**Project Idea-**

**Overview-**The application I have decided to create will be called IC Diary. It is a basic database application for a chronic painful bladder condition called Interstitial Cystitis or commonly referred as Painful Bladder Syndrome. It will keep track of the foods and liquids consumed during the day, medications taken as well as a pain scale colour scheme all tracked on a calendar.

**Motivation-**This project has a personal interest to me as my wife suffers from Interstitial Cystitis and there is little to no apps on the app stores to help keep track of flare ups with certain food groups. According to the Melbourne Bladder Clinic it is estimated that 8-1600 people per 100,000 are affected. Unfortunately there is no cure to this condition only pain management plans to ease the severity of pain and discomfort. With so many different causes to flare ups and pain every persons experience will vary. A certain food type could cause severe pain for one and not the other. So with this daily log it will better help people suffering this condition to monitor the foods and liquids that cause them their pain.

**Group Motivation-**As a group we wanted to contribute to a project that would positively impact someone’s daily life. After speaking to Chris, he briefly explained his wife’s condition and how difficult it can be to monitor and stay on top of. We thought we could spend our time and create this app that would be truly useful for other people on a day to day basis. With Chris dealing with this condition daily we could see how motivated he was and how impactful this could be for this wife and other people who suffer from IC.

Furthermore, it was important that we tackled a project that was manageable to our skill levels as well. As an introduction into the world of Information Technology, the skill set of our group varies. For some of us this is our first experience with coding HTML and CSS, whereas others have some knowledge in these areas already. Therefore, having a project that is more manageable in terms of combining software and functions will allow our group to also focus on the quality of work we produce.

**Description-**The application features will be basic at first. The homepage will be a calendar that will be colour coded using the pain scale colours to see an overview of the month. You will be able to click on each day and go into detail, via a text box, on exactly what food and liquid you had during the day. A medication log via a text box as well to log which types of medication you had taken like paracetamol, Ibuprofen or stronger pain killers. You can also add how many times you had to go to the toilet to urinate as during flare ups this can increase dramatically.

There will be a pain scale as previously stated that will be colour coded with 4 colours. Green representing no pain, yellow being little discomfort or pain. Orange for manageable pain and discomfort or red for severe pain causing the use of strong pain killers and stopping you from doing your day to day routines. This will be visible via the homepage so you can see which days of the month you had which colour and clicking on them to see what may have caused this pain. There will be a comments section to note what type of pain you had, such as a stabbing pain or pressing discomfort.

The application will have a daily log notification to remind you at certain intervals throughout the day to input the required data to help keep track of your condition and get the most out of the application.

From the homepage there will be an add doctor appointments button so you will be notified when they are upcoming. You will be able to have an overview of your entire report so your Doctor can see the run down on how you and your body have been doing with raw data but this will come in version 2.

This application will be free for all with no log in required and no fees or subscription services.

Version 2 will have added features such as setting up an account so you can keep the data across multiple devices. The pain comments section will be updated to have a couple of common descriptions to select from. The medication will have common ones added as well. We will add a substitution list for common ingredients that can cause flare ups and what you can use instead.

\*UI picture\*

**Tools and Technologies-**For this app to be created I will be using JavaScript through the react.js framework as it can be used for IOS, Android and web browser. It is a very versatile and easy to use language which is used by all modern browsers. It gives access to a full JavaScript library.

React native will give us access to a collection of special react components. It connects the JavaScript language to specific platforms, like IOS and Android, without having to learn specific languages to those platforms. It can also give us the option to access the native platforms API’s such as camera, Notifications and the GPS tracking.

We will use the EXPO CLI to create and ship the app to different platforms. It uses the Reach Native library and helps configure the JavaScript language to be interpreted by IOS and Android devices.

As we are writing the code we can download and see in real-time how the app is progressing by using EXPO GO on our devices. We will need to have Node.js download as some packages will be using this to run.

There are 2 main disadvantages with using JavaScript, one being the security side. Since JavaScript code is executed via the client side it is far easier for bugs and code issues to be used for malicious purposes. To some browsers will interpret the code differently causing some minor detail changes for the end user.

**Skills required-**To get this project running we will need to learn how to code in JavaScript, which we will need to download React.js. We will also need to be able to use a source code editor such as Visual Studio Code, Notepad++ or Sublime Text. We will need to be able to use the EXPO CLI and know the correct commands that go with this. Lastly we will need to know how to configure the special components that come with the React Native Library.

**Outcome-**If this project were to be successful we will have an application that Interstitial Cystitis and Painful Bladder Syndrome sufferers can use and interact with to better understand how their body works and with what foods and liquids and at certain times of the month. They will be able to have all this information in one easy to go to app. This will benefit sufferers greatly to keep on top of which foods to steer clear of.