Rowing Training System :)

Analysis:

Introduction and justification of the program

Justification of why the problem is solvable by computational methods

Thinking WHY

Thinking Ahead

Thinking Procedurally

Thinking Smart

Stakeholders

List of stakeholders

Interviews

Interview Summary and Conclusion

Research of the problem:

Existing solutuons:

X

Y

I have Ran out of generic place holders



I hate Plotwists

Im scared of irony

AAHHHHH

Remember to delete this.

Essential features

Limitations

Hardware requirements

Software requirements

Success Criteria

# Introduction and Justification of the program

As an athlete, I can train up to 12 times a week. And there is currently no easy way to communicate (and show off) scores and results of training. There is also no easy and clear way for a coach to communicate when a session time has changed or when it is cancelled. I aim to create a website and digital system in order to allow for:

* An Easy, Clear and intuitive method for a Coach to create a training schedule
* An Easy, Clear and intuitive method for a Coach to communicate a training schedule
* An Automated system to alert effected athletes on changes to the status of a training event
* An easy and intuitive way for athletes to communicate (show off) scores and achievements from training and events to other athletes. And view others scores.
* An easy way to view a digestible training program

The website lends itself to a computational approach because in a school enviroment it is a common occurrence for athletes to be confused about whether a training session is happening, which can lead to them missing a session or arriving to a session that is not happening. By creating a website to allow athletes to view an automatically updating and easy to use and digest website instead of scouring through outdated emails, this will be prevented.

The Website also lends itself to a computational approach because the current state of students recording their training is at best taking pictures of the erg machine screen only to be lost in the void…..

By making this website scores and achievements will be easy to store and view so athletes and coaches can track their progress.

# Justification of why the problem is solvable by computational methods.

Thinking WHY.

My solution/product will aim to:

* Streamline the process of Making a training schedule in order to save coaches time and confusion.
* Allow athletes to view a time table which will avoid confusion about a schedule
* Allow athletes to communicate training scores and achievement between other athletes and coaches

The solution will Improve upon the current system of pure text, hard to digest emails.

Thinking Ahead.

I can break my inputs down into Three sections:

* Creating an account
* Creating a timetable
* Entering training data

Creating an account:

There will be 2 types of users, coaches and Althletes, however both will need similar data to create an account.

For coaches:

* First and last name
* Optional Account Description
* Password

For Althletes:

* First and last name
* password
* Optional account description
* optional Sporting scores (e.g: rowing 2k: 6min 20)
* optional sporting achievements (e.g 2022 winner of ladies challenge cup HRR)

Creating a timetable:

When a coach creates a timetable, they will need to input data per session to create a timetable for a defined group of athletes:

* Session name
* Session type
* Session start and end time
* Session location
* Is it recurring or not, how often, (e.g. every week on a Monday) if so this will be automatically plotted)

Entering training data:

An athlete will be able to input training data in to ways. By clicking on a past session and attaching the relevant data to the session or inputting data from a session not on their timetable.

When clicking on a past session:

* Set time and distance achieved or set distance and time achieved
* Average split time.
* Optional: average stroke rate.

When inputting data from a session not on their timetable they will need all the previous data stated as well as:

* Session date and time.

Thinking Procedurally

Because of my history with rushing into things and creating a rather messy solution to things, I will approach the problems I will face with decomposition to break down the problem to try and ensure I solve the problem efficiently and effectively.

Thinking Smart

I will need to consider the use of the features I will be implementing and how they will be used in order to deliver them effectively. For example many users will need to be able to upload data and create and view timetable at the same time, so I must consider this in my approach.

# Stakeholders

My aim with the stakeholders is to present them with the best possible product, therefore I will conduct interviews with a varied group of people in order to gain a better understanding of what they want and how I can build the product to suit the users.

One of the main stakeholders will be Stefan Lawrence, he is the coach that handles almost all the rowing sessions at my school and will be one of the coaches using the product. My aim when interviewing him will be to learn about fine details that would make the current proposed product more usable and convenient for him as well as to uncover any features that he may want that I have not thought of including.

Another stakeholder will be Joshua coulter, Josh is a dedicated athlete and regularly attends training sessions but is also constantly unsure when they are, what is going to happen during them and whether recurring sessions are going ahead. This makes him an ideal stakeholder as the product aims to solve all of his problems. Josh also tracks his scores and loves to show off, so the product would streamline the process of tracking his progress and displaying it to others in his group.

The final stakeholder will be Henry Sullivan-Porteous, Henry is a slightly more casual rower and does not attend all sessions, the product will allow him to continue to be aware of sessions he does not regularly attend and has previously stated that he would find an automated system to tell him when sessions have been cancelled useful. He will also represent the need of the more casual rower and will therefore expand the target userbase therefore make a product suited for more people.

Interview with Henry Sullivan-Porteous:

1. How often do you record your data:

After most sessions

1. When you don’t record your data, why don’t you?

I Forget or can’t be bothered

1. When you cant be bothered, why?

I have Difficulty in the long current process

1. How useful would you find a website to record your data?

A Program would be helpful

1. How important is the ease of use of the website?

Streamlining the process will help and make the program appealing

1. What is your current method of recording data?

With the camera app on my phone

1. Would compatibility with photos be useful?

Yes, an easy way to transfer picture to data would be helpful

1. What would be your main objection to switching systems?

It would need to be worth the extra time using the website, ideally the process would be as quick as possible

1. Do you like to show off your athletic achievements?

I would like to however I do not have a way to efficiently show off my achievements to others, so a website to allow me to do this would be helpful

1. How do you like to organise the majority of your training data?

By date.

1. Is there any specific way you would like to show off your data?

I think a way to show the total distance rowed and total time rowed on my profile would be cool. As well as a Leaderboard in groups and global

1. What is your experience with understanding when sessions are on and when they have been cancelled?

I am often confused when sessions are on, I would like an emails system to describe all session details weekly and say if regular sessions occur or not.

Interview with Joshua Coulter:

1. How often do you record your data?

After all sessions, as much as possible.

1. What allows you to record all your data?

I record my data by taking pictures with my phone, so it Is quick and easy.

1. Would you say the speed of recording data is the most important factor when you consider how you record it?

Yes.

1. How useful would a website be to help you store your data and visualise your progress?

An easy was to see my progress over time would be great, however the value the site provides must make any extra time spent recording the data worth it.

1. Would compatibility with photos be useful?

Yes

1. Do you like to display or/and show off your athletic achievements to others?

Yes I do, however I have been told that I am not discrete in my methods so a more passive way of doing this would be useful.

1. How do you usually organise your training data?

By date, as in my experience this allows me to best see my progress.

1. What is your experience of understanding whether sessions are or aren’t occurring?

I find the current system makes it hard to find the up to date schedule and even this is sometimes incorrect.

1. Would an email system be useful in order to alert you when sessions are on or off?

Yes.

1. Would you prefer a weekly email which summarises all the sessions or a system that alerts you when sessions are cancelled?

I think a weekly email that summarises all of the sessions in the week would create a kind of one stop shop which would make it easier, although a system to alert me when sessions change would also be useful as sessions can change with late notice so the weekly summary might become outdated.

Interview with Stephan Lawrence.

How to you currently organise your training sessions?

I have a rough idea in my head of what I want to do in each session, I go from there

What would you look for in a system to help you organise your coaching?

I would want a system to keep my athletes informed, both when sessions are and what will happen in them, as this will help them prepare for each session. I also think a timetabling system would ensure that I create an ideal spread of training to best target athlete progression because it would help me visualise an athlete progression over a long period of time easily.

How important is it that the product is easy to use?

I think an easy to use product would incentivize me to use it and would reduce the time spent using the product.

Interview Conclusion.

In Conclusion I have learnt there are 5 main things to take away from the interviews:

1: The Website must be efficient, easy to use and be compatible with methods such as pictures

2: The website must have an area of competitiveness in order to create an fun incentive for athletes to use the program which will compromise for any lost time storing data.

3: the timetable must clearly communicate any changes in the regular timetable, as well as communicating the timetable for the week.

4: Athletes must be able to easy view and digest data over a large variety of time frames.

5: Creating a timetable must be easy and quick for a coach.

# Researching the problem

Existing Solutions:

Strava:

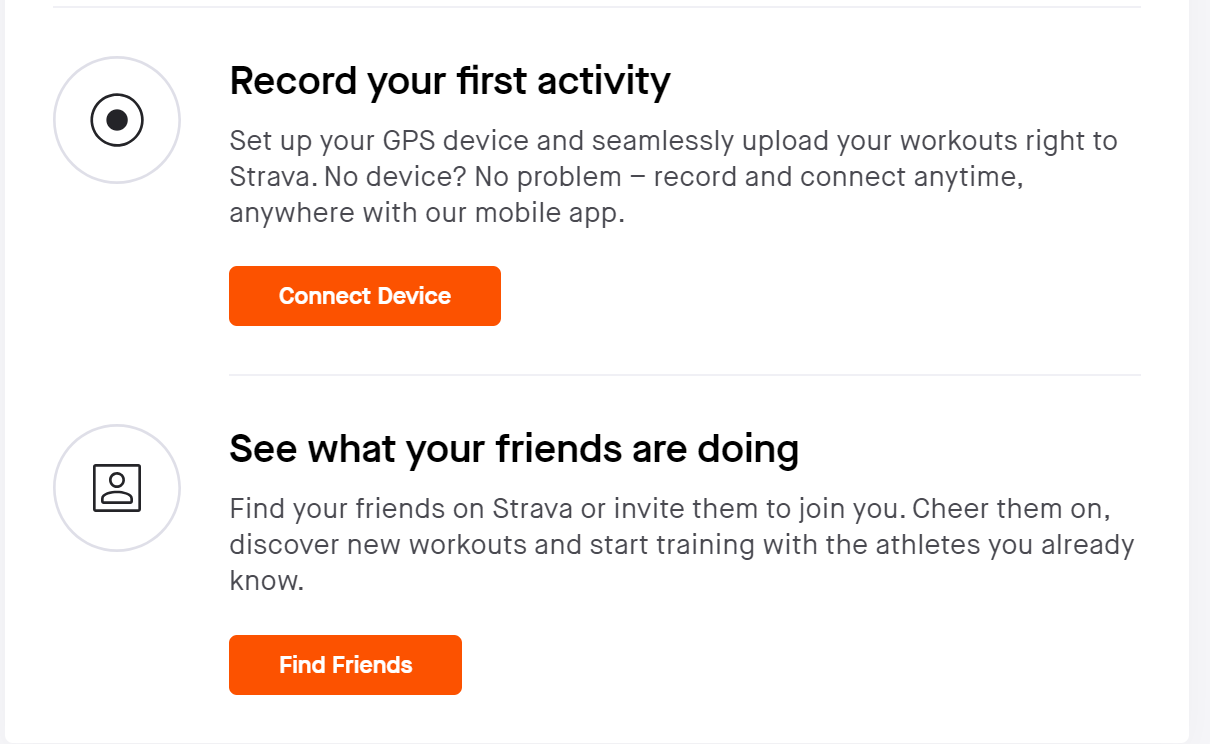
A screenshot of a computer

Description automatically generated Strava is a popular Fitness website and app targeted at athletes and enthusiasts. It is focused in tracking and sharing the data from physical activities.

The site uses may pages which separate the different uses of it. This also helps the site look spacious and usable whilst also looking professional.

The Homepage looks professional and acts as a summary for the website.

It has a simple colour scheme which helps make the site easy to digest and relatively easy to navigate.



The Homepage features boxes which advertise some of the uses of the site which helps introduce new users to ensure they are not confused or overwhelmed.

A screenshot of a social media account

Description automatically generated

The homepage features a small box in the corner displaying some basic user data, this ensures that the user knows they are logged in and makes the experience feel personal.

A screenshot of a calendar

Description automatically generated

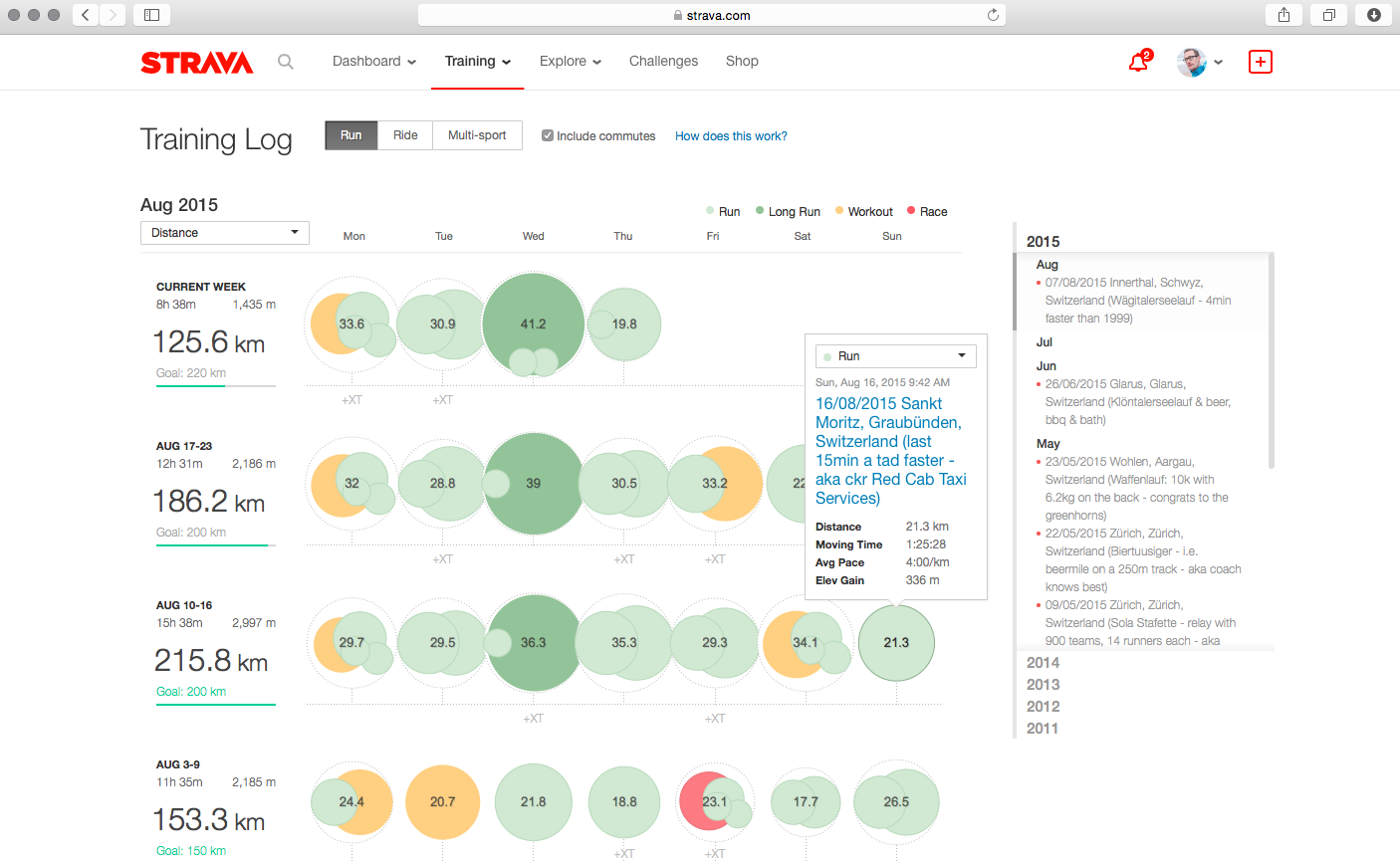
The training calender is spacious and intiuitive which makes the page easy to navigate, The count in the corner gives an easy way of tracking progress, by clicking on one of the month boxes you get this:

A screenshot of a calendar

Description automatically generated

The in-depth calendar of the month features a similar design which gives it a familiar feeling which makes the pages feel connected and intuitive and easy to navigate.

The “Training Log” feature offers data visualization and analysis of inputted training data, Although this feature is behind a paywall I have managed to find and screenshot.



The way the data is presented provides a digestible view of training data over time and compares it to a goal.

From this website I understand that my website must be easy to navigate in order to provide a friendly user experience, and that training data must be easy to digest to allow users to analyse it easily. I also know that a homepage presenting a overview of all the uses of the website would be useful to provide a better user experience.

Socs:

A screenshot of a computer

Description automatically generatedSocs is a simple timetabling system used by many schools in order to show a visual time table. The schools can assign many lessons/sessions to different groups, and individuals can also add other sessions as a single or recurring event.

The main page of the website serves its main purpose of displaying a timetable. The page features a simple, soft colour scheme and a neat design.

Days are sorted into individual collums:

A screenshot of a computer

Description automatically generated

Which consists of a collum of activities throughout the day.

A screenshot of a timetable

Description automatically generated

The box contains all the information about the activity including time, location and a name of the activity

The single event page (not recurring) looks like this:

A screenshot of a computer

Description automatically generated

The date is inputted by selecting a date when this pops up:

A screenshot of a calendar

Description automatically generated

This method of input makes the process quick and also because it does not take in text and instead takes in the date by pressing it, ensures it is in the correct format.

The page overall is simple and therefore efficient, however is not the most digestible or visually appealing.

The reccuring page is similar:

A screenshot of a computer

Description automatically generated

It features the same inputs as the single event page, as well as inputs to find the date range (when it starts and stops happening), and a “recurrence pattern” input, which asks when a event repeats, e.g: it repeats every Monday.

If daily is selected, this appears:

A screenshot of a computer

Description automatically generated

However if weekly or biweekly is selected, this appears:

A screenshot of a calendar

Description automatically generated

Hiding these inputs until they are necessary helps compact the page, speed up the input process and make the page more digestible.

From this website I can learn that the website must be easy to navigate and digest and consistent in design. One of the ways I can do this is by hiding unnecessary features and details unless they are needed to simplify the experience.

Microsoft Teams:

Microsoft teams is a complex team/school management system. One of the features is the assignments:

A screenshot of a computer

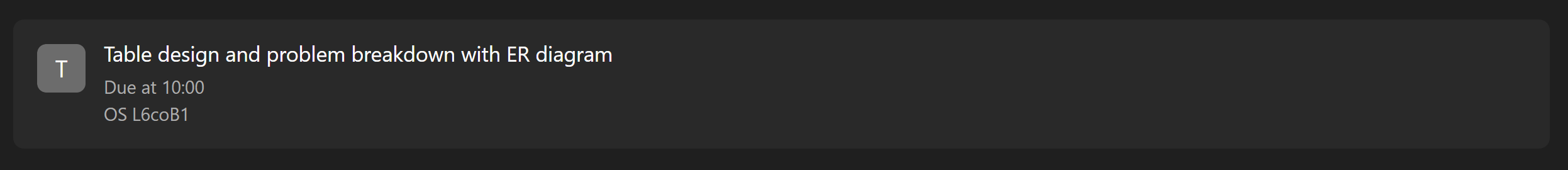
Description automatically generated

The page is broken up into days:

A black rectangular object with a black stripe

Description automatically generated

The “sub header” for the day simply states the day on which the assignments, or what would be in the case of my product, the sessions would be. It also separates the day from others. Each session is represented by this:



The picture on the left can be used to represent an aspect of the assignment, in the case of my program this may be the type of session. This would help distinguish each session and allow the user to know the type of the session easily and in many ways. The other way would be with the bottom text.

The use of different font colours draws attention to the main subject of the sessions. This helps guide the user through the program and allows for an easy user experience.

From this program I can learn that In order to make the website intuitive an easy to navigate which will make it efficient to use which will minimize client time used, I must make a website which guides the user through the programmes using design. I must take note that a method of doing this especially well includes highlighting interactive aspects of the website (such as buttons) which will make it intuitive.

# Research Summary

Ease of navigation:

The main take away from my research Is that my site must look and feel professional in order to incentivise use. It must also be easy to navigate to minimise time lost by logging data on the website instead of just taking a picture. The data presented must be easy to digest so that the user understands the data. The data must also be able to viewed in multiple ways over multiple timeframes.

Summary homepage:

The homepage must act as a summary for all for the features of the website and must be an intuitive hub of navigation. This will make the website easy to navigate and make the website less overwhelming while adverting/showing off its capabilities. An essential feature of this homepage must be a small area which summarises basic user data including the users name. the real purpose of this will be to show the user that when they are logged in, they are logged in.

A competitive aspect:

Adding a competitive aspect will add a new feeling to the website. It will incentivise the logging of data in order to show off and compete with friends to get the highest score. A competitive aspect for one athlete can be created by comparing current and previous data to encourage self-improvement.

General Design:

Making a nice web design will complement the previously mentioned. As well as to stand out against other more “boring” designs of similar websites which will incentivise use.

# Essential Features.

A Homepage:

The homepage must be an access point to enable users to access all the features of the site, it must feature a short user summary, as well as a summary of other features such as the weeks timetable without detail, and a small assignments section to overview sessions in a different way.

A Timetable page:

This must enable athletes to view their timetable. They must be able to click on a session and attach achieved data. Including a picture.

A New session page:

This page must allow athletes to store data for a session not on their timetable

A Coaches Homepage:

A homepage exclusive to coaches will summarise the coaching features, allowing coaches to easy access features to create and edit timetables.

A way to allow coaches to create and edit timetables:

This will allow coaches to create edit, and distribute timetables.

A Login Page:

The login page will allow users to login after taking in a name and password.

A Sign Up Page:

The Sign up page will ask users to input the previously stated necessary data and create an account.

An Email System:

The system must send out an email to athletes once a week summarising their weekly schedule and individual emails alerting them when a new session is occurring and when a regular session is cancelled

A Leaderboard System:

This must display both global scores and “team” scores between athletes about their total distance and time rowed. Athletes must be able to view this under multiple timespans such as all time and over the previous month

# Limitations

One feature that I would like to implement is a image to text converter when athletes input data, however because of the way data is presented on a rowing machine screen available solutions are not nearly reliable enough to use, and I cannot make a solution myself because programming a machine learning algorithm is slightly out of reach of what I am able to do in the coursework timeframe and the it would take to collect and create a data set from an ai to learn from would make the feature unrealistic and not worth it.

Another Feature that I would like to implement would be a sister app in order to produce a smoother/easier user experience. However coding an app would take too much time for this project. I will instead make sure that my CSS is variable and Phone friendly so that it can be used like an app from a phone browser.

Because of my budget for the project I will not be able to use a simple and professional domain name. however I believe that this shouldn’t be too much of a problem as because the website has quite a specialised purpose it will be spread more by word of mouth than by people searching for it.

# Hardware and Software Requirements

Software Requirements:

I will be programming using visual studio code as this will allow me to easily traverse the many files the project will use.

For the final Solution I will be using Html to structure the website, with CSS in order to style it to make sure the website is digestible/intuitive and generally looks nice. The main function side will be done with PHP to access and output tables. With some JavaScript to do some basic mathematical calculations

I will be using these languages as they lend themselves very well to the demands of the program. They are also the ones I am most fluent in.

Hardware Requirements:

Because I will be using a free hosting service, the hardware such as the web and SQL server will be provided so I do not need to worry about that. In order for the user to access the website they must need a device with an internet connection that is easily able to run a web browser.

# Success Criteria

Identified, justified and measurable success criteria for the program:

1. **The main criteria is that the final website must be easy to use by being intuitive and presenting features and data in a digestible way**. As this will reduce the time spent on all aspects of the website and increase the satisfaction the user receives while using it. I will measure this by testing the total amount of times the user asks me for help or seems unsure during their first use of the site. I will aim for them to not ask me anything (relevant to the site) more than once and seem unsure more than 3 times. This will mean that new users can easily navigate the website without help which will show that it is intuitive.
2. **A coach must be able to make and assign a training program in under 10 minutes on their first attempt:** This is because Mr Lawrence my stakeholder on the coaching features of the website, said that the website must be quick to use in order to incentivise use, and after quick discussion we have agreed that 10 minutes is a good benchmark
3. **A user must be able to create an account in less than two minutes:** this is to prevent the sign up process taking too long and scaring away users. Ideally the process will take less than a minute however I have acknowledged the fact that some users may want to add large amounts of optional information to their account and will take longer than most.
4. **Users Must be able to login to their account within 30 seconds of logging in.** The login process needs to be short to avoid the annoyance caused to a user when they have been logged out between sessions. The process also needs to be short because users will be using the website when trying to record data at the end of a training session and my stakeholders have told me that this is something they want in the site.
5. **Users must be able to access all of the main features within two clicks of the homepage:** this is two reduce time spent navigating the site to reduce overall time spent on the site
6. **Users must be able to look at their data in multiple ways:** this will allow data to be viewed and processed from “different angles” and will therefore help the user digest their data.
7. **Coaches must be able to assign programs to athletes in under 30 seconds per athlete:** this will ensure that the overall process of making a training schedule for a team is short.
8. **Athletes must be able to fill in a sessions data within 2 minutes:** This is to make sure that recording data is quick in order to meet the stakeholders requests.