Inventory Management App

BO20-G27

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20. January 2020
Project Group

The group consists of Patrick Gilstad, a computer science student of 4 years at Østfold University College currently residing in Dublin, Ireland. I have a knowledge of multiple aspects of the computer science field such as, but not limited to: Object Oriented programming, Java, C#, database setup and querying, data structures, 3D animation and modelling. Beyond computers and programming, I also enjoy watching movies, playing games and traveling.

Employer

The Employer’s name is Superior Racking and Shelving, a private limited company situated in Dublin, Ireland that makes storage solutions for a wide variety of customers. Their primary market is Ireland, but they support clients all over the country. There are currently X people employed at the company.

Assignment

Overview

This assignment was created to help inspire my employer. The employer has researched ways and tested out solutions to help their clients get a better overview of inventory, while they at the same time can better keep tabs on what they have and easily update inventory so costumers got the most exact information readily available.

Current situation

A problem with this is that the business does not have a set inventory of different shelves or racks. They make custom shelving based on what the customer wants.

Goal and deliverables

What the company wants to show clients is what kind of accessories they have and what kind of shelving-parts models they have while also help customers get an estimate on what a project might cost. The system would need to be able to allow customers to get inventory of shelving accessories, and also be able to allow customers to get an estimate on their project by filling in information about what they want.

On the client-side, the customers should be able to either use a phone application or a web application to interact with the system. The phone application will need to be able to run on both android-based devices as well as iOS-based ones. The company wants to be able to update all of their different applications with ease without having to handle lots of different code for each platform, so using a common language infrastructure will be essential here.

The user will be at the centre of this application. Universal design will play a vital role here, especially with the onset of new laws stating that websites have to be accessible to all people, whether they are visually impaired or suffer from something that makes using websites harder than for the average person. Many design choices will also be impacted by this, whether it be text size or colour choices for instance.

What will be provided to the business is an application intended to solve a problem the company is currently facing – customers being able to do very little online, having to call and email a lot, which results in time being lost, rather than a more efficient system of customers doing most online. The business would also definitely find benefit in this by having an improved way of tracking their inventory.
The main goal of this project is to make the system more efficient. Users currently can look at previous work by the company and have to make a call or send an email to talk through their options with the company. In order to achieve the main goal of making the current system more efficient, there are sub goals that will make up the main goal. One of the sub goals will be to develop an application to improve customer interaction, which will improve the system by allowing customers to do many of the initial formalities themselves, allowing company resources to be freed up and be spent on creating the products the customers want. The other sub goal will be to help the business track their inventory. Employees currently have an unclear and highly manual way of tracking inventory, and this application would not only benefit customers, but also staff at the business.

Summary and method

The goal here is to help customers more easily find the information they want. What I make will help the business get ideas as to what and how they can achieve this goal, so my phone and web applications will serve as inspiration. All of this will be reached by researching my employers’ current situation, doing market research by looking into customer needs and possibly see if any competitors or other businesses have made solutions that can be used as inspiration for my own project. Focus groups will be involved and other relevant parties to ensure that the user is always at the centre. Getting an insight into how the company operates will also be a part of the process, perhaps by shadowing workers for a day, depending on suggestions or choices the company makes.

As for the method that will guide the group towards the goal, it has been decided that an agile work method is the best option, and scrum fits the project the best. A set of goals has been made, sprints, that will be met, and individual planning will be held through weekly planning sessions, and weekly scrums to document progress and alter the sprints if more or less time is needed. While scrum has a focus on team work, it works well for one-man operations as well. It is important to get the product in other people’s hands during the project, whether that be beta testers, end users or even people the group knows such as friends or family. This will help make sure that the user always stays in focus throughout the project.
Project Plan

Activity 1: Pre project report
Start: 2\textsuperscript{nd} January
End: 20\textsuperscript{th} January
Delivery: Short report about the project
Description: The delivery will contain information about the student group, the employer, what the student group will provide for the employer and vice versa.

Activity 2: 1\textsuperscript{st} iteration of app
Start: 10\textsuperscript{th} January
End: 29\textsuperscript{th} February
Delivery: Functioning application with bare minimum functionality and basic design
Description: A basic application that can do the very minimum of what the employer asked for. At this point what matters is being able to illustrate to the employer how the things that have been discussed work out, if any changes should be proposed based on what the group learned from working and discuss with supervisor what lies on the road ahead

Activity 3: First version main report
Start: 20\textsuperscript{th} January
End: 9\textsuperscript{th} March
Delivery: First version of the main document
Description: A first copy of the main thesis that is going to be delivered in May. What I have done so far and learnt so far will be part of this document, and feedback from supervisor will help shape how the document will change into its final form.

Activity 4: Second version main report
Start: 9\textsuperscript{th} March
End: 24\textsuperscript{th} April
Delivery: First version of the main document
Description: A second copy of the main thesis that is going to be delivered in May. What I have done so far and learnt so far will be part of this document, and feedback from supervisor will help shape how the document will change into its final form.

Activity 5: Finished application
Start: 29\textsuperscript{th} February
End: 9th May

Delivery: Final version of the application

Description: The application in its final form will be ready by this date. At this point if something is not finished, it will either be discarded or included for talking points. No more changes will be made to the application unless bug fixes need to be made prior to the hand-in date.

Activity 6: Finished project

Start: 2nd January

End: 15th May

Delivery: Finished project

Description: The entire bachelor thesis will be finished; the application will be fully operational, and everything will be ready to be submitted. No more changes will be made for the project at this point.

Execution of project / Process

Relationship with employer

The group’s relationship with the employer will be based on a mixture of physical meetings with the employer, online correspondence through email and phone calls / texting. Every fortnight is when the group and employer hope to meet, but there will be room to change this based on how fast or slow the project progresses but hectic periods for the business might result in less flexibility from the employer side. The employer hopes for information on how this project can be done, suggestions on what could be done and why as well as inspiration for design of the system. As for the other way, the student hopes to get an insight into how business side and software engineering side of things collide, as well as feedback as to what is best in a market setting.

Group structure and workflow

Assigning roles to the group members was very easy, since this is a one-man group. The initial work method that is planned to be followed is the agile process framework SCRUM, which is designed for complex knowledge work. Github will be used to handle the code, version control and backup. Handling exceptions from other group members or absent group members is not a problem that will arise within this project, again due to a one-man group working on it.

Relationship with supervisor

My relationship with the supervisor will be based on online correspondence through email or skype, and will happen every other week, the same as with the employer. That way it is easier to relay what has happened with the employer and the information they handed me will be fresh in mind as well.