# Problem Statement

Michelle Mallon is the founder of Premium Fitness. Her business is based in Sydney to provide quality fitness training programs for clients who are taken in only with a doctor’s referral. Michelle’s business is growing as it acts like a liaison between the doctors who prescribe a fitness goal for their patients and trainers who can take up patients as clients and train them towards their goals.

For this assignment, your task is to analyse the needs of many stakeholders and formulate the requirements for a system called the “PF System” (PFS)\*\*\*. Your task is to go through the initial proposal described below and detail some features and processes that PFS would need to provide.

## An extract from the proposal:

Personal Trainers (PTs) across Australia interested in training new clients can register through PFS. To register for a PFS Trainer account, they need to register their details by uploading their resume. A PF Manager will cross- check their details, experience, and conduct reference checks (done through Referoo, which is an external organisation that specialises in reference checks). Once satisfied with the reference checks, the PTs will receive an email with the login credentials.

General Practitioners (GPs) across Australia who are interested in helping their clients succeed in their fitness goals can also register through PFS. To register for a PFS GP account, they will need to register their details including an AHPRA registration number. Again, a PF Manager will cross-check their AHPRA registration number (done via an external check through AHPRA). Once satisfied with the AHPRA checks, the GPs are emailed with credentials to log in. GPs can create a referral in the system for their patients. They will also be able to see the progress the patients/clients make.

When the clients get a referral, they can also register through PFS. The registration process is quite simple. They will have to upload the referral letter through PFS to register. The PF Manager will add their details, verify with the referral that the GP has created, create an account, and email the link to the client. Once they click on the link, they will have to set up their password and they are good to go. If a PT/a client registers, their details are automatically uploaded to an AI Match Manager system. The PF Manager will use the Match Manager system to assign the client to the PT. Once the match is made, both the client and PT are notified by email.

Clients will be able to see their fitness program details, their progress updates, and the details of the PT assigned. They will be able to add their progress updates like measurements, and progress photos. The client can choose to send an email about their updates to the GPs once they add their updates. They will not have any delete access to the progress recorded and the deletion happens via an email to the PF Manager. The PF Manager will then act upon the request.

The PTs will be notified when they are matched with the client through a message. They will be able to message the clients and create an appointment on the app using a calendar. They will also be able to see the updates that the clients upload. They will be the ones to set up the training program after reviewing the referral letter from the GP. The clients and the PTs have the option to request other PTs and clients if they are not satisfied with the match. They will have to provide the reason and then the PF Manager will do the allocation once again through the AI Match Manager system (Premium Fitness has only received a handful of change requests since using this system, super powerful!) Note: All email requests are sent through an external Email Server.

*\*\*\* This problem statement is fictitious.*

# Task Descriptions

**In your Individual Submission document:** (note that these are to be done individually, and not as a group)

* Submit your individual task answers to all the questions in Task 2, 3, Task 4 Q7, Q8
* *We will be monitoring individual submissions within/outside groups for potential collusion / plagiarism.*

**In your Group Submission document:** (note that these are to be done as a group and discussed as a group)

* Submit your group task answers to Task 1, Task 4 Q6
* *Your mark may be impacted by the assessment of your contributions to the group.*

Task 1: SDLC (**15 marks**)

Q1) Can this project be carried out in traditional SDLC? How would that compare with implementing the project using Agile Methodology? You are allowed to make any assumptions you wish about the scope of the project. Please ensure you have referenced the sources and cited them in your report. Approximately 600 words by each member of the group (**15 marks**)

## Task 2: Requirements elicitation (**5 marks**)

Q2) List 2 requirements gathering techniques that you would use to find out more about the problem. Explain how you would use this technique to gather information for requirements provided in the case study (**5 marks**).

## Task 3: Requirements specification (**20 marks**)

Q3) Write 2 Epics and 5 user stories under each of the Epics (**10 marks**).

Q4) Write 5 functional requirements for the proposed system for at least three different actors (**5 marks**).

Q5) Write 5 non-functional requirements for the proposed system (include the measures / limitations as part of the requirement, not just the heading) (**5 marks**).

## Task 4: Diagrams for different system perspectives (**60 marks**)

Q6) Draw a Context Diagram (**Level 0 DFD**) for PFS. Please note it can ***exclude*** the data from the new features you are adding to Q7 (**15 marks**).

Q7) Draw a complete Use Case Diagram for PFS based on the problem statement and extract.

*Also*: You need to create a use case for an actor of your choice and add that to your diagram. Please add a few sentences underneath the diagram explaining the newly added use case (**25 marks**).

Q8) Write 2 use case descriptions for any of the use cases from Q7 (one newly added and another from the problem statement). Please note your use case description must have a reasonable number of steps and exceptions since they are worth 10 marks each (**20 marks**).

# Marking Rubric

| **TASK 1** |  |
| --- | --- |
| Q1) Traditional SDLC explanation | /5 |
| Q1) Agile methodology for explanation | /5 |
| Q1) Comparison of two methodologies | /5 |
| **TOTAL –TASK 1** | **/15** |
|  |  |
| **TASK 2** |  |
| Q2) Two requirements gathering techniques identified and justified? | /5 |
| **TOTAL –TASK 2** | **/5** |
|  |  |
| **TASK 3** |  |
| Q3) Correct Epic Structure & Description | /2 |
| Q3) Correct user story structure | /2 |
| Q3) 10 user stories content | /5 |
| Q3) Correct grouping of user stories under Epics | /1 |
| Q4) Functional requirements | /5 |
| Q5) Non-functional requirements-written with measures | /5 |
| **TOTAL –TASK 3** | **/20** |
|  |  |
| **TASK 4** |  |
| Q6) CONTEXT DIAGRAM |  |
| Identification of data flows correctly labelled with right notation | /7 |
| Valid entities | /5 |
| Process | /1 |
| Scope of the system covered | /2 |
|  | **/15** |
| Q7) USE CASE DIAGRAM |  |
| Covered main use cases with correct naming conventions | /10 |
| Included new use cases with correct naming conventions | /2 |
| Includes all actors (classes of user, and external systems)? | /5 |
| Correct usage of includes/extends/generalisation links | /5 |
| Correct scope | /3 |
|  | **/25** |
| Q8) USE CASE DESCRIPTIONS |  |
| Newly added use case? | /2 |
| Clear format with steps | /12 |
| Pre/post conditions, exception, triggers | /6 |
|  | **/20** |
|  |  |
| **TOTAL –TASK 4** | **/60** |
|  |  |
| **TOTAL** | **/100** |

FAQs from last semester

### Is there a mandatory tool to use? Can I just draw and submit the diagrams?

*No, you can use any tool available (You can use Word/Visio diagram tools). Your aim is to present your ideas clearly and concisely. Only thing you need to be very particular about is legibility.*

### Do we need to have a cover page on the document we are uploading?

*Nope.*

### Do we need to read the assignment forum?

*This will be the primary place where assignment questions will be answered. Any updates will also be posted there. It is your responsibility to monitor this forum regularly. As with any job, you will want to be up to date on the latest information related to your tasks.*

1. ***Are we only allowed to submit our assignment one time?***

*You can submit multiple times before the due date, so be sure to have early versions uploaded just in case iLearn (or your internet connection) has any issues.*

### Can we make some of the pages landscape and some portrait?

*Yes, you can have some pages in portrait and some in landscape (especially if it helps make the diagrams more readable).*

### Should every group member submit the group assignment?

*No, just one person from the group must submit the assessment. More than one submission from a group carries a penalty.*

### How detailed / complicated should my diagrams be?

*As a general indication… it is easy to make something look complicated; it is hard to make something look simple. This is where your judgement and considered thought processes will be exercised. You should aim to make everything clear and easy to understand. If you think your diagrams are too simple, ask yourself if you are missing any information. If your diagrams look complicated, ask yourself if you can make it simpler without losing key details (or if that detail can be shown in another diagram or description).*

*Start early and allow yourself time to really think about your requirements and analysis conclusions in detail. Also, feel free to ask the tutors / lecturers in class or on the forums.*