

CARDIFF UNIVERSITY

COMPUTER SCIENCE AND INFORMATICS

INITIAL PLAN

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Implementing a user-friendly version of the  
**TRAK** web site

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# 1 Project Description

TRAK is a web-based app that supports self-management of knee rehabilitation. The key functionality of the app includes information provision, a three-step exercise program based on a standard care for the rehabilitation of knee conditions, self-monitoring with visual feedback, and a virtual support group. more information about TRAK can be found here: <https://www.researchprotocols.org/2015/4/e122/>. The app has been re-implemented for use within the NHS: <https://trakphysio.org.uk/Home>. The goal of this project would be to re-implement this web site to:

- (1) Improve the look and feel of the web site, including a responsive mode, to ultimately improve its user friendliness, and
- (2) Add extra functionality such as automatically creating a video playlist based on an exercise prescription.

# 2 Project Aims and Objectives

The aim for this project is to provide critique of an existing system. A collaborator from a London hospital used the web site in her clinical practice and has compiled feedback from patients who used it in their own rehabilitation. In addition, I will carry out my own research on the website to complement the user feedback with my own professional opinion as an IT expert. As a result, I will provide recommendation as to what features of the website need be improved and how.

There are two main objectives that need to be completed within the project:

1. Improve the look and feel of the web site, including a responsive mode, to ultimately improve its user friendliness.
  - User interface is of a high standard.
  - Should be able to work naturally on a range of different platforms such as smartphones tablets, not just laptops and desktop PCs.
  - Make the system to be user friendly.
2. Add extra functionality such as automatically creating a video playlist based on an exercise prescription.
  - Allow users to select the videos they want and then be able to make a playlist that can automatically play throughout an exercise session without requiring the user to interact with it.

To create these features and user interface I will need to be familiar with HTML, CSS, Javascript and PHP. Furthermore, to complete these tasks it will require the design and implementation of many features, such as a user Interface Model. I will use software such as balsamiq to illustrate how the user will interact with the system and what features will be available.

It will also require the implementation of a user interface. This is a front end interface to allow users to interact with the system.

In addition, it will require the design, implementation and testing. There are three steps to testing, these are creating test cases, functionality testing and usability testing. Test cases are a set of requirements that are used in order to test the created system against the specific requirements. The functionality testing will be needed to ensure that the functions of the final system complete given requirements. Finally, usability testing will follow the framework described in the following paper:

Irena Spasić, Kate Button, Anna Divoli, Satyam Gupta, Tamas Pataky, Diego Pizzocaro, Alun Preece, Robert van Deursen and Chris Wilson (2015) TRAK application suite: A web-based intervention for delivering standard care for the rehabilitation of knee conditions. JMIR Research Protocols, Vol. 4, No. 4, e122 [<http://www.researchprotocols.org/2015/4/e122/>]

This will allow us to compare the usability of two versions of the system.

### 3 Work Plan

Week	Task	Milestones/Deliverables
Week 1 (23/01/2017 - 30/01/2017)	Complete initial project plan	Completion and Submission of project plan.
Week 2-3 (30/01/2017 - 06/02/2017)	Complete background research in order to find the issues in the current website.  Documentation - Risk Assessment - Social, legal and ethical issues	Have completed the research and have found all the issues and what can be improved.  Completed the risk assessment and discussed all the social, legal and ethical issues that are involved.
Week 4 (06/02/2017 - 13/02/2017)	Create and complete designs of the interface for the system.	Finished the designs using balsamiq and have met supervisor / client in order to finalise the design. Selected a design to implement.
Week 5-8 (13/02/2017 - 13/03/2017)	This period will focus on the implementation stage of both user interface and the features within the system. - Allowing users to select videos and then watch them in a playlist. - Re-create the existing pages in a better user interface. - Re-create the system in order to make it user friendly.	Completed implementation. Software demo. Meet Supervisor to show web site.
Week 9 (13/03/2017 - 20/03/2017)	These weeks will focus on testing of the system. - Testing the system against the test cases I have created. - Testing the functionality of the system against specific requirements. - Testing the usability of the system against specific requirements.	Would have completed testing against the test cases. Usability findings summarised. Meet supervisor to discuss final report.
Week 10-12 (20/03/2017 - 05/05/2017) (Easter Break in the middle 10/4/2017 - 30/4/2017)	Work and complete the final report until submission date.	Final report submission.

I will use a gantt chart and the work plan in order to structure my project. The work plan and gantt chart will give me deadlines I need to meet in order to make sure that I complete the project at a high standard before the final submission. In the gantt chart, the purple triangles are the milestones I have created. I will make sure I follow these milestones so I know that I am following the work plan and then my supervisor will know how far through the project I am and if I am working at a good standard.

# 4 Gantt Chart

