**Sports Finder App**

Project Proposal

Nottingham Trent University

Final Year Project

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# Introduction

1. Explain the topic and give a general overview to the project.
2. Demonstrate familiarity with the background literature. (create table to compare strengths and weaknesses?)
3. Identify a problem(s) which is relevant to the topic
4. Place the topic in a wider context.
5. Identify any general implications for the project

The chosen topic for the project is a mobile application aimed at individuals who have interest in Sports. The reason behind the chosen topic is related to physical health issues in the UK due to lack of exercise which will be discussed in more detail later. Thus, the application will aim to encourage more people to get involved and help them find opportunities in their area. Using this app, the users’ will have the ability to search for clubs or find opportunities around their area. They can filter out the competitive opportunities with non-competitive ones depending on the user’s preference. The app will have a feature to filter clubs depending on the sport they have chosen in the dropdown field they will be provided. Upon start of the app, the user will be presented with a login interface. There will also be a toggle option to toggle between a normal user and a club, because clubs can also make an account so they can add opportunities about for people and provide information about their club. The user will be able to login if they already have a registered account, alternatively, they will be given an option to sign up under the ‘Login’ button which will be bold and highlighted. When the user clicks on the sign-up option, they will be presented with a new interface. Similarly, to the login interface, there will be a toggle button to switch between the type of user you wish to make an account as. On the ‘Sign up’ interface, the user will be provided 3 text fields to type in their information such as, full name, email address, and password. After typing the information, when they click on the ‘Sign up’ button, another interface will appear with more text boxes to ask them to provide further information such as, their address (Street name/number, city, postcode) and a dropdown field which will ask them their preferred sport. The app will use this information to help filter clubs/opportunities and locate facilities. If the user registering an account selected ‘Club’, then they will be provided with an extra information which will ask them about their club, provide a picture and the opportunities. More features… messaging feature? League table? Sport for men and women? Social media? Have club statistics? Focus on a specific sport?

Currently, there are no solutions in the app market or online that offer same functionality or features to the proposed project. However, there are a few resources which help achieve similar results. For example, using Google maps to locate suitable local clubs or facilities and then receive directions. You can also use Facebook to help you achieve the same thing. Facebook has a functionality which allows its users to create Facebook pages where they can post updates and events. After doing some research, there were few pages that can be found on Facebook who advertise sport clubs/tournaments providing opportunities to people; such as “Sunday League Football (West Midlands Only)” page. ‘Sunday League Football’ also advertises kits players can buy at a very reasonable price. Another online resource which provides information about Sunday league football clubs is the FA website. The user can find their city’s Sunday league (Men/Women and different ages), and all the teams currently registered; among other things, they also keep track of match results and player/club statistics. There is an app called “Match Report Pro” on Google Play/App Store which provides similar features and functionality compared to the proposed project; It is free to install. The application allows its user to create an account (usually the club manager) and register their team on the platform. The user will have the ability to manage their team from the app as they can add the player information, register match dates (when the match date approaches it will send them a notification); ‘Live Scoring’ system where the user can create minute by minute text commentary of in game action such as goals, corners, shots, tackles, fouls etc. Team statistics & individual player stats are created from users’ live scoring actions. The app has a built-in function which will automatically write match report for the user. ‘Match Report Pro’ also allows the user to send push notifications and emails to the team and see who can attend training/matches. The user can also communicate with the team sending them messages and chat using the app. There are also sport facilities who post leaflets to advertise around the local area and often provide indoor sports opportunities, such as ‘DW Fitness First’, ‘David Lloyd’ and ‘Moorways’ etc who offer indoor boxing and swimming lessons.

Health issue is the main problem this project aims to tackle and provide a potential solution for. The majority of health issues in the UK are due to the lack of exercise which is “as deadly as smoking” [[1](https://www.nhs.uk/news/lifestyle-and-exercise/lack-of-exercise-as-deadly-as-smoking/)]. Researchers have estimate that lack of exercise often can be the cause of one in 10 cases of heart disease (10.5%) and just under one in five cases (18.7%) of colon cancer in the UK. [[2](https://www.nhs.uk/news/lifestyle-and-exercise/lack-of-exercise-as-deadly-as-smoking/)]. In 2008 inactivity caused more than 5.3 million of the 57 million deaths estimated overall. [[3](https://www.nhs.uk/news/lifestyle-and-exercise/lack-of-exercise-as-deadly-as-smoking/)].

# Aims and Objectives

Describe what this project will attempt to achieve and deliver. You will need to state clearly the aims and objectives of the project. Your objectives must follow the SMART (Specific, Measurable, Achievable, Realistic and Time Bound) methodology.

* How to make objectives follow SMART
* How to ‘critically evaluate key needs’?
* Have option to login for 2 different type of users
* Have option for signing up for 2 types of users
* Being able to add sport clubs, location, type of opportunity the offer

# Task and deliverables

Identify the tasks that need to be carried out in order to complete this project. Outline the expected outcomes that this project hopes to deliver. Provide details of the expected scope of the project and which of the tasks and deliverables may or may not be within scope. List the main project milestones.

* How do you show an exceptional knowledge and understanding of scheduling?
* Scope out of scope?
* Deliverables?
* User Interface? (UI)
* Database set up
* Club side complete
* User side complete
* Testing

# Gantt Chart

* 1. Project milestones (including main deliverables)
  2. Project tasks and deliverables including start time and duration
  3. Other milestones including deliverables for other modules, exams etc.
* Project registration - 4/10/2019
* FYP Tutorial 1 - 14/10/2019
* Review Point 1 & Ethics declaration – 25/10/2019
* Project planning document submission – 01/11/2019
* Research
  + Research users/target audience
  + Research issues related to the chosen topic
  + Research Existing Solutions
  + Research helpful online resources
  + Research what database to use
* Analysis
  + Functional/Non-functional requirements
  + Use cases
* Design
  + DFD
  + Design data storage design
  + GUI paper prototype
* Implementation
  + Create GUI for normal user
  + Create GUI for Club user
* Artificial Intelligence Lab Task 1 - 05/11/2019
* FYP Tutorial 2 - 18/11/2019
* AAD 1st submission - 22/11/2019
* FYP Review point 2 - 06/12/2019
* Artificial Intelligence Lab Task 2- 10/12/2019
* Artificial Intelligence Report - 17/01/2020
* FYP Tutorial 3 - 20/01/2020
* Review point 3 and show case entry - 08/02/2020
* AAD Report + Code - 14/02/2020
* Artificial Intelligence Lab Task 3 - 25/02/2020
* Adv Soft Engineering Report + Code - 26/02/2020
* FYP Tutorial 4 - 02/03/2020
* AAD Phase Test - 06/03/2020
* Artificial Intelligence Lab Task 4- 27/03/2020
* Project submission - 24/04/2020
* Project demonstration - 30/04/2020
* FYP Tutorial 5 - 04/05/2020

# Resources

In order to work on your project, you will require various resources such as software and hardware, literature and research findings etc. These can come from a wide range of sources including lecturers, colleagues, connections you have made on your placement etc. In this chapter you need to:

* 1. List of the resources that you will use to meet the project outcomes.
  2. List the sources of the information required to conduct the project.
* Android Studio
* Android Java
* Android OS
* Firebase
* YouTube
* Udemy
* GitHub
* Mobile Application Lab exercises
* Mobile Application Lab tutor
* Personal Tutor/Project Supervisor (PT)
* Friends familiar with mobile application development
* ‘Developers’ website (documentation on mobile app development)
* Flutter (Google Framework)
* Material Design (Gives ideas and tips on design and layout for your apps)
* Fluid UI (for design the user interface)
* Google Play Store
* Name hardware? Android?

# Risks

|  |  |  |
| --- | --- | --- |
| **Potential Risk** | **Cause of the Risk** | **Potential Solution** |
| Not meeting user requirements | There might be features the application is lacking so it doesn’t meet user requirement. Thus, add a lot more features which makes the project complicated resulting in not being able to finish the it on time. | Get some feedback from friends (who do sports), PT, colleagues and maybe even local clubs. |
| Interface is very confusing and complicated to use | Due to lack of experience making application, it could prove to be difficult to add all those features in a user-friendly way | Try to get advice from ‘Mobile Application’ module lecturer and PT. Don’t add too many features on a single interface, instead try to have a verity of interfaces for different features to make it simple to use for the user |
| The project doesn’t get finished on time | Due to having lots of work to do for other modules, or making the project way too complicated and unrealistic to complete in the given time-frame | Manage time well by using free sessions/time efficiently and make a weekly timetable to divide the time appropriately between the modules. Discuss with PT if the features are realistic or unrealistic to create |
| Work gets deleted | Accidently delete the code file, or laptop/computer stops working | Make sure the worked is backed up and use source control (version control) such as ‘GitHub’ to keep work safe and backed up |
| Database isn’t set up properly | The database isn’t implemented properly so the app cannot store user information, such as login info when they register. This will result in them having to make a new account over and over. | Do some testing while implementing the app features. Do some research on how to set up the database properly in ‘Android Studio’. |
| Error in the Code | Not implementing test suites to test the code for errors etc which could result in the application being full of bugs and ruin user experience | Research how to write test suites in android studio and what resources are available online to help achieve this |
| Overworking (being ill) | Working on the project and assignments from other modules without taking breaks which could affect the person’s health |  |

# Legal, Social, Ethical and Professional Issues (LSEPIs)

It is essential that any project considers the Ethical issues that relate to the project. Ethics are the consideration of how your project effects people and society in any way. It is unlikely that your project will not have an impact on the wider society in some way. You need to consider these issues for both the outcomes of the project and for the way in which you carry out your project.

Legal issues: any area of computing related legislation (Data Protection Act, Computer Misuse Act, Freedom of Information, ….)

Social issues: areas that impact on society (home, education, workplace), welfare and surveillance.

Ethical issues: safeguarding (DBS), Health and safety, risk assessment

Professional issues: observing professional competence and integrity by observing the rules, standards and conventions of the profession.

**The importance of this section in your planning document is emphasised by the fact that a failure will result in a failure for the whole PPD assessment.**

* 1. Explain the LSEPI’s that relate to your project outcomes
  2. Explain the LSEPI’s relating to the process of carrying out your project.

Specifically, will the research that you carry out have any effect on people. As well as completing this section in your PPD all students will also need to complete an Ethical Issues Declaration form (submitted with your Review Point 1 form). This form helps to identify if additional Ethical approval is required to carry out your project.

How many examples for each?

* Legal –
* copy right?
* Privacy concerns?
* Costs?
* criminal liability including hacking?
* Social???
* Ethical issues?
* Professional issues? – British computing society Code of Conduct

# References

<https://play.google.com/store/apps/details?id=com.matchreportpro.app> (Match report pro app)

[https://www.matchreportpro.com](https://www.matchreportpro.com/) (website for the app)

<https://www.facebook.com/groups/1392412307647809/> (Sunday league group)

<http://www.derbyshirefa.com/leagues-and-clubs/county-leagues>

<https://www.nhs.uk/news/lifestyle-and-exercise/lack-of-exercise-as-deadly-as-smoking/> (lack of exercise)