

*School of Electronic Engineering and Computer Science
Queen Mary University of London*

FINAL YEAR PROJECT DEFINITION 2020-21

This project definition must be undertaken in consultation with your supervisor. The feasibility of the project should have been assessed and the project aims should be clearly defined.

Submission of this document implies that you have discussed the specification with your supervisor.

Project Title: SmartFit

Supervisor: Thomas Roelleke

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PROJECT AIMS:

State the design, development or research challenge (problem) that the project aims to solve.

The purpose and aim of my project is to create a fitness application that is useful to anyone that has just started their journey of weight loss or in general someone who is looking to maintain a healthy lifestyle. My app is aimed at those that aren't very knowledgeable when it comes to health and fitness therefore when it comes to what diet plan or workout plan they should follow these people have no clue and tend to give up before they even begin.

As we live in an era where the digital market has consumed our every day lifestyle, it is very rare to find people without phones or people that have never used a mobile application. During the first quarter of 2020, statistics show that fitness and health apps have been downloaded almost 593 million times with this figure increasing to 656 million by the end of the 2nd quarter. If we compare this figure to previous years where in the 1st quarter of 2019 the figure was around 488 million, we can see that more and more people are starting to care about their health and wellbeing.

A major problem however many people like myself who have almost no knowledge on health and fitness run into is that a lot of these fitness apps bombard you with many irrelevant features which take away from the original purpose the user may have downloaded the app thus distracting them. I myself have used multiple fitness apps such as MyFitnessPal, FatSecret and many more over the years and realized there are just so many features that you are bombarded with, with no clear indication of how these features should be used or what they should be used for, thus leading to me deleting the apps overtime. Furthermore a lot of these apps provide users with many workout plans or even diet plans they can follow however many users are left on their own to decide which of these diet plans or workouts to follow in which they may end up following a diet or workout plan which is not very suitable for them thus leading to them giving up early on in their journey.

With my application I want to solve these issues for those many people like myself and ensure that they are able to lead a healthy lifestyle and reach their goals by providing custom diet plans & work out routines for different individuals based on their everyday lifestyle habits and other factors such as body type etc... as well as keeping my application very minimalistic to keep it very user friendly and useful.

PROJECT OBJECTIVES:

List a series of objectives you need to achieve in order to fulfil the aims of your project.

- Implement a feature that allows to check for users BMI so that custom diet plans and workout routines can be provided
- Implement a simple & minimalistic GUI
- Implement a feature that provides custom workout plans
- Implement a feature that provides custom diet plans
- Provide a way for users to track calories (If they eat outside of diet plan)
- Provide notifications to users (To notify them for different eating periods Breakfast, Lunch & Dinner)

(As of now these are the current objectives I can think of)

METHODOLOGY:

Describe the various steps that you intend to follow in order for you to achieve your project aims.

The steps I intend to follow is first I will do a thorough research on fitness and wellbeing, within this period learning about what diets and workout plans are recommended for different body types as well as what is suitable for people based on their activity levels.

After my research I will commit to learning and adapting to the Android Studio IDE so that I can efficiently build my application. Within this period, I will also hone my java programming skills.

I will then step by step attempt to implement the main necessary features of my application ticking off each feature as I implement them.

PROJECT MILESTONES

Indicate what measurable/tangible components you will produce as part of this project. This may take the form of deliverable document(s) or developmental milestones such as a working piece of software/hardware.

- Produce custom diet plan system
- Produce custom workout plan system

- A functional fitness application (With intended features listed above)
- Produce a project report

REQUIRED KNOWLEDGE/ SKILLS/TOOLS/RESOURCES:

Indicate as far as possible the skills that are required for you to undertake this project. Also include any software, hardware or other tools or resources that you believe you will need.

I will be building my project on Java therefore I will require sufficient knowledge on java programming. I will also be using an emulator (Android Virtual Device Manager) to run and test my app at different stages. The software I will be using to build my application on is Android Studio, this is an IDE where I can create my application.

Furthermore, additional skills that I will require is good time management to ensure that I am able to complete different parts of my application and stick to the plan I create.

TIMEPLAN

This can be a GANTT chart submitted with this document or a list of tasks, milestones and deliverables with timings.

