National College of Ireland

BREW YOUR BEER

FINAL REPORT

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Declaration Cover Sheet for Project Submission

SECTION 1

Name: Neil Gallagher
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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 assessment is entirely my own work.

Signature: Neil Gallagher Date:08/05/2017

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1 Introduction

1.1 Project Overview

The purpose of this project was to develop an online web application that creates craft beer and handles orders. The application will be geared towards customer customisation of their own craft brew. From the taste to the bottle it is in. I want the user to easily navigate the site and orders to be quickly processed. We will allow the customer to create their own personal profile, create beers that they can view and send updates periodically via email. Customers can also review products that have already been made by different users.

Throughout this report we will look at the technologies used to build this project, the development stages, a survey carried out, functional requirements, non-functional requirements, implementation, testing and GUI screenshots giving you a clearer picture of my project.

1.2 Background

The background of this project began back in August while coming up for project ideas. In semester one of this year, I knew this was a big year ahead for me and I needed to come up with a good project idea. How this idea came about was while meeting with a good friend of mine. He presented his business idea to me and I asked could I be able to apply this to my final year project. He agreed and we consulted on details of the project and what needs to be in the application. This idea allowed me to go in to my project pitch confident and prepared. The lecturers intently listened to my idea and thought it had great potential. They accepted it. Once I got accepted I was then able to start.

1.3 Project Objectives

The main objectives for this project was to create a new application that gives the beer consumer a chance to create something of their own without the hindrance of purchasing brewing equipment and brewing in their own home. We give them the easier and simpler option of just signing up to our application and giving them the options creating something new at a small price.

2 Requirement Elicitation and Analysis

2.1 Introduction

During the idea phase I struggled to come up with something substantial that interested me. I met with a good friend of mine and we talked about his business ideas and one in particular stood out to me. It was this project. The Brew your beer idea, he ironed out what he would like to have in an online application and I knew the project had a lot of substance and would be really cool to build. The concept proposed was building an online web application that will give users the ability to make their own craft brew. We both wanted the

application to be simple and easy to navigate allowing anybody of any age to use this website.

We both feel that creating something like this which has never been done for regarding brew making at the click of a button would be a fantastic tool and great for growth of craft beer makers. I consulted with Daryl and asked him directly what he wanted from this application. Below you will find a survey analysis which gives us further input into what the market is like, if they would like something like this and even what their favourite drinks are.

2.2 Aims

My aim for this project was to build a responsive website that will allow a user to sign up to our website then login and browse through the collections of readymade craft beers or create their own personalised drink from the taste right down to the bottle logo or text.

The site should be easily navigated and run completely without any errors. There should be security steps in place to ensure our users are of age. Once you create your profile you should be able to edit details later.

2.3 Technologies used

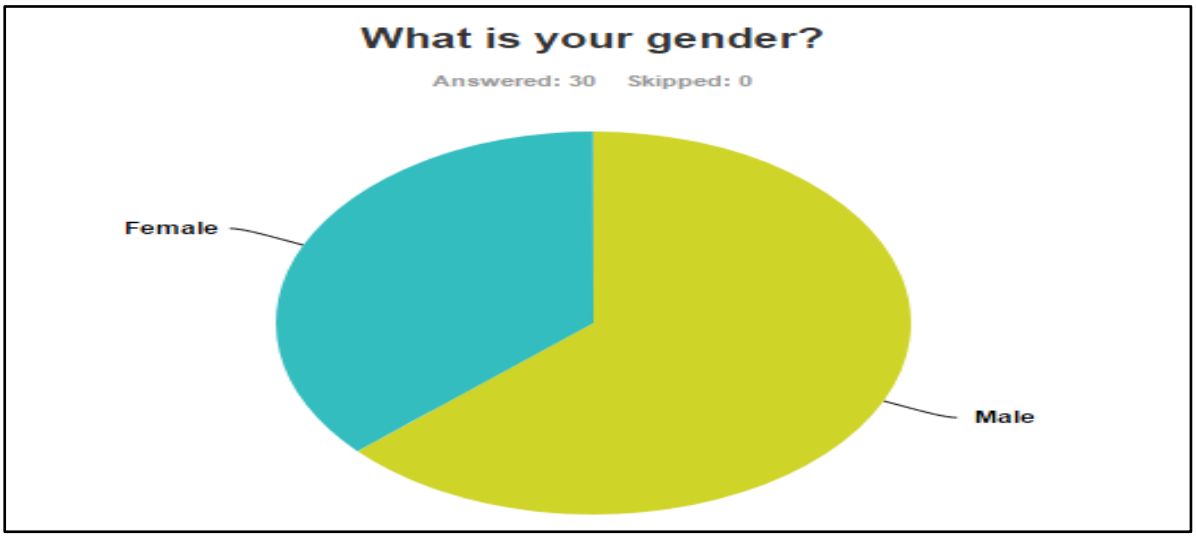
The technologies that were used in my final build of this project were:

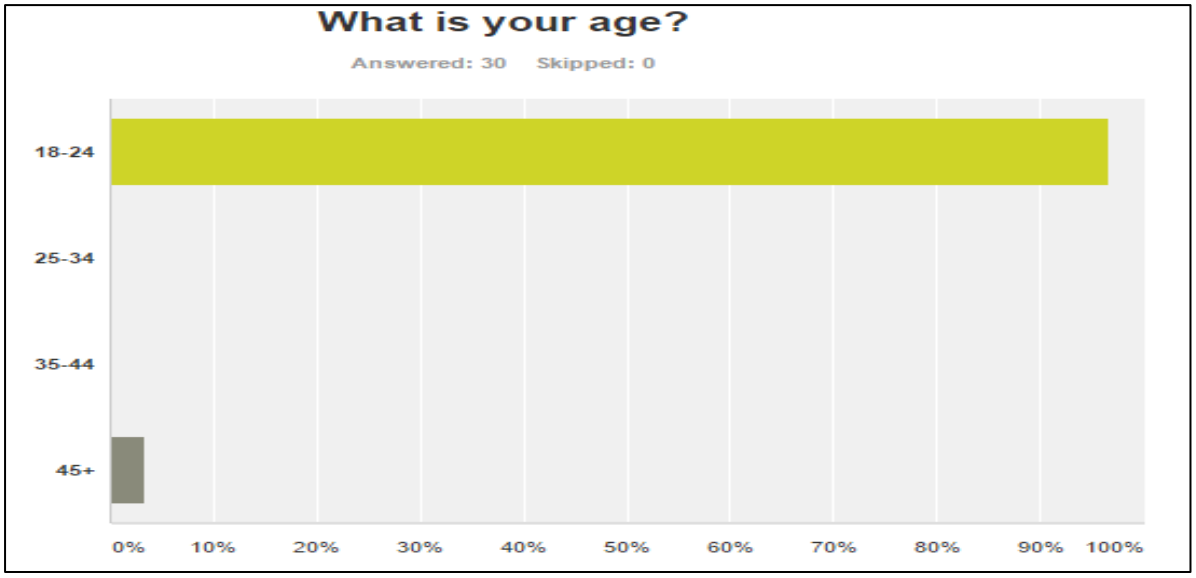
- HTML
- JAVA
- JavaScript
- CSS
- MySQL
- Strut framework
- JQuery

3 Survey – Analysis

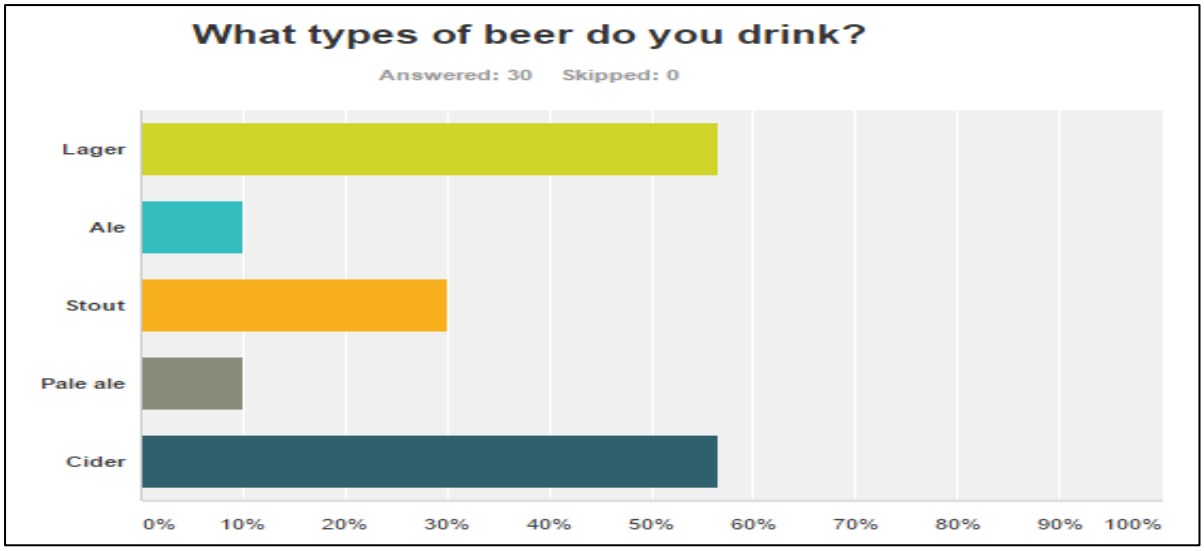
Upon doing some research analysis I created an online survey to get an understanding of consumers' needs and how people view craft beer and whether they would appreciate this service. I created this survey on a free application called survey monkey. I distributed the survey on my Facebook and patiently waited for replies from people. We acquired 30 respondents to the survey which is a good sample size and with this application could analyse our results with visuals. Most of the general questions were asked would be answered with a yes or no answer and when I wanted to find out which device the customer usually uses when shopping I gave options whether it be PC, Mobile or a tablet. In one of the questions we can also clearly pin point the most popular beers which is something we would look at for the development of our site and product.

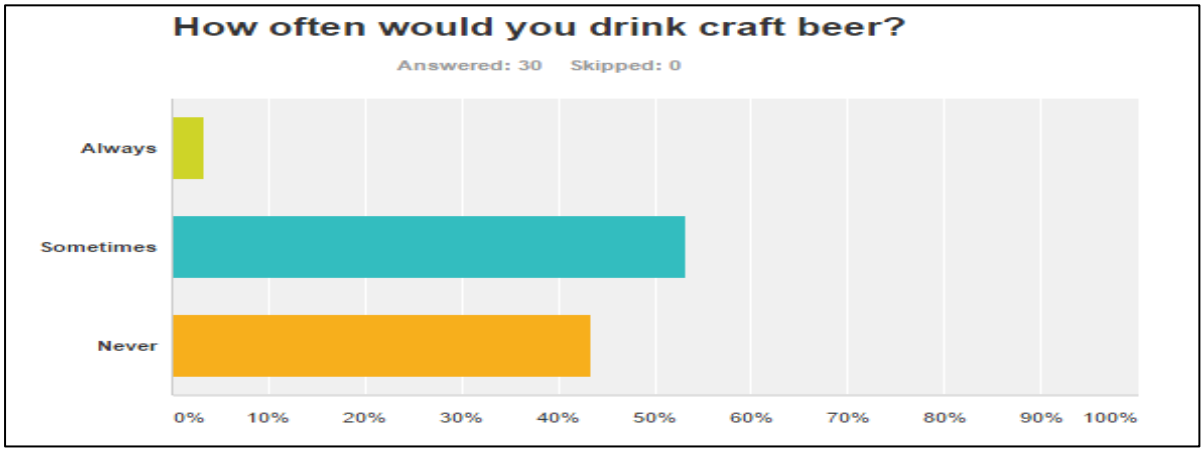
3.1 Charts

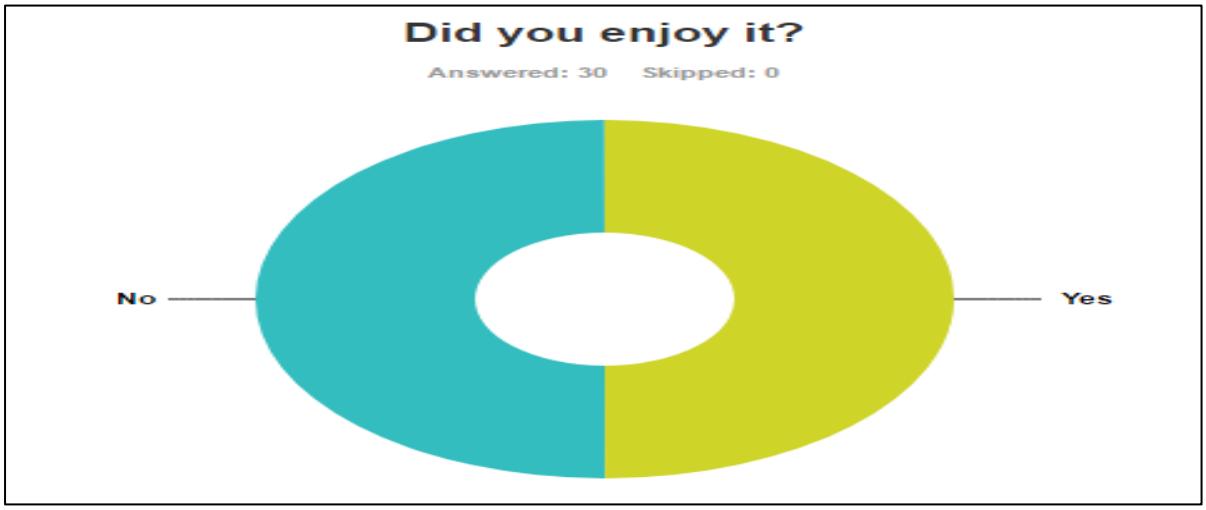

What is your gender?
Answered: 30 Skipped: 0
Female
Male

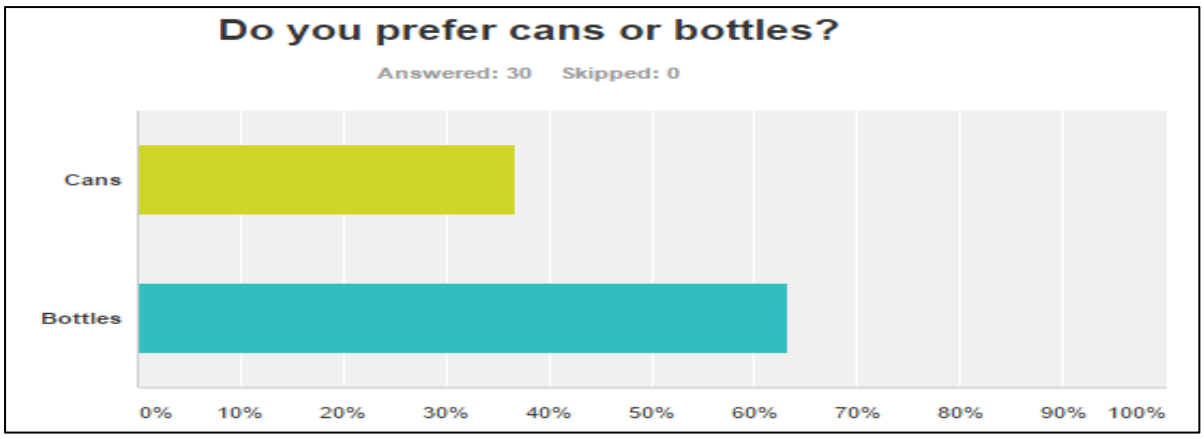

What is your age?
Answered: 30 Skipped: 0
18-24
25-34
35-44
45+
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

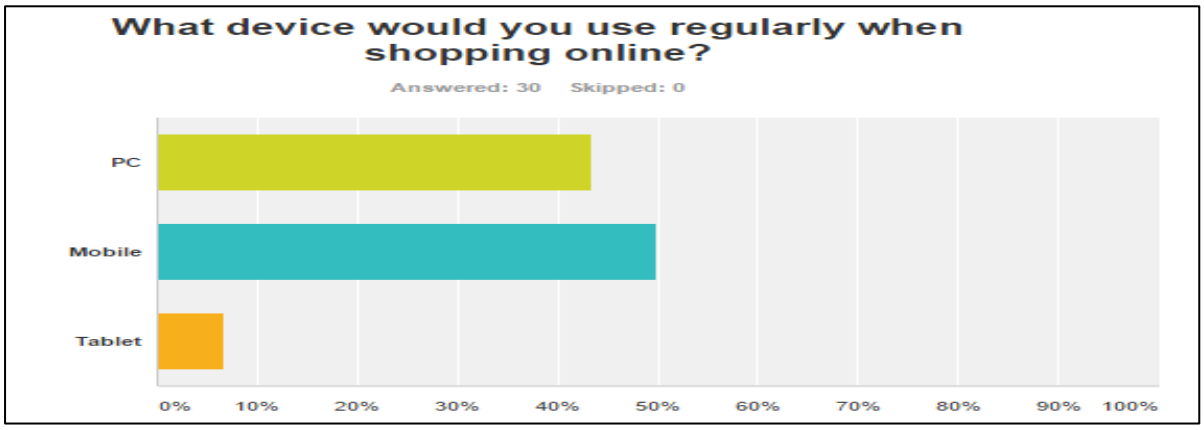
Have you tried craft beer before?
Answered: 30 Skipped: 0
100%
80%
60%
40%
20%
0%
Yes
No

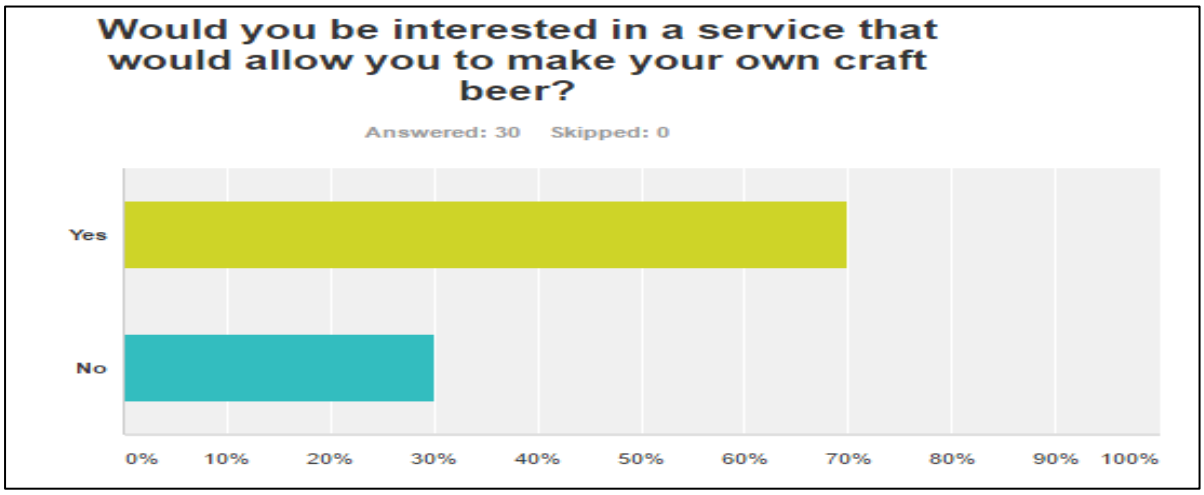

What types of beer do you drink?
Answered: 30 Skipped: 0
Lager
Ale
Stout
Pale ale
Cider
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

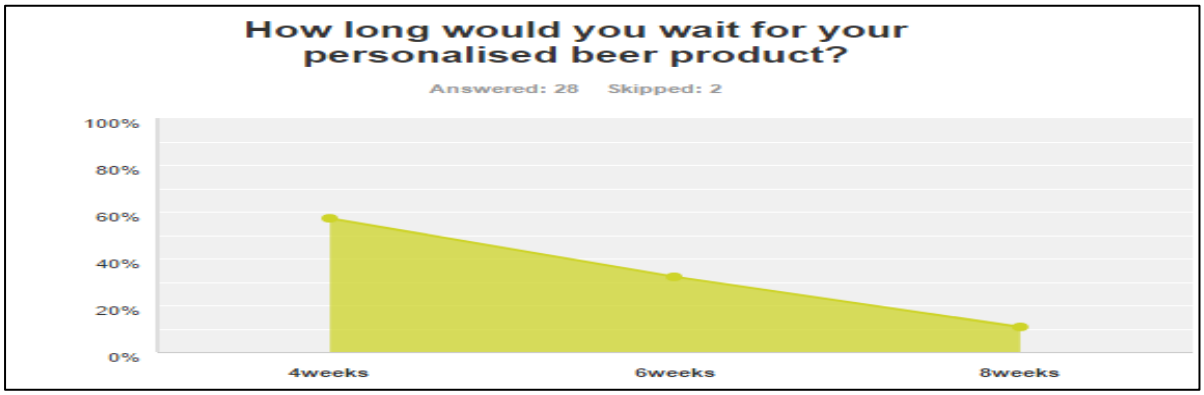

How often would you drink craft beer?
Answered: 30 Skipped: 0
Always
Sometimes
Never
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%


Did you enjoy it?
Answered: 30 Skipped: 0
No
Yes


Do you prefer cans or bottles?
Answered: 30 Skipped: 0
Cans
Bottles
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%


What device would you use regularly when shopping online?
Answered: 30 Skipped: 0
PC
Mobile
Tablet
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%


Would you be interested in a service that would allow you to make your own craft beer?
Answered: 30 Skipped: 0
Yes
No
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%


How long would you wait for your personalised beer product?
Answered: 28 Skipped: 2
100%
80%
60%
40%
20%
0%
4weeks
6weeks
8weeks

4 System

4.1 Purpose

The purpose of this document is to set out the requirements for the development of a web application called 'Brew your Beer'.

The intended customers are those interest in personalised alcoholic beverages specifically those with a vested interest in craft beer. What the company actually does is it creates the product to the exact specifications of the user as per information giving from the order via the brew your beer website. The system will allow the user to sign up and then login using their username and password and will take them to their profile. Once signed up the user can browse through out site and view craft beers that have been previously made by other users. The

4.2 Project Scope

The scope of the project is to make a responsive web application for the user and allows the users to create and place orders of craft beer through our system. We intend on building a database to store orders, user data and inventories. The customer will be able to review our products too. The project has to be done within a 5 month timeframe. I was involved in discussions with my client Daryl McCann, who would require this application.

4.3 Definitions, Acronyms, and Abbreviations

DDOS – Distributed denial of service

HTML – Hypertext Mark-up language

JAVA – Computer programming language

MySQL – open web service for database management

USE CASE – In software engineering it refers to the list of actions of a system.

UI – means at which the user interacts with a computer.

GUI – the graphical display on the system

4.4 User Requirements Definition

This section describes the set of objectives and requirements for the system from the customer's perspective.

- The user should have a pc, laptop or portable device.
- They should have a Wi-Fi connection to access the web.
- User must have an account to create craft beer products.

What the user can gain from using this application is the ability to understand the process behind the brewing methods and how it can be done. The actual process on site for creating a product and submitting to order takes seconds but in real time waiting for this product would be anywhere from 4-8weeks. It will be a quick and easy service for any person out there looking to make a product like this.

4.5 Requirements Specification

The systems that will be user friendly and with minimum training, staff at brew your beer will be able to utilize the full potential of the system. The system will be easy to update (new stock levels) and the only maintenance would be to add new features. Errors should be kept to a minimum and solved within 4 hours.

4.6 Functional requirements

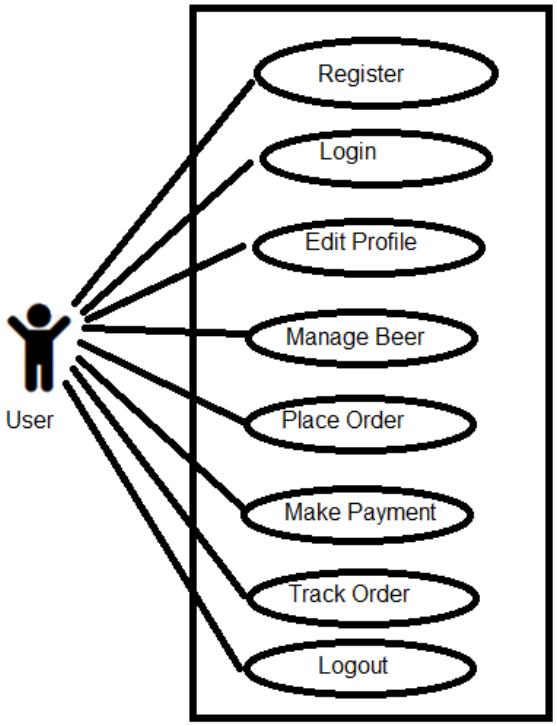
The customer will need a way to choose what ingredients they would like, a log in to check the status of their order, a checkout, a database, a review page, and be responsive on any platforms. The software requirements would be HTML, CSS, JAVA, MySQL, and JavaScript.

We want the user to be able to:

- Sign up/Log in
- Create product
- Beer customization
- Add to cart
- Order product
- Checkout + purchasing
- Review products

4.7 Use Case Diagram

The Use Case Diagram provides an overview of all functional requirements.



4.8 Requirements

Requirement 1 <Sign Up >

Description & Priority

The user will be prompted with a sign up registration form upon clicking on the website.

Use Case

Scope

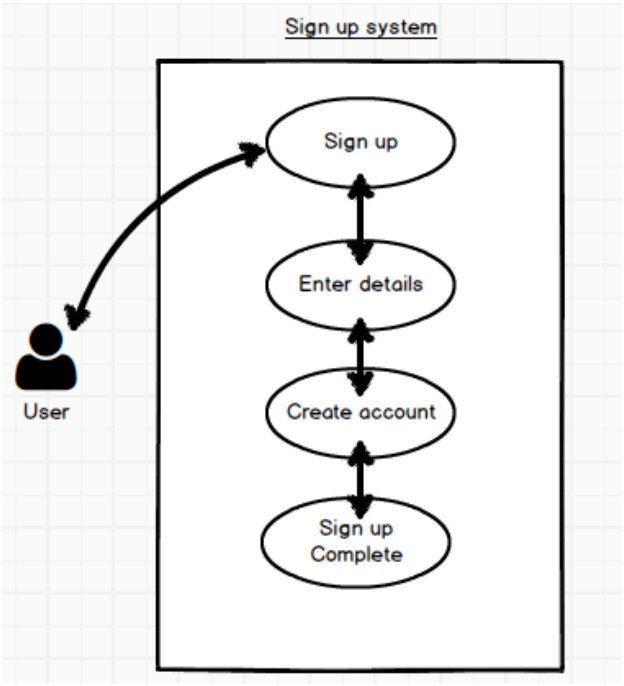
The scope of this use case is to create a account for the user.

Description

This use case describes the user signs up.

Use Case Diagram

Figure to the right



Flow Description

Precondition

The system is in initialisation mode.

Activation

This use case starts when an <User> starts the sign up process

Main flow

1. User selects sign up
2. The system shows the sign up page
3. The user enters his details.
4. The system processes his details.
5. Sign up verification by mail
6. The user is now signed up.

Alternate flow

A1 : <Failed Sign up>

1. The system identifies the user entered incorrect details.
2. The user restarts the main flow.
3. The use case continues at position 2 of the main flow

Termination

The system presents the next stage and brings the user back to the index page.

Post condition

The system goes into a wait state

Requirement 2 <Login >

Description & Priority

The user will be prompted with login after completing sign up or visits site again.

Use Case

Scope

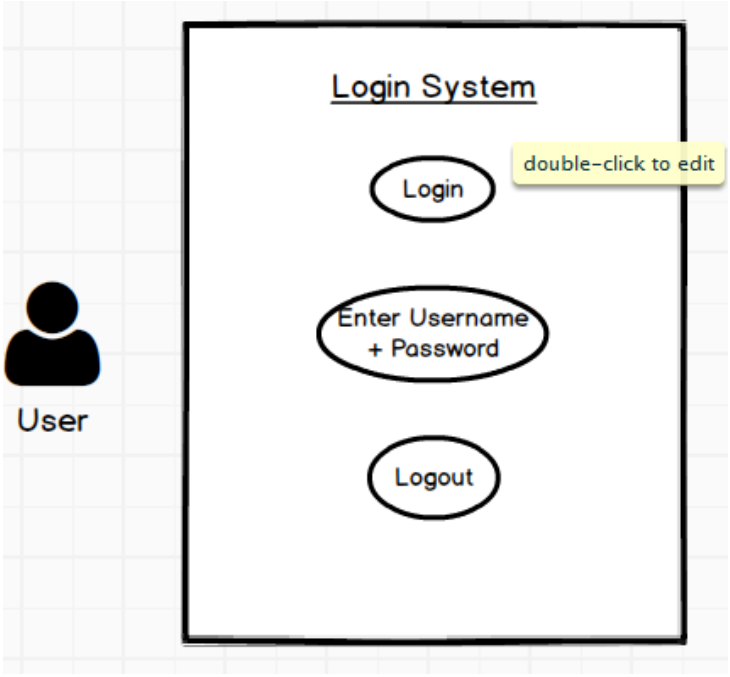
The scope of this use case is for the user to access their account.

Description

This use case describes the process of signing into your account.

Use Case Diagram

Figure to the right



Flow Description

Precondition

The system is in initialisation mode.

Activation

This use case starts when an <User> starts the login process

Main flow

1. User selects login
2. The system shows the input parameters
3. The user enters his username and password.
4. The system processes his details.
5. The user is now logged in.

Alternate flow

A1 : <Failed Login>

4. The system identifies the user entered incorrect details.
5. The user restarts the main flow.
6. The use case continues at position 2 of the main flow

Termination

The system presents the next stage and brings the user back to the login.

Post condition

The system goes into a wait state

Requirement 3 <Create Beer>

Description & Priority

The user goes to the create beer page and starts creating their beer.

Use Case

Scope

The scope of this use case is to create the craft beer for the user.

Description

This use case describes the steps involved for making the beer.

Use Case Diagram

Figure to the right

Flow Description

Precondition

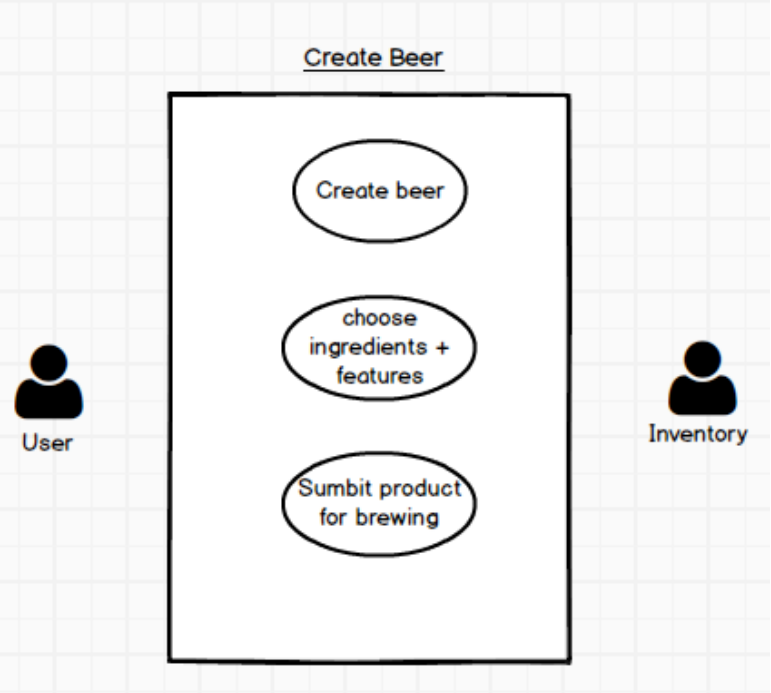
The system is in initialisation mode.

Activation

This use case starts when an <User> starts the creating process

Main flow

1. User selects create beer
2. The system shows the options for the user
3. The user enters his ingredients and features of his product.
4. The system processes his/her information.
5. The user has now created their beer.



Termination

The system presents the next stage and brings the user back to the order handling page.

Post condition

The system goes into a wait state

Requirement 4 <Order >

Description & Priority

The user will be prompted with a form to handle their order.

Use Case

Scope

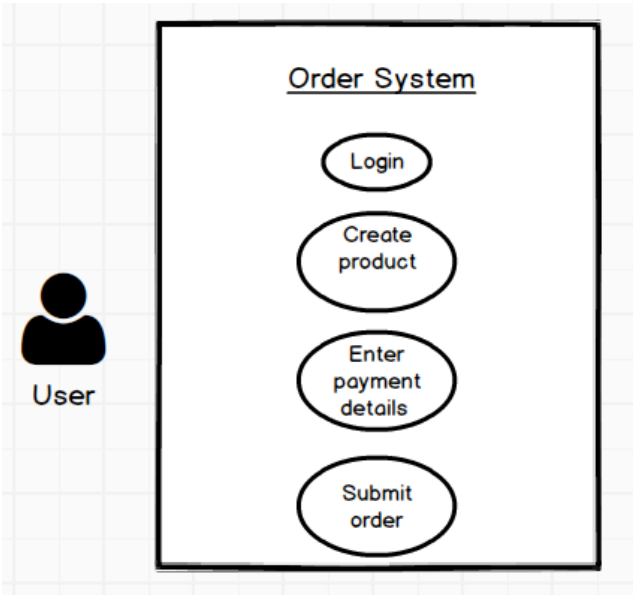
The scope of this use case is to handle the customer order.

Description

This use case describes how orders are processed.

Use Case Diagram

Figure to the right



Flow Description

Precondition

The system is in initialisation mode.

Activation

This use case starts when a <user> starts creates their product.

Main flow

1. User must be logged in.
2. User creates product.
3. User goes through to order payment
4. User enters his details.
5. The system processes his details.
6. Details verified.
7. Order is processed.

Alternate flow

A1 : <Order failed>

1. The system identifies the user entered incorrect details or card rejected.
2. Cancels order.
3. The user restarts the main flow.
4. The use case continues at position 3 of the main flow

Termination

The system presents the next stage and brings the user to the payment stage.

Post condition

The system goes into a wait state

Requirement 5 <Payment >

Description & Priority

The user will be prompted to enter their Credit Card details & the system will process the payment.

Use Case

Scope

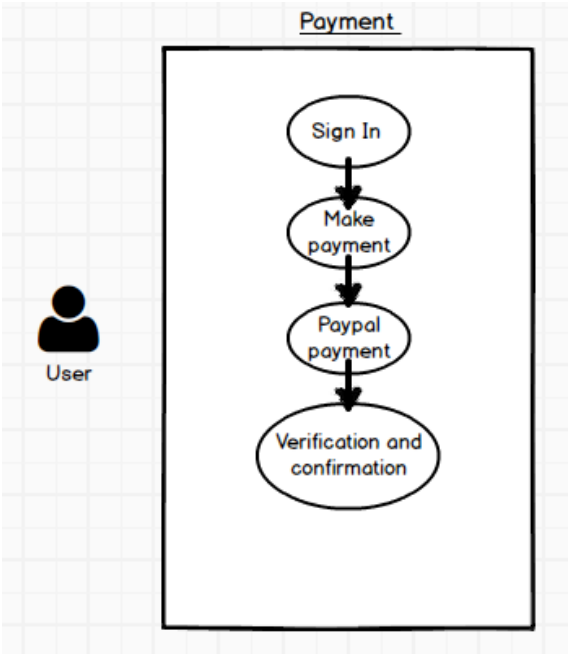
The scope of this use case is to handle the customer payment.

Description

This use case describes how orders are processed.

Use Case Diagram

Figure to the right



Flow Description

Precondition

The system is in initialisation mode.

Activation

This use case starts when a <user> starts creates their product.

Main flow

1. User must be signed in to make payment.
2. User chooses payment.
3. User enters his details.
4. The system processes his details.
5. Details verified.
6. Payment is processed.

Alternate flow

A1 : <Payment failed>

5. The system identifies the user entered incorrect details or card rejected.
6. Cancels order.
7. The user restarts the main flow.
8. The use case continues at position 2 of the main flow

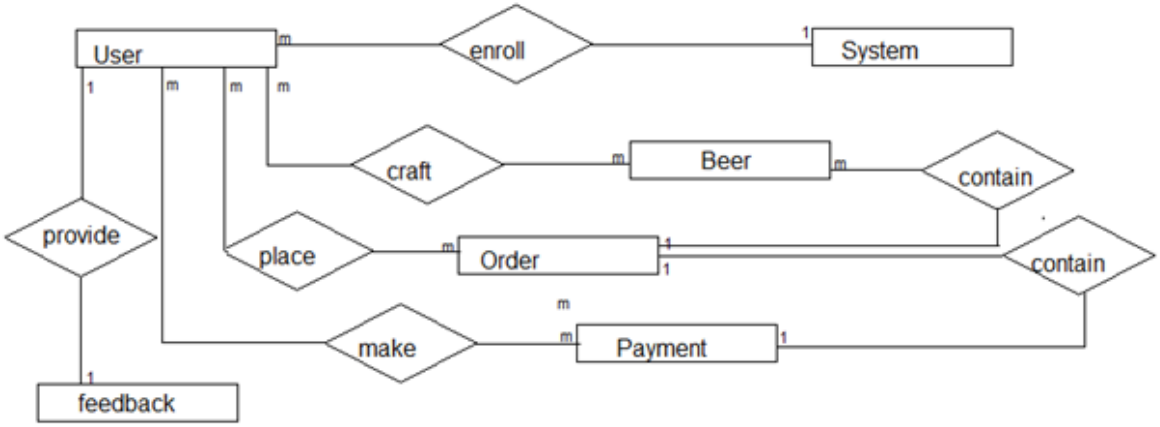
Termination

The system presents the next stage and brings the user back to the index page to continue browsing.

Post condition

The system goes into a wait state

Entity Relationship Diagram



4.9 Non-Functional Requirements

Performance/Response time requirement

The performance of a system and how it responds is a very important factor. If our site is slow and doesn't respond well, the user will become dissatisfied and leave our application. If we can build a solid application with a good response time, we can be sure to create brand loyalty. During the customer 'sign up' we would like the response time to be no more than 1 second. Navigating also from page to page should be fluid, also without refreshing onto a new page.

Availability requirement

Our system will be available for use once created. It will be an active application all year round bar when we need to undergo maintenance.

Recover requirement

Like discussed in the in availability requirement, we want the site to be active all year round. If there ever was the case where the system crashed or needed maintenance, we would like the issue to be resolved quickly as to not hinder the sales of our product and therefore lose money. Our recovery time objective would be roughly 4s hour to one day process of getting the site fixed and live again.

Robustness requirement

This term refers to how the system copes with errors and or execution time. For instance we want our sign up for an ordering system to identify whether the customer is entering invalid information into a particular section.

Security requirement

In order to set up an account the user will need a valid email address. Also in order to submit an order, the user will need to submit the details of a valid debit/credit card. Privacy is of the utmost importance and in order to protect the information we store, we plan on implementing a number of measures such as the CAPTCHA API which will determine the user isn't a robot. We also wish to include a personal security question for the user.

Reliability requirement

In order to test our system we will perform planned DDOS attacks to see how the system copes. The servers are also protected by Microsoft security essentials.

Maintainability requirement

Once every 30 days, a technician will begin scheduled updates and testing which will commence at 3am GMT while the sites traffic would be sufficiently low.

Portability requirement

The site can be optimised for not only computers, but smart phones and tablets using the bootstrap design method. This allows the users to access the information where and whenever suits them.

Extendibility requirement

As the system grows in popularity, more commuting ram can be obtained by expanding the storage space on the pc.

Reusability requirement

The system could be optimised to accommodate any personalised commodity based revenue model.

Resource utilization requirement

The main resource used in producing and running this system will be my laptop and also using the certain programs only available on college network.

GUI SCREENSHOTS

Sign Up
Name
Address
Email:
Phone
Gender Male Female
Date of Birth mm/dd/yyyy
UserName
SIGN UP

My Profile
Neil Gallagher
Ireland
neilgallagher@gmail.com
9874563210
Gender Male Female
Date of Birth 05/02/1980
NeilGallagher
UPDATE

Sr No.
Mash
Flavours
Extras
Bottle Text
Bottle Design N Logo
Place Order
Action
1
Wheat
English-Style Bitter
Corn Syrup
My Beer
2
Wheat
English-Style Bitter
Corn Syrup
My Beer beauty
3
Wheat
English-Style Bitter
Corn Syrup
Aperus
Craft Beer

Craft Beer
Mash:
Wheat
Flavours:
English-Style Bitter
Extras:
Corn Syrup
Bottle Design N Logo:

4.10 Testing

Test Case ID	Test Case – Login	Expecting behaviour	Exhibiting behaviour	Result
1	Enter the wrong Username and Password for user	Error message has to be displayed	Error message is displaying	Pass
2	Login as user and Try to craft new beer	It has to craft	It is crafting successfully	Pass
3	After login edit profile	It has to display the user information	It is displaying user information	Pass
4	After login update user profile	perform edit on user profile	perform edit on user profile	Pass

Test Case ID	Test Case – Craft Beer	Expecting behaviour	Exhibiting behaviour	Result
1	Create craft beer	Create beer without issue.	No issues	Pass
2	Customisation part left empty	Values empty. Error message prompt	Prompted with error message	Pass
3	Show existing beers	List beers that have been created by the user	It is displaying user beer information	Pass
4	Choose existing beers and add to cart.	Can select existing beer and add	Performs perfectly	Pass

Test Case ID	Test Case – Sign up	Expecting behaviour	Exhibiting behaviour	Result
1	Enter valid information	Information is processed and customer can go to next stage	All user information processed. Customer proceeds to login	Pass
2	Enter invalid information and or missing values	Customer cannot proceed to next stage	Customer cannot continue without entering valid info	Pass
3	JavaScript functionality works.	Choosing the date of birth and selecting data.	User can select data of birth from table correctly.	Pass
4	Customer details saved and ready for login	Details saved in database and can now login to system		Pass

4.11 Further Development - System Evolution

After the project is completed I believe it will make an impact in the craft beer market. From my research there isn't a system out there like this and hopefully will gather investments from potential clients. As the company would grow in popularity I believe we would have to scale up our system and brewing facilities to accommodate such interest. As well us creating the products we think it would be strong option to work alongside other craft beer industries and sell their products online as well as our own of course. Attracting other businesses will help increase our status in the market and also will influence the growth of our business. In terms of the systems evolution we think by adding more options in customization would be ideal. Allowing users to upload an image instead of just choosing from our options would also be a good feature. I believe that if was to add the dashboard element to it as the company grows it would be fantastic tool to have in so we could quickly analyse the sales of the beers and other analysis we can get out of it.

4.12 Conclusions

Overall I have thoroughly enjoyed developing this project. I have learned a lot of new skills that I feel will help me in the future. While developing this app I worked with languages and API's that were totally new to me, I now feel a lot more confident with languages such as Java and JavaScript. I think the main advantage to doing this project for me, was that it proved that it is possible, and that I am capable of developing a commercial application on my own, within a reasonably short space of time. I had to be disciplined and keep up to date with my work so that I could complete the project on time. I feel as though I handled my time management well and put in enough work to gain a good mark from this project.

5 Reflective Journals

Student name: Neil Gallagher BSc in Computing (Data Analytics)

5.1 September

My achievements:

This month I was able to come up with an idea I wanted to do for my final year project. I believe it is an innovative idea that will attract big businesses. I am in the data analytics stream so if I could apply something around the project in terms of big data or statistics would be even better. I plan on building a website with an integrated database as well as having a database dashboard. What I have come up with is basically a company that provides customers with the ability to create and customise their own alcoholic beverage to their particular taste "craft beer".

My reflection:

I felt it was difficult to come up with the ideas. I got in contact with a friend of mine who is a bit of an entrepreneur. He threw a few ideas my way, but once I had something to hold onto the idea and possibilities were endless. Overall I believe this idea is a strong one and I believe I can make a good project this year. As you go round to many pubs there is a demand for craft beers. So I do understand that there is a market for it. I hope it gets accepted because I know there is more to this project and still elements to be added.

Intended Changes:

After doing my pitch I got a better picture as to what I should do with this project. The lecturers gave me good tips for future development. I will go more in depth to it and find more interesting features that can be added and what tools I will use to build this project. Working on the project deliverables is essential this semester so I am going to stay on top of my work.

5.2 October

My achievements:

Once my idea was accepted, I was able to go ahead and come up with certain elements plan out what I wanted for this project. I worked on my project proposal and submitted it and acquired some of my requirements I will need going forward for the requirements document. After meeting with my supervisor he helped me understand what my next objective would be. I plan on using Twitter's API and scraping some data about 'Craft beer' from the social media network. I want to be able to apply my specialisation to this project and by creating a database dashboard, it is something I would definitely like in my project

and adds more depth to it. Writing up my requirements is the main objective and I am continuing to add more and more information. It is a work in progress.

My reflection:
On reflection of this month I feel it has been productive. The workload in various other modules has been big. I have been trying to manage my time effectively. I have a layout of everything I need to do so now my goal is scraping the API's of the likes of twitter and Facebook getting big data and getting an understanding of my market and analyse the data for trends.

Once I complete this requirements spec I can then focus on the work at hand and start developing a prototype. I have a good idea of how I want my site to look. I am still exploring the likes of python and I am learning the basics. I am just working on scraping twitters API for data and meeting with my supervisor to show him how I got on and what advice he can give me next.

Intended Changes:
No further changes.

Supervisor name: Keith Maycock Date of meeting: 26th of October

5.3 November

My Achievements
This month, I was able to get a better understanding of what tools I want to use to design and build this project. I intend on using NetBeans IDE as my platform for the build. I am set on using PHP as my programming language and having been experimenting with this code, Researching and making a website with this language. The information provided from Moodle on PHP is something I will now go off and utilise for my project. I have been looking to involve an API from a service called Untapped who provide people with lists of beers to try. I think it will be good to use their API.

This month also I have been working on my Technical report. Gathering information and researching more into the project. I am just piecing the document together now and will be uploaded before the submission deadline.

My Reflection
I felt, it worked well to research prior to making any rash moves and just start coding something that may not be useful in the long term. I think I will keep up what I am doing whether it be reading or listening to videos. I have started building the application and I want to produce something useful. I believe the idea I have is strong and hopefully in the future could become a large business.

However, I was not successful in certain aspects using PHP there were certain issues when I tried connecting to the database but I think with more time I can get it working. Upon reflection I found that due to the massive workload it was difficult to fit time into this project but I think I have done okay even though the workload this year has been big.

Intended Changes

Next month, I will try to start developing my project and try get it finished as soon as possible and then work on the little details at the end. So far I am happy enough going forward and will continue to work on it with the time I have been given.

5.4 December

My Achievements

This month, the write ups were still being continued and the development process was in full swing. I feel this was a good month for me with the project. I am very confident in my project idea and what I want to achieve. The website and database are created and it's just about adding that extra complexity. I also had my project presentation with Keith my supervisor and Paul Hayes. I felt it went well and got great feedback from the guys on what needs to be done in the coming weeks.

My Reflection

Upon Reflection, I feel it was a good month for the project as a whole. I got a lot done and getting the feedback off the lecturers was great in preparing me for the future presentations. Complexity was the main thing in feedback there has to be something different and that makes it stand out. It's a fourth year project so making sure that its complex is key to getting a good grade. I feel after these exams, I will focus my attention a lot more on the project.

Intended Changes

Finding ways of adding more complexity and ensuring my project report is up to standard.

5.5 January

My achievements

During this month, I came to the conclusion that I wanted to change my project and ditch the prototype I had developed so far. I got far with what I had but I felt that my knowledge using PHP was below par and I felt there would be a better solution to just start from scratch. I wanted to continue to use bootstrap and other elements and not change the design too much. I set my focus on using the programming language Java and utilising JavaScript within my project. I found a good bit of resources throughout the web. I reshaped the database with everything I needed and the relevant tables.

My Reflection

Like I have said above I felt I wasn't getting anywhere with the build and needed a change I wanted to go down a simpler route and design concept. I felt I was looking into too many complex concepts that I wasn't capable of doing for example a database dashboard and or mining through data regarding craft beer some of that information is irrelevant to what I actually want to do. So I looked at what I could do so that I could stay through to my project idea without changing so much.

Intended changes

I stopped development using PHP and changed programming language and looked into new ways on how I can make this project simpler for me to build. My intention was to build a dashboard alongside this project for analysis of trends of beer but I wanted to steer clear of that and focus on my strengths. I am a data analytics student but my first and main goal is designing a website called brew your beer that will allow you to create your own product and that is what I am setting out to do from now on. I have only a short space of time but the project for me needs to be as simple as possible no point in complicating things.

5.6 February

My achievements

The good portion of this month was reshaping my database. I designed the appropriate tables and ensured everything is linked from website to database. I also spent my time rewriting the main functions from scratch. I spent a good bit of time also changing the layout of my site. I now have to use java to create this application in Netbeans IDE. I have been looking at different tutorials to get a grasp on what I need to do; stack overflow is helping a lot. I have also implemented a user login with registration system that is connected to my database.

My Reflection

Slowly the elements are piecing together and I am able to progress further with this application than I would have done if I was still trying to do the build I previously set out to do. I have not met with my supervisor in a while though due to his absence and I am confident in my own abilities to make sure this project meets the finish line. My last visit with my supervisor he said if I added an algorithm or could find a way of using this algorithm it would add more complexity but this is something I found difficulty with. It was the travelling salesman problem but I could not incorporate it whatsoever.

Intended Changes

I completed scraped the dashboard element and the use of travelling salesman problem as I had issues with these and for the continued development of the project I didn't want to delay my progress.

5.7 March

My achievements

For this month I have implemented a way for the user to craft beer and also place orders. I implemented the functionality of placing order; all the orders are saved in the database. This was quite challenging for me and navigating through the application everything seems to work perfectly. You are able to make your very own product, customising it and sending for order. Adding items to carts has also been a cool feature added in. I currently have the buttons and functionality implemented and it is working the way I want it. Another task I set my self was the start making the application look pleasing to the eye. I want it to have a clean and simple look that is easy to navigate through. Testing all the elements in the website has been a major task of mine. I will be providing test cases in my final document for you to see and have got friends and colleague to run through it to see if it runs smoothly. The design of my posted for the showcase was carried out during this period.

My Reflection

The things I have set out to do are piecing together and I feel that my application will run successfully. My current objective has been finalising documentation; I have ensured my report is the best from what I can do.

Intended changes

None

5.8 April

Last month

As the final submissions approach, I have been finalising everything and proof reading the documents. I have learned a lot about the development process and how a project should be planned and constructed especially if there is a time frame. I will be happy to go ahead and submit all my project work.

Proposal

Objectives

The main objective is to make an integrated database and website that will give consumers the freedom to customize an alcoholic beverage and also allow them to check the status of their product while sending periodic information via email and keeping them updated on the status of their product.

The product is to cater for beer enthusiasts and also for those who want to throw a special event and would be able to give that something special to their guests, their own personal craft beer. So this is why I am developing this project to bring the company brew your beer to the online market.

In my opinion I believe it will give the craft beer market a rise in profits and people will not just settle for the standard mass produced product. I am a firm believer in trying something new. In terms of what I need to make for this final year project, I am going to have to build a very simple and effective website and a database to store all the information about my beers and ingredients etc. I also want a database dashboard within the site to display pieces of data that is already out there and what is given back from the site. The challenge is in making a customizable drink to suit even the most particular customer.

Background

The Irish beer market has typically been dominated by English, American and European brand. The only exception would be Guinness but even Guinness was bought by Diageo. Pubs and supermarkets alike would buy these mass produced beers for the Irish market while exporting homemade brands. In recent years Ireland, along with the rest of the world has experienced a cultural shift towards “craft brew” beers. These are typically micro-breweries with limited resources. Consumers have embraced this shift and our company would instrumental in removing any and all barriers to entry that currently exist. These include but are not limited to; a lack of knowledge, a lack of equipment and a lack of time.

There are a number of home brew kits available to Irish consumers but in our experience they produce mediocre results at best, and that is if the consumer does everything correctly. The other problem with home brew kits is their innate rigidness. What is meant by that is that customers cannot tailor what beer they get in the end; they may as well buy readymade beer from a supermarket. Our company is capitalising on the niche market of the everyday beer drinker who would like to be a part of this cultural drinking shift, but have been largely ignored. At the moment the choice is between mass produced stale beers, overpriced craft beers or potentially fatal home brew kits.

Our main target market would be men of all ages who have a passion about beer but lack the expertise, time or equipment to create their own unique beer. After conducting market research, we have concluded that there is an interest in personalised beers. People would

be willing to pay premium prices to get beer specifically tailored to their taste, right down to the bottle cap. At Brew Your Beer our main goal is to produce a wide variety of beers such as stout, lagers ales, and ciders. We would also like to branch out in the future to include different spirits, merchandising and personalised coffees.

What makes our service unique is the fact that we take ownership of producing and shipping the customer's product. The customer decides the taste, colour, flavour, consistency and strength of their beverage. The customer dictates the recipe or uses one of our premade recipes and our expert brewers produce it. Customers can also choose a unique ingredient to add in such as orange or honey to give it that unique personalised feel. Customers can then go to choose the type of bottle, the label, the quantity and even when they want it.

When we are in the process of making the customer's unique beverage, we allow customers to logon at any moment and check the status of their beer at any time. They can see the temperature, the progress and how long is left in each stage. We will also have periodic checks carried out and an update sent via email to the customers on how their beer is coming along.

One of the most important factor is the peace of mind in knowing that what is made by Brew Your Beer has passed safety checks, alcohol level checks and has no contaminates whatsoever. Something that would very difficult to do with something made at home in a bath with a home brew kit. This means that the consumer knows they will receive a high quality product tailored to their exact needs. To summarise, there is a niche market available for tailored, customisable beers. People are moving away from mass produced beers which currently dominate in pubs across Ireland. Consumers would benefit

Technologies

PHP – This is a programming language that is mainly focused on server side scripting. PHP can do many things like create dynamic web content, collect form data and is probably the best support for a database within your application (phpmyadmin).

Technical Approach

Requirement stage

Cohesively my client 'Daryl' and I collaborated on exactly the requirements for this project. Together we agreed on making a responsive web application using PHP, HTML, MySQL and JQuery. Requirements are set in and I plan on following the advice of my client and what he desires within reason. I feel that it will be a challenging project ahead and there will be more things and little bits to add.

Development:

For the development stage I plan on building wireframes for HTML side and to assist me in designing a prototype for the UI (user interface) for my client's approval. From there apply PHP coding to connect with my database with phpmyadmin.

Wireframes for HTML prototype:

This will give me a better understanding of how the site will look and what elements and pages will be within the site. I want the website to be responsive and to run all typically any device mobile or pc.

Design Database- add tables and entities:

This will be my biggest task I find there is a lot of information to be taken in. It will give me a more understanding by drawing Entity relationship diagrams and showing how it works. This will be done in the requirements stage.

Build a UI / Prototype from Wireframes and get approval:

Once I get feedback from my client and confirmation of the go ahead I can work away developing a small prototype.

Apply server side code for CRUD (create read update and delete):

This is how the PHP interacts with my database and I will be using PHP PDO as it will eliminate the possibility of SQL injection attacks.

Database dashboard:

I would like to create a statistical analysis page in the web application and a dashboard displaying what stats of our products that are selling the most etc.

Special resources required

There is reading material that has been provided by the college so I intend on broadening my ideas out and learning more about particular areas where it be in data mining or even learning about what my project is about. Seeing as my idea is about a craft beer making company there is good reading material about the making of such a product. I wouldn't be the most proficient with JQuery but I intend on sourcing some literature from the library and also researching the web.

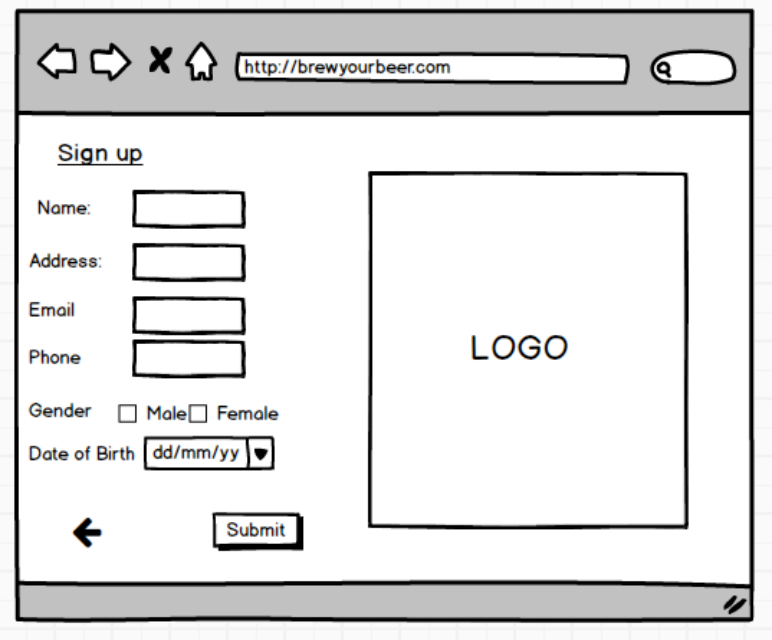
Technical Details

These are the technologies I intend on using.

- PHP
- HTML
- MySQL
- JQuery

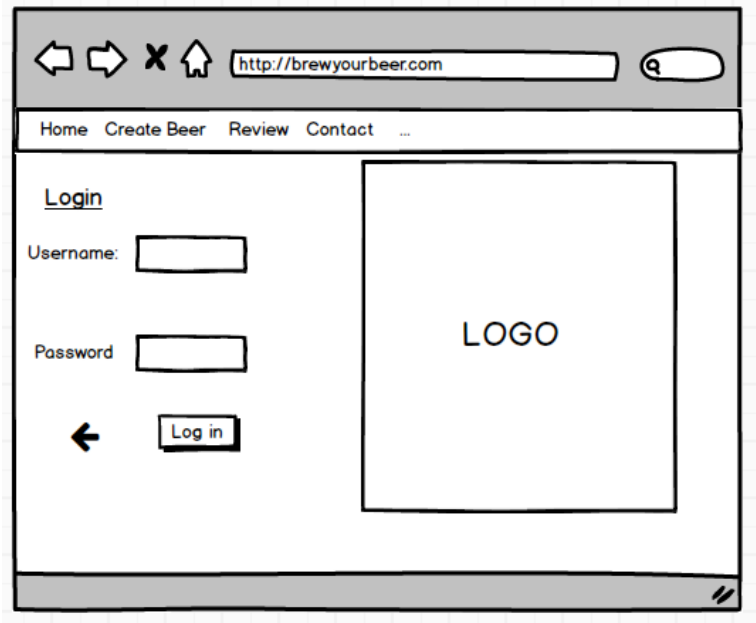
GUI

This section displays the wireframes of various pages of my application. It displays what I intend the interface will look like. It is a rough idea and there is still more to add.



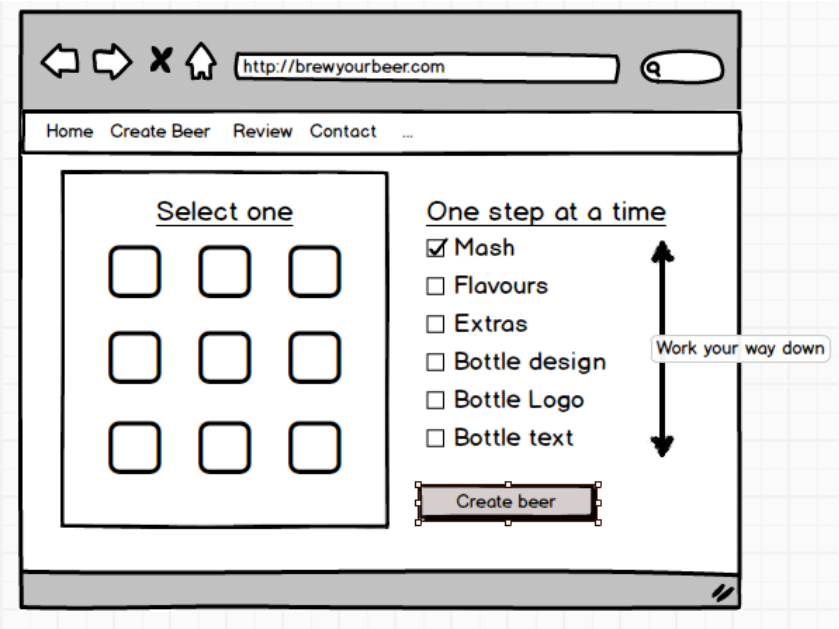
Sign up wireframe

This is an outline of how I want the sign up to look. There is still customer attributes that will still be added but now the general idea is something like this.



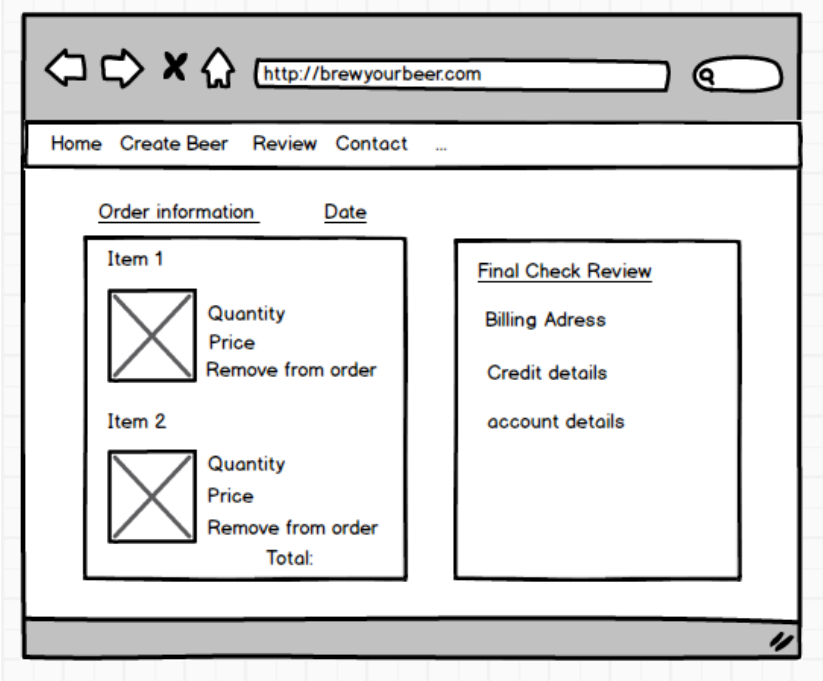
Log in wireframe

This is the log in page. The user will need to enter their username and password to access their account.



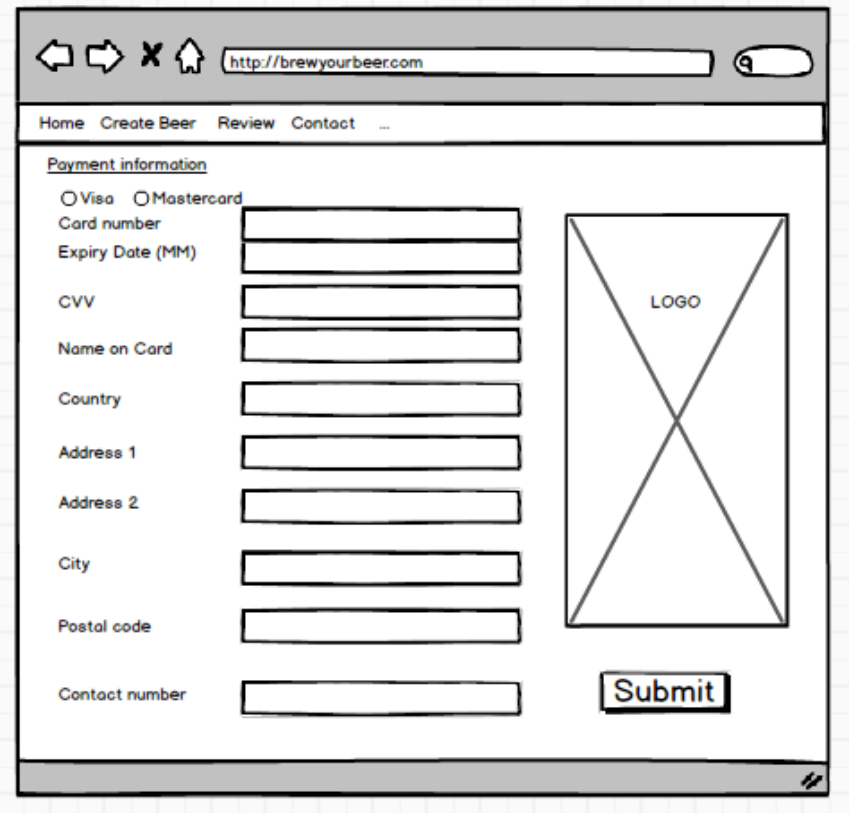
Create Beer wireframe

I want the user to easily navigate our page and the creation process should be very straightforward. I am still looking into how beer is brewed so elements of creation are still going to be added. For selecting the flavours once the flavours on the rights is selected it will display options for the user to select.



Order wireframe

This page is the order page and it lists the items that the user has created. It displays the quantity, price and gives an option to remove the product. Offers a final check review of their details just to ensure the correct information has been entered. There will be a place order button at the bottom which will take the user to the payment page.

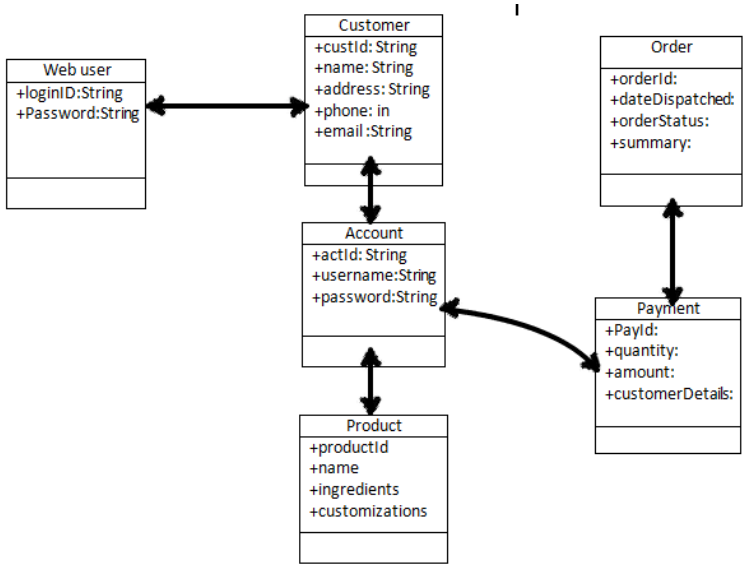


Payment Wireframe

This page will have to be filled in by the customer with all relevant information. Every field will have to be filled to complete order.

System Architecture

This is my class diagram of the systems architecture.



Evaluation

This project is for my client and once it is live it will be tested by associates. I will have my own particular version running locally and the other running off his server or a web host.