**SCNI/01304/2021**

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**COMMUNICATION AND COMPUTER NETWORKS**

***1.Pick an appropriate software engineering methodology (2 marks)***

**Incremental development** is well-suited for this project because it promotes the development of the system in small, manageable increments, allowing for continuous improvement and adaptation based on user feedback. This is particularly beneficial for the Fitness Tracker project as it enables the development team to incorporate new features, such as additional exercise tracking options or nutrition plan adjustments, based on user demands and evolving fitness trends.

***2.Your system uses cases, come up with the following system modelling schemes***

1. **Context models (5 marks)**

EXTERNAL HEALTH APPLICATIONS

FITNESS TRAINER SYSTEM

USERS SYSTEM

FITNESS TRACKER SYSTEM

SOCIAL MEDIA PLATFORMS

DATA STORAGE SERVERS

NOTIFICATION AND ALERT SYSTEM

WEARABLE DEVICES

1. **Interaction models (5 marks)**

LOGIN/LOG OUT

REGISTER

CHOSE GOAL

USER

CHOSE PROGRAM/WORKOUT

VIEW PROFILE

EDIT PROFILE

1. **Structural models (5 marks)**

All systems involve interaction of some kind. This can be user interaction, which  
involves user inputs and outputs, interaction between the system being developed  
and other systems or interaction between the components of the system. Modeling  
user interaction is important as it helps to identify user requirements. Modeling system to system interaction highlights the communication problems that may arise.  
Modeling component interaction helps us understand if a proposed system structure  
is likely to deliver the required system performance and dependability.

Register

Login

Post recipe

Users

Decsribe Procedure

Transfer Data

Follow someone

1. **Behavioral models (5 marks)**

LOGIN

REGISTRATION

YES

YES

NO

REQUEST

VIEW MODULE

SEARCH FITNESS MODULE

NO

YES

VIEW DASHBOARD

YES

NO

EDIT PROFILE

VIEW PROFILE

NO