Intro – My project is on the reporting of concussion in sport with a specific focus on rugby in this case.

I am a final year computer science and business student and with the help of Mary and a number of others who have helped bring my project from the idea generation phase to where it is today.

Overview – These are the topics I will be going through. These topics cover a majority of what the project involves.

Background: I will talk about why I picked this project and what exactly it means to me.

D&I: Im going to talk about the software and technologies I used and also the development model I chose.

Demo: All going to plan I will walk you through my website, we will create a user account and add a concussion into database.

Issues: This one is pretty self explanatory. I had a couple of issues regarding the hosting of my website and my scheduling of time also.

Evaluation: I will critique my meeting of requirements. Also in this part I will talk about my plans for the website for the future and especially in the coming months after exams.

Conclusion: To conclude I will quickly go through what exactly I have learned from this project and a reflection of my own work.

Background – Ive played rugby since I was 6/7 in my local club, Enniscorthy. I’ve played at each each grade the whole way up and Ive also played at each grade of senior rugby within the club. Like everyone who has played rugby I’ve had a number of injuries ranging from sprains and scrawbs to dislocations and breaks.

Along with these I’ve unfortunately had a number of concussions which really do affect your ability to partake in normal life. Because of this, its something I wanted to look into further and to learn more about.

At both professional and domestic levels, concussions are dealt with differently:

HIA at professional

Law 3.10 to force player from pitch at domestic level

Design & Implementation: I’m sure you both know most of these. Throughout my project I’ve used them at one stage or another. Some I’ve used to just test the connections to make sure my PHP was alright like MAMP which sets up a local server environment and from that I used 000webhost which allowed me to set up the MySQL database. phpMyAdmin made this aspect far simpler. It allowed me to build my database with a cleaner UI than using the command prompt and a script.

HTML, CSS, JavaScript and PHP were what I used to build my website. PHP interacted with my database while HTML and CSS gave me the client side and JavaScript added interactiveness.

I feel an interative-incremental hybrid suited my project best. It allowed me to have a basic working model early on in the development stages and then add functionality with each iteration.

Once the major requirements were defined. I was able to work within them using the model to keep me on track.

Demo:

Issues: Thankfully, I didn’t run into many problems throughout my project. My main issues were with 000webhost.com. One of these was the PHP version they run on their servers. The latest version of php available is 7.1.3 whereas the 000webhost servers run version 5.2 which has been out of date since 2009. This added a lot of extra work to find the difference between two dates given in the eligibility function. Thankfully, I resolved this issue but not without far too long spent searching through stackoverflow and php documentation.

Once I uploaded my latest version of css to the server I sometimes found that it took a number of hours/days for my site to fully update which I thought was strange. Currently I have no answer to this issue but its probably down to the fact that im using a free hosting solution.

My scheduling issue was down to my own time management. I found it difficult to sit down to do a bit of coding when other assignments for other modules were due. This was seen especially after Christmas where my other modules really took over leaving FYP left behind.

Evaluation: I was extremely happy that I was able to meet all of the functional requirements which I set out in the beginning. These were to: have fully functional database, a log in system, a means to input data, have a function to show the eligibility of a player and a search function.

As far as NF requirements go, I was happy also. I broke my NF requirements down into 4 different groups, Usability, robustness, performance and reliability. In terms of performance, reliability and robustness I think my website goes a long way to fulfilling these needs. It is also a quite easy website to use as you have seen but I believe this is down to each individual user.

Future Work: From all the research I conducted and journal articles I read, it seems as though most of the information about concussions comes from players. I would like to possibly partner up with a researcher who is willing to gather data from referees with the use of my website. With this, I would need to add a statistical element to the dashboard where the researcher can query different things and receive the necessary data such as which position is most prone to receiving concussions or is there certain times of the year where the occurrence of concussions rise.

Conclusion: I’ve learned a huge amount about the effects of concussion on the brain. Even subconcussive blows can have lasting effects which can lead to degenerative diseases. Recently, as portrayed in the movie ‘Concussion’, Dr Bennet Omalu diagnosed a number of retired American footballers with CTE, a disease similar to alzheimers. This disease is very similar to alzheimers but is seen in those who have received repeated blows to the head. Unfortunately it is only possible to diagnose it after one’s death and therefore it is impossible to see the true extent of the disease in American Football, rugby or in football where even heading a heavy ball can lead to degenerative brain diseases like in the case of Jeff Astle who played in an age where they used a leather ball.

Above all else I just wanted to highlight the devastating effects that concussions can have on the brain.

This is the first time I have designed and built a working system on my own. Thankfully the course gives me the necessary tools such as learning about databases in information management, the different development lifecycle models in a number of modules and of course the exposure to a huge range of programming and markup languages throughout.