UFCFXK-30-3 - Digital Systems Project

Formal Project Proposal

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Details of Project:

Project title:	**AFNT – Alistana Fitness & Nutrition Tracker**
Brief description of topic:	Design and implement a software solution focused on helping users achieve their fitness objectives. This involves developing a user-friendly platform for creating and customizing workout routines, monitoring nutrition and workout progress, and offering health and fitness guidance.
Aims and objectives:	**Project Aim** To design and implement a software solution focused on helping users achieve their fitness objectives. This involves developing a user-friendly platform for creating and customising workout routines, monitoring nutrition and workout progress, and offering health and fitness guidance. The main aim is to build an engaging and efficient fitness tool that encourages users to live healthier, more active lives. **Project Objectives**

ID	Objective	Description	Created
O1	Develop a Scalable and Secure Database Management System (DBMS)	Develop a scalable MySQL DBMS, including a central database for 2,000+ records and a local database for user data and watch data. Improve database performance and security and ensure GDPR compliance.	09/10/2023
O2	Design a User-Centric Account Management (AM) Website	Develop a responsive AM website with a user-friendly design, secure sign-up/login, and role-based access control. Include a feedback system and measure performance using user feedback and security audits.	09/10/2023
O3	Build the Alistana Fitness & Nutrition	Investigate the functional and non-functional requirements of a complete fitness website/application.	09/10/2023

		Tracker (AFNT) Application	Develop the AFNT application with features for workout and nutrition tracking, body progress and measurement tracking. Connect to databases, AM website, and Arduino watch, and assess performance using user feedback.	
	O4	Design and develop an Arduino Watch	Create an Arduino watch to measure blood oxygen level and heart rate and investigate ways of connecting the Arduino watch to the AFNT and store it in a local database.	16/10/2023
	O5	Enhance Code Quality and Performance	Implement clean, maintainable code with 80% code coverage. Optimize application and website response times to under 2 and 3 seconds, respectively.	25/10/2023

Full details of initial literature sources, in correct UWE Harvard format:

'Functional vs Non Functional Requirements' (2020) *GeeksforGeeks*. 28 April 2020 [online]. Available from: https://www.geeksforgeeks.org/functional-vs-non-functional-requirements/ [Accessed 4 October 2023].

Team, L. (2021) *Functional and Non-Functional Requirements for Mobile App: What's the Difference? Lvivity*. 20 February 2021 [online]. Available from: https://lvivity.com/functional-and-non-functional-requirements [Accessed 4 October 2023].

'End-user requirements - Analysis - National 5 Computing Science Revision - BBC Bitesize' (2023) *Bbc.co.uk*. 2023 [online]. Available from: https://www.bbc.co.uk/bitesize/guides/zt6jrwx/revision/1 [Accessed 5 October 2023].

'Software Requirements Specification - Gym App' (2016) *Studocu*. 2016 [online]. Available from: https://www.studocu.com/row/document/sichuan-university/software-engineering/software-requirements-specification-gym-app/8216521 [Accessed 5 October 2023].

'Tutorial: Intro to React – React' (2021) *Reactjs.org*. 2021 [online]. Available from: https://legacy.reactjs.org/tutorial/tutorial.html [Accessed 5 October 2023].

'Welcome to Kivy — Kivy 2.2.1 documentation' (2023) *Kivy.org*. 2023 [online]. Available from: https://kivy.org/doc/stable/ [Accessed 5 October 2023].

'MongoDB Courses and Trainings | MongoDB University' (2023) *Mongodb.com*. 2023 [online]. Available from: https://learn.mongodb.com/learning-paths/using-mongodb-with-python [Accessed 5 October 2023].

'MySQL :: MySQL Workbench Manual' (2023) *Mysql.com*. 2023 [online].

	Available from: https://dev.mysql.com/doc/workbench/en/ [Accessed 6 October 2023]. 'Arduino - Home' (2023) *Arduino.cc*. 2023 [online]. Available from: https://www.arduino.cc/ [Accessed 19 October 2023].
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