

Project Initiation Document

1. Introduction

Currently there are many fitness trackers and fitness tracking websites available, for both athletes and individuals interested in fitness, to use. However, currently there aren't any fitness tracking websites for everyday individuals that allows them to see if they are at risk of injury or not. By everyday individuals, I mean individuals who aren't athletes but like to keep fit and exercise regularly. A fitness tracker that interprets what exercise the user is doing, the frequency and the intensity of the exercise and then tells the user if they are at risk of injury, will mean that everyday individuals will have a better understanding of whether any harm is being caused to their bodies.

2. Background/Motivation

As mentioned above, there are currently a range of fitness tracking websites available, however none that give feedback on whether the user is susceptible to injury, based on the exercise they are carrying out. A lot of people use gyms and carry out regular exercise, but don't know the effect the exercises they do can have on their bodies, if carried out too frequently or along with other high impact activities.

I have chosen to undertake this project to gain a deeper understanding into the best ways individuals should exercise and what activities you should avoid doing too much of. I also want to develop my skills in ASP.Net and JQuery. As well as making an interactive and high-quality website, that is accessible to users.

Potential users would be individuals who regularly exercise but are not athletes. These users would want to use this product as it is a place they can upload their exercises and track what they have done and how much they have done. This allows users to compare their workouts to previous workouts and see whether they are improving or not. The website will also allow users to be aware of any exercises they are doing that could potentially be causing them injury. The website can also help users by suggesting other possible workouts they could carry out instead, that reduces the risk of injury.

3. Project Objectives

1. To allow users to log their fitness activities
2. To analyse users' fitness log entries and inform the user if they are of risk of injury
3. To provide users with an easy to use interface, that requires minimal training
4. To allow users to access their fitness log in any location, given that they have internet access
5. To provide recommendations to the user on alternative exercises they can carry out, if they are at risk of injury
6. To provide a fitness tracker that is accessible different types of users

4. Initial Scope

1. The proposed system will allow
 - a) users to input their fitness activities and be able to delete or amend them afterwards
 - b) users to view previous fitness activities logged and compare them to present fitness logs
 - c) users to get feedback about whether they are at risk of injury
 - d) users to access the fitness tracker from any location with internet access
 - e) security, legal and usability issues will be key quality criteria
2. User requirements will be gathered using questionnaires, observations of similar systems and through the development of user stories. User requirements will be expressed primarily in text.
3. The more complex user requirements will be elaborated into detailed system requirements either using text, use case descriptions and/or a use case realisation. A class diagram will be produced. State machines will be developed (only) for those classes with significant state dependent behaviour.

5. Method of Approach

I intend to carry out an agile approach to my project. I plan to carry out an incremental approach to my software development. I will have three increments which will focus on (i) the development of the initial website and database, resulting in the user being able to log their fitness activities; (ii) the development of algorithms to provide feedback on the data the user has input; and (iii) manipulating data, for example creating graphs comparing exercise logs and creating recommendations of exercises to carry out. The technologies I will use are ASP.Net/SQLServer and HTML, CSS and JQuery.

6. Project Plan

A gantt chart of my project plan is shown in Appendix A.

Stage	Expected Start Date	Expected Completion Date	Products/Deliverables/Outcomes
1. Initiation		Fri 2 nd Feb	PID
2. Investigation into exercise and injury and creation of potential user questionnaire	Mon 5 th Feb	Fri 9 th Feb	Findings of exercises causing injury; Potential user questionnaire
3. Investigation and outline requirements	Mon 12 th Feb	Mon 19 th Feb	Analysis of similar products; Analysis of potential user questionnaire; Outline requirements
4. Initial high-level design	Tues 21 st Feb	Tues 27 th Feb	Design documents (Architecture; DB schema; GUI style guide; ...)
5. Increment 1	Wed 28 th Feb	Mon 12 th March	Increment requirements and design; Sub-system providing

			development of initial website and database; Test results
6. Increment 2	Tues 13 th March	Thurs 22 nd March	Increment requirements and design; Sub-system providing feedback on data the user has provided; Test results
7. Increment 3	Fri 23 rd March	Fri 30th March	Increment requirements and design; Sub-system providing manipulation of user data; Test results
Easter Holidays	Mon 26th March	Fri 13th April	
8. System and user acceptance testing	Mon 16 th April	Fri 20 th April	Test results, final system; user training
9. Assemble and complete final report	Mon 23 rd April	Fri 4 th May	PRCO304 Report

7. Initial Risk List

Risk	Management Strategy
Schedule overrun	Contingency has been introduced into the project plan. Highlight reports and review meetings will provide a regular monitoring of schedule. An exception plan will be developed, and approved by the project supervisor, in the event of more than 1 week's slippage.
Technology failure/data loss	The system will be deployed using standard technologies, and system backups will be taken daily
Illness	Contingency has been introduced into the project plan.
Deadlines for other modules overlapping	Ensure good time management. Contingency has been introduced into the project plan. Highlight reports and review meetings will provide a regular monitoring of schedule. An exception plan will be developed, and approved by the project supervisor, in the event of more than 1 week's slippage.
School placement commitments overlapping	Ensure good time management. Contingency has been introduced into the project plan. Highlight reports and review meetings will provide a regular monitoring of schedule. An exception plan will be developed, and approved by the project supervisor, in the event of more than 1 week's slippage.
Difficulty learning/using the development technologies	Revising the technologies, I'm going to use prior to the development stages and communicating any issues I have with my project supervisor.
University sports team commitments overlapping	Ensure good time management. Contingency has been introduced into the project plan. Highlight reports and review meetings will provide a regular monitoring of schedule. An exception plan will be developed, and approved by the project supervisor, in the event of more than 1 week's slippage.

8. Initial Quality Plan

Quality Check	Strategy
Requirements	Requirements will be checked to ensure that they are correct, relevant (i.e., traceable to the business objectives), complete, achievable and demonstratable. The requirements will also document required product quality criteria (e.g., usability). Prototyping, user interviews and walkthrough will be employed.
Design validation	The design will be checked against requirements compliance, HCI guideline compliance, screen-design acceptance, DB normalisation and software design principles (e.g., cohesion, coupling)
Sub-system V&V	To be conducted at the end of each increment
System V&V and user acceptance	To be conducted within Stage 8

9. Legal, ethical, social and/or professional issues

In my project I will require participants to provide insight into the potential requirements they would like to see from the end product. I will also require participants to test the product at different stages of development and to provide feedback at each stage. The University's Ethics Policy relating to the use of "research involving human subjects" will cover the ethical approval I need to involve human participants in my project.

A potential legal issue that could arise in my project is software licensing issues. However, the software I will be using will be software downloaded through the university which will be used in accordance to the regulations. To make sure I don't break any copyright rules, I will thoroughly research competitor websites and ensure that I am aware of features they have copyrighted. I will also ensure that any images used are not copyrighted and are either created by myself or are images that are free to use in the public domain.

To ensure there are no social issues with my project, I will ensure that any information participants provide are not made public or shared with others. This will avoid participants invasion of privacy or feeling embarrassed or offended at their information being shared.

Appendix A

