MOBILE FITNESS APPLICATION

INITIAL PLAN

CM3203 ONE SEMESTER INDIVIDUAL PROJECT

40 CREDITS

Karol Krajcir C1444273

Supervised by Dr. Wendy Ivins
Moderated by Professor Chris Jones

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PROJECT DESCRIPTION

We live in a fast-paced society where people are full of stress and anxiety and tend to have desk-bound jobs. As technology is improving faster than ever and becoming a stable part of our lives, we understandably rely on it more and more. However, all these factors have contributed to the fact that we often struggle to find some time for ourselves and to commit ourselves to leading a healthy lifestyle. The insufficient amount of movement and exercise combined with bad eating habits and sedative jobs have recently largely contributed to the increased often result in obesity, currently being the second highest cause of premature death in Europe, increasing the risk of various health conditions such as diabetes, high blood pressure or osteoarthritis (BBC 2017). What's worse, obesity rates are projected to further increase (OECD 2017), according to experts.

To efficiently solve this problem, the underlying cause needs to be understood and removed. One of the several main reasons for this lack of active lifestyle among people of all ages is lack of motivation. When one cannot see their results or have no one to support them, they tend to give up.

The main purpose of my mobile application is to equip user with the tools necessary to reach their desired fitness level within a certain period of time. In order to do that, the application seeks to solve the lack of motivation problem by enabling user to connect with other like-minded individuals and pursue their fitness goals together. It will also provide them with an activity tracker and verification system to ensure their motivation remains at steady levels at all times.

PROJECT AIMS AND OBJECTIVES

By the end of the project, I am aiming to have the following components finished:

- Gain an understanding of the background
  To gain a better understanding of the background of the problem I am trying to solve with my application, I am going to research more about motivation to exercise and lead a healthy lifestyle as well as factors that influence it. I am also going to undertake a user research in order to find out more about my potential users, including habits, fitness levels and any motivation problems they may have.
- Gain an understanding of the market & the need for my application
  To gain an understanding of the market, I am going to do a research on what has already been done to solve the problem. I will also figure out how my application will complement the market and how it will add value rather than just copy what has already been made. I will be looking at the most successful and widely used solutions and I will then compare them to my app and justify the need for it.
- Acquire an awareness of the possible approaches and tools & choose a suitable one
  First of all, I am going to choose a suitable set of tools that I will use throughout the project – mobile platform, development environment, development language and database system to name a few. This needs to be done as soon as possible for me to be able to undertake any potential courses needed before I delve into implementation. Regarding the software development methodology, I believe the best one for this type of small-scale individual project is agile as my focus lies in delivering the product early and in adding functionality gradually. There is several possible agile approaches out there that I like, hence a more thorough research will need to be done before I make my final decision. One option would be to use a hybrid approach, only making use of the suitable elements of the methodology.
- Gain an understanding of user needs

Based on the research, I am going to collect all the desired functionality and document it in what will become the functional and non-functional requirements of the app. This will be done before the implementation and is unlikely to change.

- Outline a graphical representation of the app's functionality
  All the requirements will be sketched in a simple design consisting of mock-ups. This will be done in line with the agile approach used.
- Develop a working solution
  I will consider this project a success if the following functionality is working. I am going to refer to this as a Minimum Viable Product (MVP).
    - Find a fitness buddy (nearby) – user will be able to find their potential fitness buddy in their area
    - Messaging system – users will be able to text each other
    - User system – user will have their own profile with some basic as well as fitness information
    - Activity tracker – user will be able to record their activity and see their progress graphically

  If there is enough time, these features will be "nice to have":
    - Goal setter – user will be able to set a desired fitness-related goal
    - Reputation system – each user will have a reputation score influenced by several factors
    - Simple verification system – this system will be optional and will track user's progress against what they have set out as their goal in the beginning. It will reward or take away reputation points depending on if they stick to their goals or not.
- Gain an understanding of the app's performance
  Once implemented, I am going to test the app against the test criteria created beforehand. Once it has passed them, the app will further be tested by a group of users to help me better understand how the app is performing and whether it lives up to their expectations. For this test, ethical approval will be needed to let users know of what this will consist of and to make them aware they can withdraw at any time. Therefore, I am going to submit my ethical approval form in Week 2 to allow plenty of time for it to be approved.

WORK PLAN

MOBILE FITNESS APPLICATION WORK PLAN

ID	TASK	START DATE	END DATE	DURATION [weeks]
1	**Undertake Research & Gather Requirements**	**29/01/2018**	**11/02/2018**	**2**
1.1	Create Initial Plan	29/01/2018	04/02/2018	1
1.2	Research problem background	29/01/2018	04/02/2018	1
1.3	Research existing solutions & justify the need for the application	29/01/2018	04/02/2018	1
1.4	Complete Android Application Development Course in Java	29/01/2018	11/02/2018	2
1.5	Research & choose a suitable set of tools	29/01/2018	04/02/2018	1
1.6	SWOT analysis	05/02/2018	11/02/2018	1
1.7	Research & choose a suitable SW development approach	05/02/2018	11/02/2018	1
1.8	Gather & document requirements	05/02/2018	11/02/2018	1
1.9	Submit ethical approval form	05/02/2018	11/02/2018	1
2	**Design, Implementation & Test**	**12/02/2018**	**23/03/2018**	**6**
2.1	Create a mock-up for the corresponding requirement	12/02/2018	23/03/2018	6
2.2	Implement the corresponding requirement	12/02/2018	23/03/2018	6
2.3	Test the corresponding requirement against test criteria	12/02/2018	23/03/2018	6
2.4	Iterate 2.1, 2.2 & 2.3	12/02/2018	23/03/2018	6
2.5	First Formal Meeting with Supervisor	20/03/2018	20/03/2018	1
	Easter Break			
3	**User Testing & Bug Fixing**	**16/04/2018**	**22/04/2018**	**1**
3.1	Test with users & gain insight about the app	16/04/2018	22/04/2018	1
3.2	Fix any bugs / improve the app based on the user feedback	16/04/2018	22/04/2018	1
3.3	Second Formal Meeting with Supervisor	17/04/2018	17/04/2018	1
4	**Writing Final Report**	**23/04/2018**	**11/05/2018**	**3**
4.1	Create structure	23/04/2018	30/04/2018	1
4.2	Write up majority of the report from the log	23/04/2018	07/05/2018	2
4.3	Evaluate chosen tools & approaches	07/05/2018	11/05/2018	1
4.4	Consider future work	07/05/2018	11/05/2018	1
4.5	Proof read	07/05/2018	11/05/2018	1
4.6	Submit	07/05/2018	11/05/2018	1
	Ongoing tasks			
	Supervisor meetings			
	Keeping a log			

MOBILE FITNESS APPLICATION GANTT CHART

TASKS					WEEKLY TIMELINE														
ID	TASK	START DATE	END DATE	DURATION [weeks]	1	2	3	4	5	6	7	8	Easter 1	Easter 2	Easter 3	9	10	11	12
					29-Jan	05-Feb	12-Feb	19-Feb	26-Feb	05-Mar	12-Mar	19-Mar	26-Mar	02-Apr	09-Apr	16-Apr	23-Apr	30-Apr	07-May
1	**Undertake Research & Gather Requirements**	**29/01/2018**	**11/02/2018**	**2**															
1.1	Create Initial Plan	29/01/2018	04/02/2018	1															
1.2	Research problem background	29/01/2018	04/02/2018	1															
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2	**Design, Implementation & Test**	**12/02/2018**	**23/03/2018**	**6**									Working Solution						
2.1	Create a mock-up for the corresponding requirement	12/02/2018	23/03/2018	6															
2.2	Implement the corresponding requirement	12/02/2018	23/03/2018	6															
2.3	Test the corresponding requirement against test criteria	12/02/2018	23/03/2018	6															
2.4	Iterate 2.1, 2.2 & 2.3	12/02/2018	23/03/2018	6															
2.5	First Formal Meeting with Supervisor	20/03/2018	20/03/2018	1															
	Easter Break																		
3	**User Testing & Bug Fixing**	**16/04/2018**	**22/04/2018**	**1**													User-Tested Working Solution		
3.1	Test with users & gain insight about the app	16/04/2018	22/04/2018	1															
3.2	Fix any bugs / improve the app based on the user feedback	16/04/2018	22/04/2018	1															
3.3	Second Formal Meeting with Supervisor	17/04/2018	17/04/2018	1															
4	**Writing Final Report**	**23/04/2018**	**11/05/2018**	**3**															Final Report
4.1	Create structure	23/04/2018	30/04/2018	1															
4.2	Write up majority of the report from the log	23/04/2018	07/05/2018	2															
4.3	Evaluate chosen tools & approaches	07/05/2018	11/05/2018	1															
4.4	Consider future work	07/05/2018	11/05/2018	1															
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4.6	Submit	07/05/2018	11/05/2018	1															
	Ongoing tasks																		
	Supervisor meetings																		
	Keeping a log																		

LEGEND

- main activity duration
- sub-activity duration
- milestone, delivarable

REFERENCES

BBC. 2017. UK most overweight country in Western Europe says OECD. [ONLINE] Available at: http://www.bbc.co.uk/news/uk-41953530. [Accessed 4 February 2018].

OECD. 2017. Obesity Update 2017. [ONLINE] Available at: https://www.oecd.org/els/health-systems/Obesity-Update-2017.pdf. [Accessed 4 February 2018].