Faculty of Science and Engineering
School of Mathematics and Computer Science

UNIVERSITY OF WOLVERHAMPTON

MCS COMMITTEE ON THE ETHICS OF RESEARCH

Registration of a Research Project

This form must be completed by the Researcher(s) and, in cases where the applicant is a student, the project Supervisor to determine if the project requires approval by the FSE Research Ethics Committee.

YOUR DETAILS

First Name: Luja Ratna	**Surname:** Manandhar
Student Number: 2407087	**Supervisor:** Johan Tandukar
Course: BSc (Hons) Computer Science	
Project Title: NutriLift: A Fitness and Nutrition Tracking Mobile Application with Community and Gamification Features	

YOUR PROJECT

State in no more than 100 words the problem(s) your project is aiming to address

This project will address the high abandonment rates of health and fitness apps by creating a simple, engaging, and affordable mobile application. Many current apps are either too complex, hide essential features behind paywalls, or lack strong motivational elements. NutriLift will combine fitness, nutrition, gamification, and a community module into a single platform to improve user motivation and long-term consistency.

Academic Question

1. How effective is the integration of fitness, nutrition, gamification, and community in improving user motivation and consistency compared to single-purpose health apps?
2. To what extent do gamification features (such as badges, streaks, and challenges) improve long-term engagement in health and fitness applications?
3. Can a community-driven fitness app designed for affordability and simplicity reduce the abandonment rates observed in existing premium fitness and nutrition apps?

Artefact 1: The Core Mobile Application

The first and most critical artifact is the

NutriLift mobile application itself. This cross-platform app will be developed using **Flutter** and will run on both **Android** and **iOS**. The core functionalities will include a secure user management system for profiles and login. Users will be able to log their meals with calorie and macro breakdowns, [redacted]. The app will also allow for workout logging and the creation of custom workout routines. A key component is the progress reporting feature, which will use visual charts and graphs to show users their improvements over time. The camera feature will also allow users to record and analyze their form during exercises.

Artefact 2: The Community and Social Module

This artifact is a key solution to the problem of low user retention and a lack of motivation in existing apps. This module will be a dedicated community section where users can share their progress, post updates, and comment on the posts of others. This social interaction is designed to provide encouragement and accountability from peers, which is a significant factor in

promoting long-term consistency. The community module also facilitates group challenges, allowing users to motivate each other as they work toward shared goals.

Artefact 3: The Gamification and Engagement System

This artifact is designed to directly address the challenge of user engagement and motivation. The system will include a variety of gamification techniques, such as awarding badges for achievements and points for maintaining activity streaks. By making fitness a fun, rewarding experience, the app aims to improve long-term engagement and prevent the sharp decline in user activity often seen in other health apps. A leaderboard will also be included to add a competitive element and further incentivize consistent use of the app.

Will the information or artefacts resulting from your project be available externally to the University?	~~YES~~ / **NO** If yes, please complete an External Agreement Form
Will your project involve: **a) Human participants** **b) Data about humans** **c) Sensitive information**	~~YES~~ / **NO**

Human participants	**Yes**	**No**
• If your proposal involves healthy adult participants, does the project have characteristics that may be detrimental to their physical or mental wellbeing?	✓	
• Does the proposal involve vulnerable participants (for example, are they under 18 years of age, do they have a disability or are mentally unable to		✓

consent)?		
Privacy		
• Does the proposal involve processing of genetic information or personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)	✓	
• Does the proposal involve tracking the location or observation of people without their knowledge?		✓
Research on Animals		
• Does the proposal involve research with animals?		✓
Research Involving Developing Countries		
• Is any of the research involving one of the Least Developed Countries?		✓
Dual Use		
• Does the research have direct military applications?		✓
• Does the research have the potential for terrorist abuse?		✓

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Project Title: NutriLift: A Fitness and Nutrition Tracking Mobile Application with Community and Gamification Features

Student Name: Luja Ratna Manandhar

Supervisor Name: Johan Tandukar

☑ **We confirm that the information given in this form is true, complete and accurate.**

Student Signature: _____ **Date:** 2025/09/07

Supervisor Signature: _____ **Date:** 2025/09/07

Thank you for completing this form. The MCS Ethics Committee will process the information provided and inform you of their decision shortly.

FOR MCS ETHICS COMMITTEE USE ONLY

The MCS Ethics Committee:

☐ approves this project. You may proceed with your project.

☐ your project requires approval by the FSE Research Ethics Committee.
Please complete the **MCS_REC_Application Form.**

Project Coordinator Signature (if applicable) _____ Date: _____