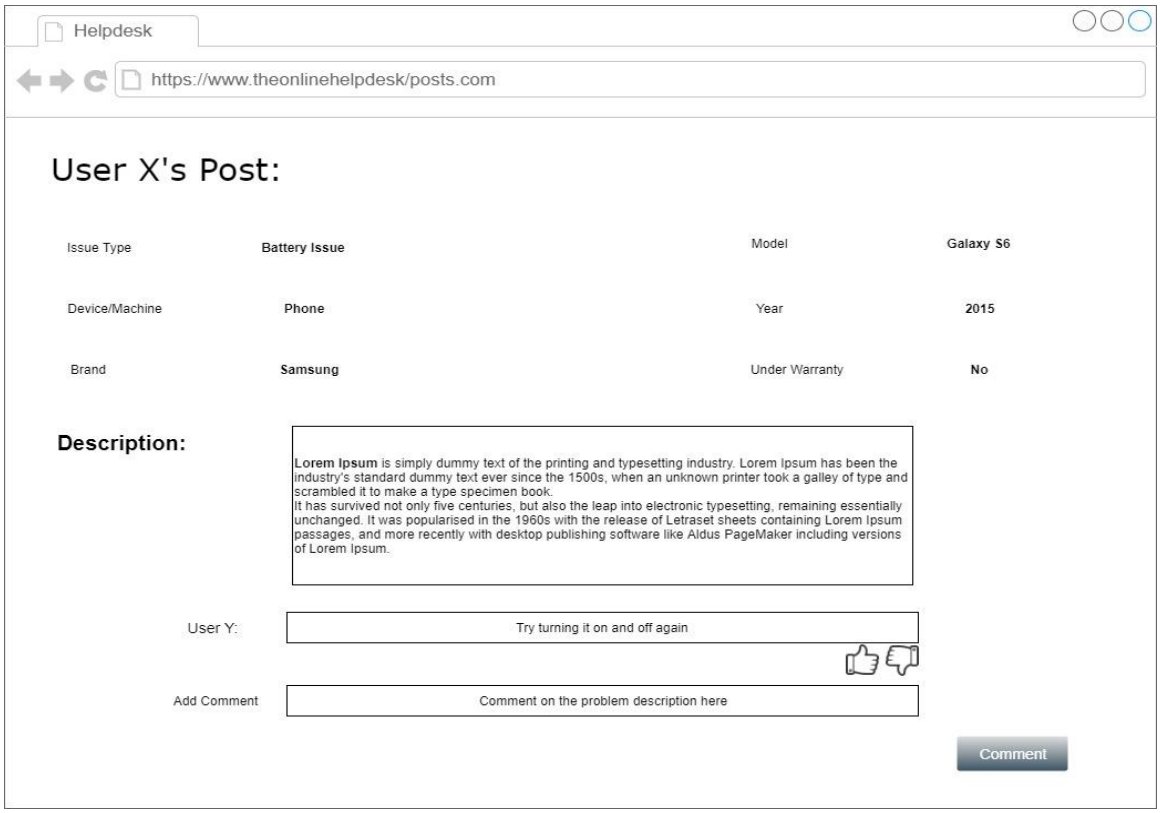
After viewing the post, the user can then post a comment or reply to another user in the comments section.



Like/Dislike Function (After reading the comment)

Once seeing the comment posted, the user can then like or dislike the comment to indicate whether or not it was helpful. Other users can then see that this comment has either been helpful or unhelpful for this problem.

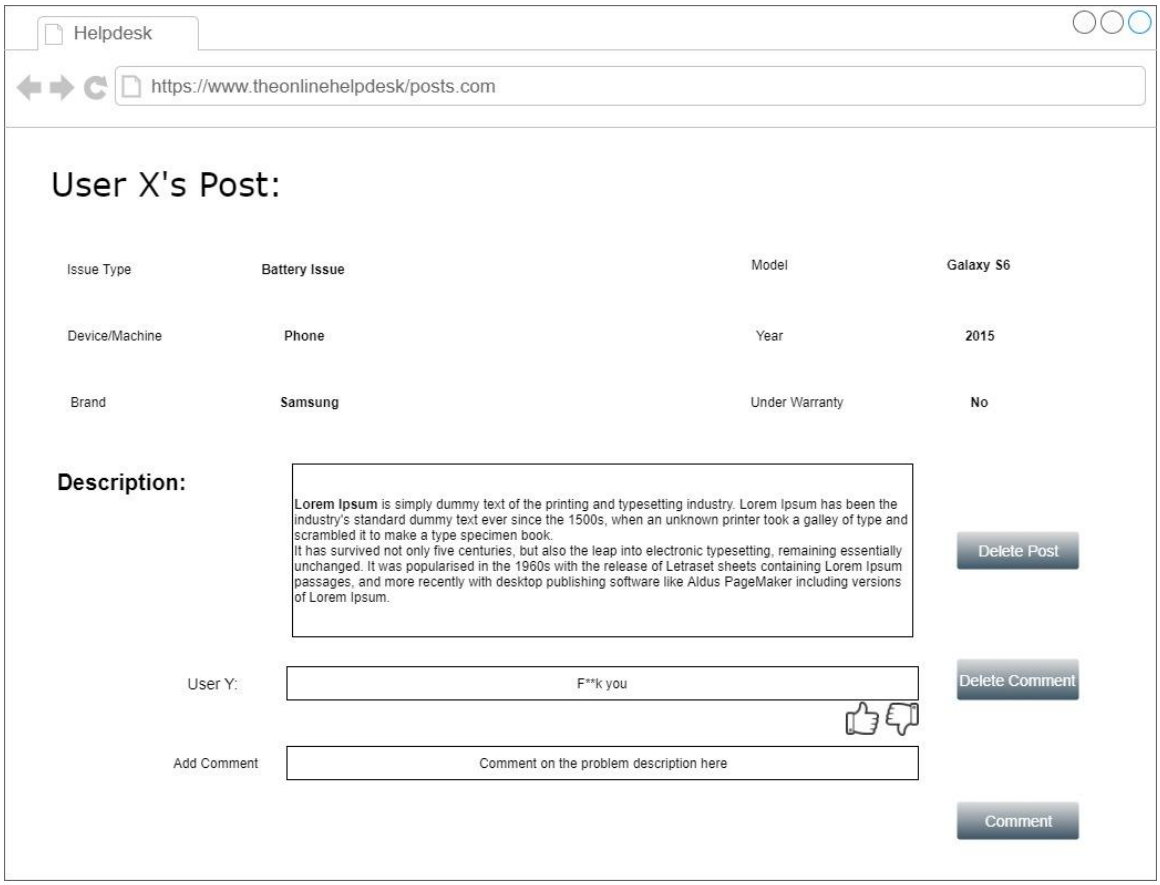
As said before, I didn't manage to get this function added to the website but plan to in the near future



Edit/Delete Posts & Comments (Signed in as admin)

If there any inappropriate posts or comments, the administrator can edit or delete these and take appropriate action against the user.

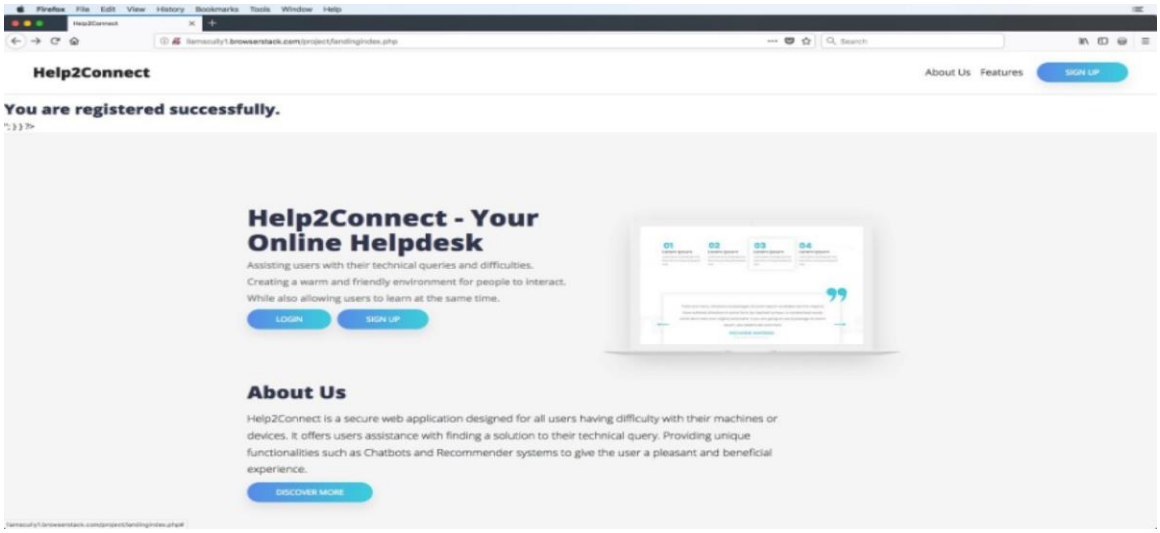
As said before, I didn't manage to get this function added to the website but plan to in the near future

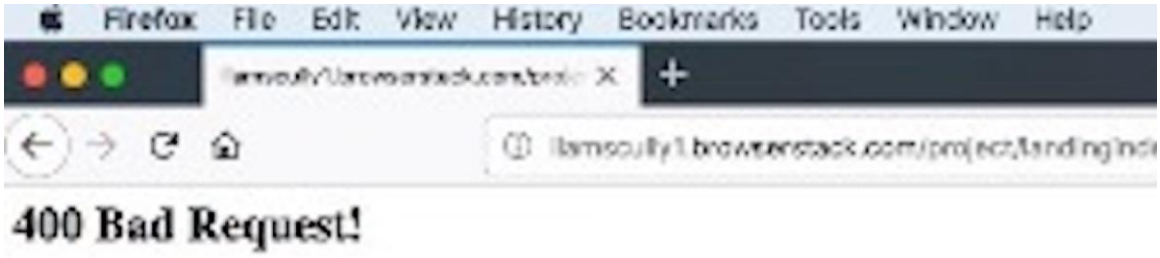


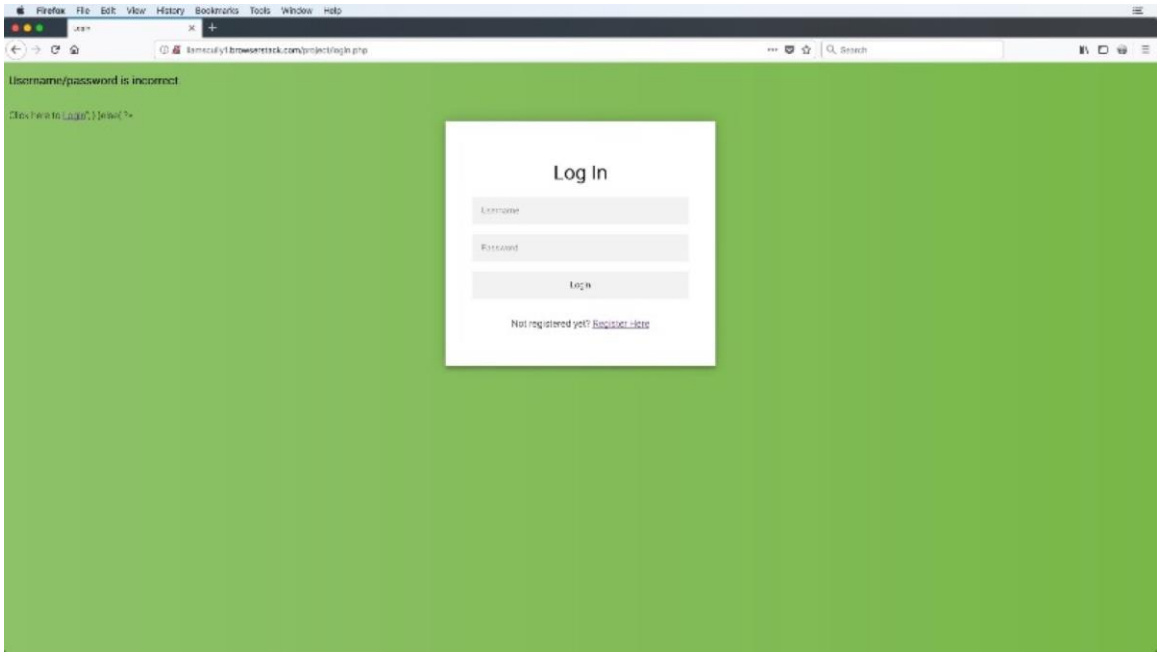
2.4 Testing

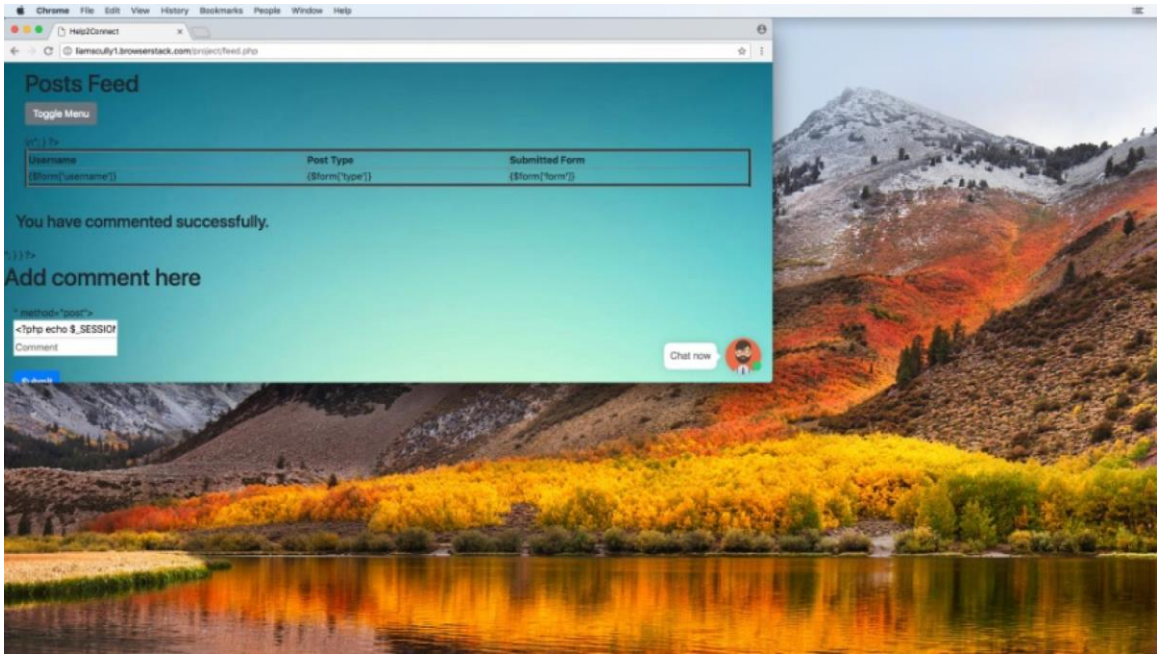
Describe any testing tools, test plans and test specifications used in the project

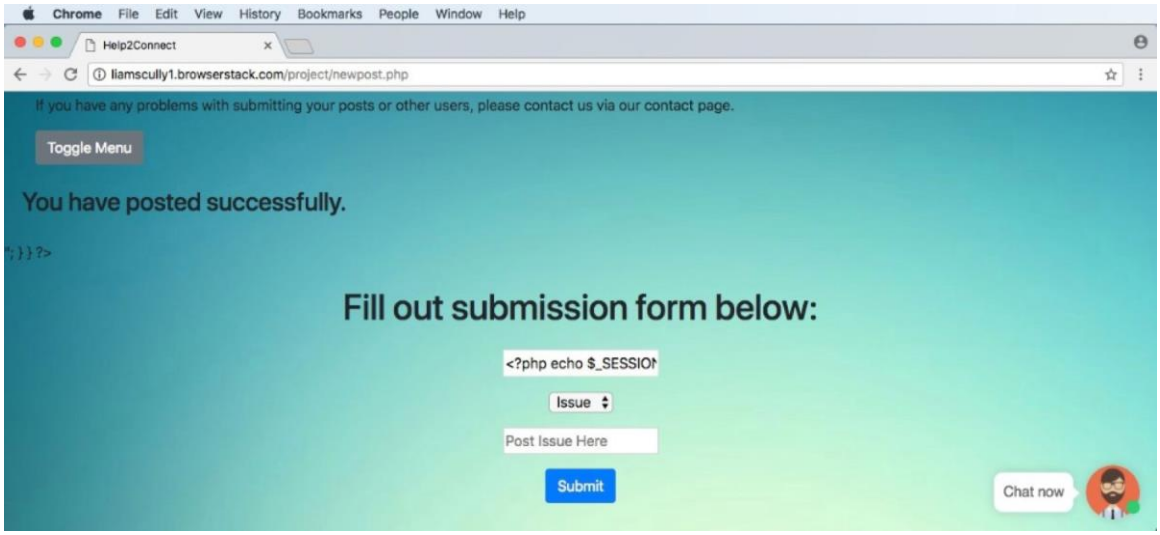
I used Browserstack to test my site locally. I made an account on the site and it allowed me to view my website as if it was live on all browsers. It also checked any errors in the script and showed where they were. This allowed me to locate any errors in the website, find them and fix them. To use Browserstack, I installed composer and other PHP testing libraries.






Username/password is incorrect
Log In
Login
Not registered yet? Register Here


Posts Feed
Toggle Menu
Username
Post Type
Submitted Form
You have commented successfully.
Add comment here
Comment
Chat now



2.5 Customer testing

For customer testing, I got some friends and family to test out the website. They provided me with important feedback to give me a better idea how customers would like the website to be.

From areas such as the background, form layout, index pages, registration and more, I learned a lot from each test. I continuously took on their feedback and made changes to the site. It ultimately gave the application a much better look.

On some occasions, the tests even found issues and flaws with the website. For example, being able to change the username when posting a form or comment. After users signed in, they could put in any username when submitting a post/comment. I then ensured that it was not possible to change the username after signing in by setting that piece of code to a read-only.

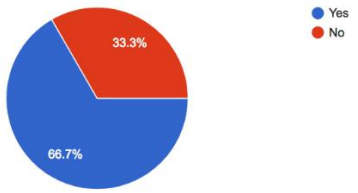
I also made a survey to get an understanding of whether or not people would be interested in this application. I made sure that they consented to taking part in the survey first of all, and then got them to answer the following questions:

1. Do you consent to being part of this study? Yes/No
2. Do you often have issues with any of your tech devices or machines?
3. Do you know someone in the family who does?
4. How often do you spend online looking for solutions?
5. Would you find this application helpful?

Of the 12 responses that I got back, the results were as follows:

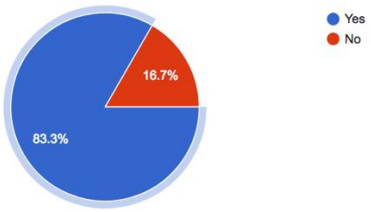
Do you often have issues with any of your tech devices or machines?

12 responses



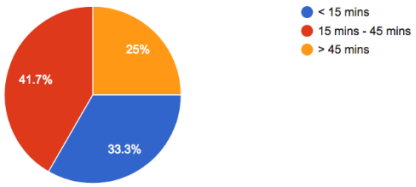
Do you know someone in your family who does?

12 responses



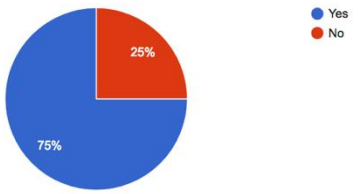
If you have answered yes to Q2 or Q3, how long would you spend online looking for solutions?

12 responses



Would you find this application helpful?

12 responses



3 Conclusions

3.1 Advantages

There are many advantages of Help2Connect as it can help so many people with their technical issues and queries. The site is simple to use, easy to understand and helpful to people of all ages. It can improve people's knowledge of IT and keep everyone up to date with the latest software glitches on every platform. The website also creates a community for users to interact with each other and give each other support.

3.2 Disadvantages

If people have issues accessing the internet on their machine, they are not able to get onto the website to post the issue.

While there isn't a lot of competition, there are sites such as StackOverflow and Bugzilla which some users may prefer to use.

3.3 Opportunities

The company has plenty of opportunity to make money through sponsorships, advertising products for different devices and different software platforms. Also, as displayed below in the Further Development section, they are many possibilities for the website to expand in the future.

3.4 Limits

There aren't many limits to the website as it supports general IT issues and has plenty of opportunity to grow over time. The social media aspect to it is limited however as you cannot view other people's profiles or follow individual users.

4 Further development or research

Overtime, there are many possibilities for the system to evolve as it progresses. The website should be useful for all ages and as time goes on, more and more people will begin to make use of it. There's no reason to say that it couldn't be made into a phone application in the future either.

The website could also be separated into different sections for Windows, Mac, Android and iOS as it grows in the future. Potentially also having video tutorials for users to view and understand what they need to do.

There is the possibility for the website to be implemented into a particular organization. For example, colleges or large companies may use it for their own internal system for their employees.

The software could also be used to outsource IT support and assist businesses who can't afford to pay for their own.

There could be a section on the website where it allows users to purchase hardware for their machines possibly. The layout and structure of the website could also be used for something completely different in the future.

5 Appendix

5.1 Project Proposal

Project Proposal

Online Helpdesk

Liam Scully, x14485488, x14485488@student.ncirl.ie

BSc (Hons) in Business Information Systems

09/10/17

Module Co-ordinator: Eamon Nolan

Project Supervisor: Paul Stynes

Objectives

(Max. 1 Page)

An Online Helpdesk

Project Overview:

The objective for this software project is to create a fully functional online helpdesk to assist people in their daily struggles with technology. The idea is to save people time, create a community and increase everyone's level of IT knowledge.

Technology is growing at a rate of knots these days and it doesn't show any signs of slowing down. People of all ages are using smartphones, tablets, laptops, computers etc. everyday.

Unfortunately, technology isn't perfect and many people suffer issues with their devices on a day to day basis. Users have issues such as a draining battery, broken screens, a damaged motherboard and other hardware problems. They also struggle with software glitches, devices not turning on and simply not knowing how to use their machine.

An online helpdesk would be a huge help to these people instead of them searching for hours on the internet or travelling from place to place to get a solution to their problem. With the online helpdesk, people can simply fill out a form of what their issue is. They will then be given advice on the trouble that they are having either via comments or useful links.

Users can simply create an account and login to the website. Once this is done, they post any problems that they are experiencing or they can comment on other users issues to give them support.

The useful links will be very helpful for those wanting an immediate solution or for people looking for a shop that'll repair their device. Example: If someone is having an issue with their iPhone, an Apple Premium Reseller would be suggested as a place to go to get their iPhone fixed.

Background

(Max. 2 Pages)

Previous Ideas:

At the beginning of the semester I looked to get an idea for my project. I thought of ideas such as a holiday website, a social network visiting Canada website and an online helpdesk.

I was torn between the visiting Canada website and the online helpdesk which both, I felt had potential.

There was more interest in the former idea as it is something I would like to do in the future. The online helpdesk on the other hand was inspiration I took from my internship which was IT Support.

Finding Inspiration:

In my internship we supported companies who outsourced their IT to us so we took care of it and managed it for them. I took a lot of the calls on the helpdesk and logged the tickets for them. My idea was to have an online helpdesk where people can fill out a form and post it to the website. Here they can get useful links to their issues, get support from other users or be given options as to how to sort out their technical problems.

The Pitch and the Idea:

I originally chose to go with the visiting Canada idea but after the pitch, the lecturers felt that the online helpdesk would be the better plan. They gave me some guidance as to how I could develop the helpdesk further and make it more complex. I now know what direction I'm heading and have a good sense of what I'm looking to achieve.

I feel that an Online Helpdesk would be a big help to today's world. More and more people are using technology, many of which are inexperienced and are getting frustrated with problems.

Once knowing what I was going to do as my software project, I looked into what technologies I would use. I'm currently planning on using PHP for coding the website and cloud 9 as a host.

In the next coming weeks I will begin to look for templates and start coding the website.

Technical Approach

Brief description of the approach to be followed (Max. 1 Page), Research, literature review, requirements capture, implementation etc…

Research:

Websites such as Stack Overflow and Bugzilla share similarities with my idea but are not quite the same. I intend to use Stack Overflow and Bugzilla to compliment my website with the recommendation system instead of looking at them as competition.

Technology:

The website will be coded using PHP in Cloud9 and pushing it to GitHub. My reason for this is that I have experience with using PHP in past projects and will work well for my social media aspect of the website. I will also be able to push the project to GitHub through Cloud9 quite easily as the 2 websites work well together and I have done so in the past.

Requirements:

The requirements for the website are as follows: The user must be able to create and login to their account on the website. If possible, I will have an option to sign in through Google, Facebook etc. The user must then be able to create their own profile, write up a bio, talk about their experience and look at other profiles.

An essential part of the project is to allow users to fill out an issue submission form and post it to the site. This will involve using checkboxes, radio buttons and text fields to describe the problems they're experiencing.

Once submitting their query, the user should then receive ‘recommended links’ to help find the solution to their problem. This will be done using key words with a recommender system.

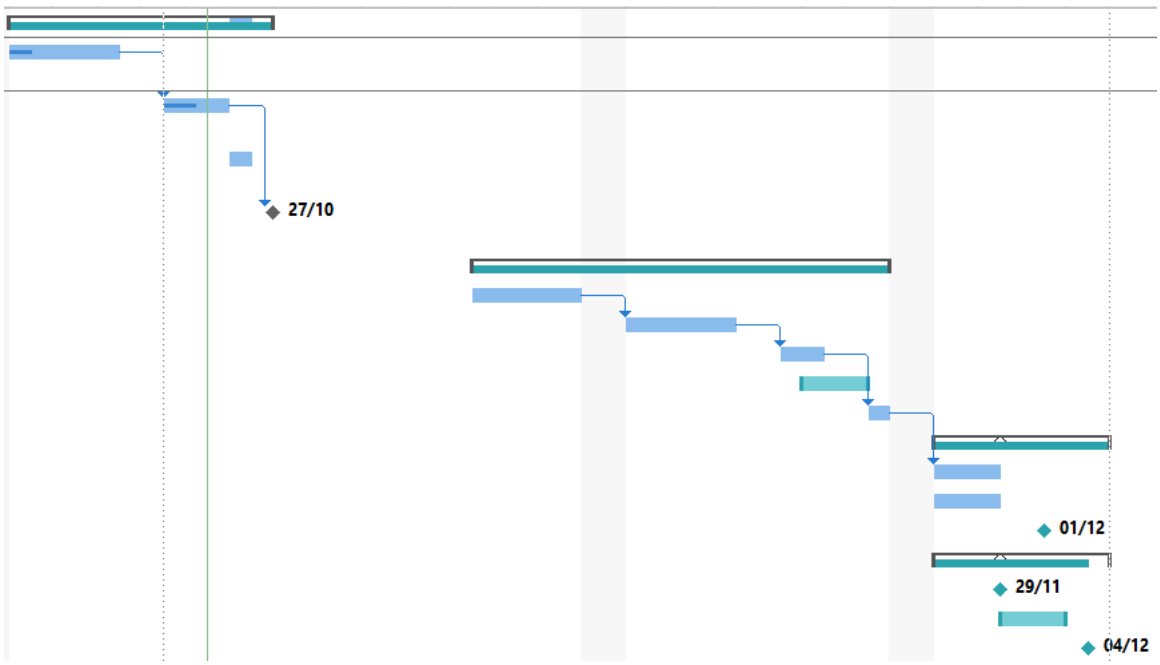
Other users will also have the capability to see the form submitted and reply with suggestions to the issue being experienced. People will then be able to like/dislike the recommendations that they suggest.

For complexity and difficulty, I am looking to implement an AI Robotic Chat Bot that users can communicate with when signing into the website.

Project Plan

Task Mode	Task Name	Duration	Start	Finish
Manually Scheduled	**Project Proposal**	**10 days**	**Mon 16/10/17**	**Fri 27/10/17**
Auto Scheduled	Objectives & Background	1 day	Mon 23/10/17	Mon 23/10/17
Auto Scheduled	Technical Approach and Project Plan	2 days	Wed 25/10/17	Thu 26/10/17
Auto Scheduled	Technical Details & Evaluation	1 day	Thu 26/10/17	Thu 26/10/17
Auto Scheduled	Project Proposal Complete	0 days	Fri 27/10/17	Fri 27/10/17
Manually Scheduled	**Requirements Spec**	**15 days**	**Mon 06/11/17**	**Fri 24/11/17**
Auto Scheduled	Begin Requirements Spec	5 days	Mon 06/11/17	Fri 10/11/17
Auto Scheduled	Main Contents	5 days	Mon 13/11/17	Fri 17/11/17
Auto Scheduled	Conclusion	2 days	Mon 20/11/17	Tue 21/11/17

Manually Scheduled	Final Touches	3 days	Tue 21/11/17	Thu 23/11/17
Auto Scheduled	Complete	1 day	Fri 24/11/17	Fri 24/11/17
Manually Scheduled	**Project Prototype**	**6 days**	**Mon 27/11/17**	**Mon 04/12/17**
Auto Scheduled	Begin Prototype	3 days	Mon 27/11/17	Wed 29/11/17
Auto Scheduled	Layout and Ready	3 days	Mon 27/11/17	Wed 29/11/17
Manually Scheduled	Complete Prototype	0 days	Fri 01/12/17	Fri 01/12/17
Manually Scheduled	**Mid-Point Presentation**	**6 days**	**Mon 27/11/17**	**Mon 04/12/17**
Manually Scheduled	Start Presentation Slides	3 days	Mon 27/11/17	Wed 29/11/17
Manually Scheduled	Main Contents	3 days	Thu 30/11/17	Sat 02/12/17
Manually Scheduled	Finish Presentation & Present	0 days	Mon 04/12/17	Mon 04/12/17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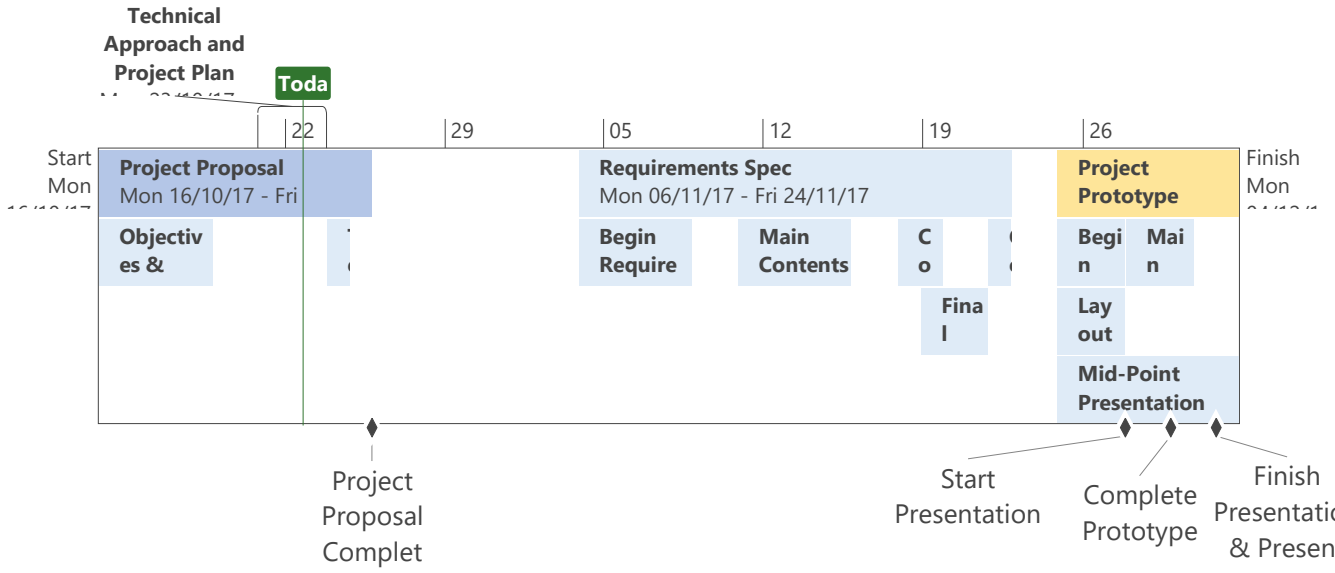
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Technical Details

Implementation language and principal libraries

Language

The languages that will mainly be used in this project will be PHP (Personal Home Page) to code the website and CSS (Cascade Style Sheet) to design it. I will first look for a template to use for the layout of the website. Once I've done so, I will download it and open it in Cloud9. Having done that, I'll remove any unnecessary files and content.

Assuming that the template is in HTML format (Hypertext Mark-up Language) I will then convert it into PHP and begin making changes to the code.

Libraries

The libraries that I will have in the project will be as follows:

Online Helpdesk – The main folder which will hold all the sub folders of the project.

CSS – This library will contain all the CSS files for the website's design.

Fonts – Includes all the fonts used by the website. This and the CSS folder should come with the template.

Images – This library will consist of all the images that will be used in the website such as the logo.

Web Pages – All of the web pages will be found in the main library in Online Helpdesk.

Evaluation

It is important to continuously test and evaluate the system and ensure that all aspects of the website are working as intended. Any errors that occur are best being solved as soon as possible. If an error occurs, it will need to be fixed straight away as it can cause a lot of problems down the line.

The purpose of the testing is to evaluate the system's compliance with the specified requirements. I will continuously evaluate the system with an end user by having people in the class testing different areas of the website as the website progresses. I intend to use Bootstrap for real technical data.

Integration tests will also be run as individual software modules will be combined and tested as a group. It will occur after the unit testing and before the validation testing.

5.2 Project Plan

Task Mode	Task Name	Duration	Start	Finish
Manually Scheduled	**Project Proposal**	**10 days**	**Mon 16/10/17**	**Fri 27/10/17**
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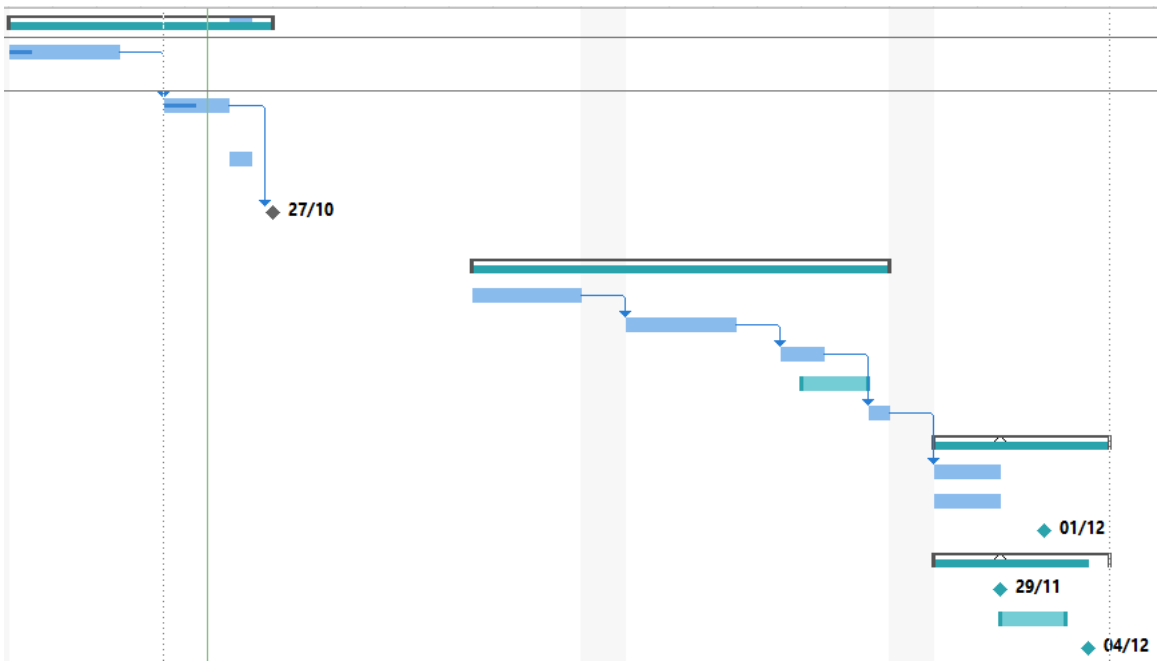
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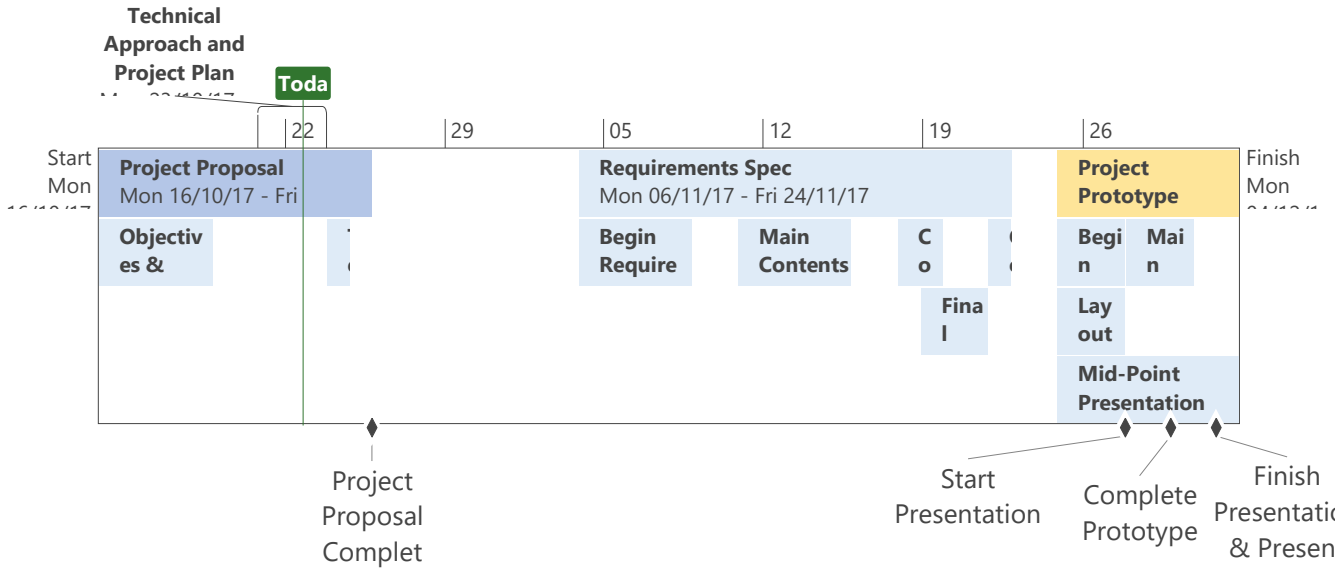
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Finish Presentatio & Present

5.3 Monthly Journals

September Journal

At the beginning of the month I looked to get an idea for my project. I thought of ideas such as a holiday website, a social network visiting Canada website and an online helpdesk. I was torn between the visiting Canada website and the online helpdesk which both, I felt had potential. There was more interest in the former idea as it is something I would like to do in the future. The online helpdesk on the other hand was inspiration I took from my internship which was IT Support. We supported companies who outsourced their IT to us so we took care of it and managed it for them. I took a lot of the calls on the helpdesk and logged the tickets for them. My idea was to have an online helpdesk where people can fill out a form and post it to the website. Here they can get useful links to their issues, get support from other users or be given options as to how to sort out their issue.

I originally chose to go with the visiting Canada idea but after the pitch, the lecturers felt that the online helpdesk would be the better plan. They gave me some guidance as to how I could develop the helpdesk further and make it more complex. I now know what direction I'm heading and have a good sense of what I'm looking to achieve.

Once knowing what I was going to do as my software project, I looked into what technologies I would use. I'm currently planning on using PHP for coding website and cloud 9 as a host.

In the next coming weeks I will begin to look for templates and start coding the website.

October Journal

Since my last journal entry I have since made good progress with my project.

At the beginning of the month I started working on my Project Proposal. In this I looked at and talked about the objectives of the project and what it was I was looking to achieve. I then went into the background of the idea, how I came up with it and explained other ideas that I had before going ahead with the Online Helpdesk. After that I discussed the technical approach that will be taken for the project. For the technical approach I wrote about the research, the technology and the requirements needed.

I then used Microsoft Project to make a Project Plan for myself, inserting all of the key deliverable dates for the year. This will help keep me on track for the semester and ensure I don't fall behind. I also looked at the technical details for the website which was the implementation language and the principles libraries. I then ended the project proposal with the evaluation. This was how I would evaluate the system by using real technical data and end users to continuously test the project.

On Monday the 23rd of October I met with Paul Stynes, my supervisor. We discussed my idea and ways to make the project more complex to ensure I achieve a 1:1 at the end of the year. We arrived at the conclusion that implementing a robotic Chatbot and a recommender system would be the best route.

Before reading week started, I downloaded a template for the website and began personalizing it for the Online Helpdesk. I ran the template in Could9 and pushed it to GitHub. I also attended Sam Cogan's lecture in which he went through the basics of using GitHub to ensure we have our project work saved elsewhere.

November Journal

November has been a very busy month with many assignments due but I have managed to make decent progress with my Software Project.

At the beginning of the month, I finished my Project Proposal and began working on my Requirements Specification. In which, I began the design of the website by creating GUI's on Draw.io and getting an understanding of how the website would look. I also made Use Cases and a System Architecture to display how the website would work.

I then started to fill in the technical report document which included the Project Proposal and pieces of the requirement specification document. I also inserted the monthly journals and my project plan diagrams.

At the end of the month, I finished of the Requirements Specification and Technical Report. I am now starting to prepare for my Mid-Point Presentation on Monday @ 9:00.

December & January Journal

December and January were hectic months with many assignments due along with the Midpoint Presentation and the end of the semester exams. As well as the presentation, I also needed to finish the Requirements Spec and Technical Report and upload them.

After uploading the documentation, I prepared the presentation and had a template made for the website. As my presentation was first, on Monday the 4th of December @ 9.00am, I spent the first few days of the month planning on how I would present for the Mid-Point.

On the morning of the 4th, I presented in front of my supervisor Paul Stynes and second marker Patrick Delaney. Overall the presentation went well and I felt that they were satisfied with the project and how it was going. They gave me a few areas to look at, parts of the project which I need to put some more thought into and possibilities for the future. It was very insightful and gave myself a good indication on what I would do in the future.

The rest of the month I spent studying for exams and completing assignments. I took a little rest over the Christmas break and then focused on my exams at the start of January.

After the exams were finished, I began working on the website again and looked into areas that I needed to work on. At the end of the month, the second semester of college began.

February Journal

At the beginning of February, I focused mainly on getting back into the new semester. However, I continuously researched landing pages, login systems, web crawlers, etc.

I also started looking into new templates and bootstraps to use for the website as I felt that there were appropriate pages out there.

I changed the name of the project from ‘The Online Helpdesk’ to ‘Help2Connect’ as I felt it was catchier and more attractive.

I attended the software project classes where we looked at how the showcase profiles and how they are done. We all got our pictures taken for the profile and uploaded them.

I filled in the 50-word profile, got it approved by Siobhan, filled in all of technologies and completed the showcase profile.

I also had my CV done by Helen, to give it a professional look.

March Journal

March was a very productive month for the software project as I spent a lot of time on it over the 2 week break. I made good progress on the website as well as working on assignments. The reading week and Easter week gave me a lot of time to catch up on work and further my project.

Throughout the 2 weeks I got a new template for my landing page and designed it accordingly. I then successfully setup my register and login system using PhpMyAdmin.

I was able to connect all of the pages in Cloud9 and leave myself in a good position after the break.

I also made good headway on other assignments and study for tests.

March was a good month for my college work.

April & May Journal

At the beginning of April and throughout, I mainly focused on my upcoming second semester exams which ran from the 23rd – 28th of April. I had to put my software project on the backburner for the time-being. After I finished my exams, I then began working on the project again.

Also at the start of April, I met with my supervisor Paul Stynes. We discussed what was left to be done with the project and how I would go about it. It gave me a clearer indication of what I needed to do.

From the beginning of May until now I have been working on my Final Year Project. I have made a lot of progress this month as I've finished the registration and login systems with connecting to PHPMyAdmin.

I've also added in new functionalities such as posts, live feeds, user comments, contact us form, a Chatbot and more.

I completed the poster for the showcase also, only needing to get it printed off now.

I am currently working on the final report and the completion of the website.