Criterion A: Planning

Word Count = 350

Defining Problem

My client Mrs Kay was my Science tutor; She currently has one newborn child and is planning to have another one. However, she stated "our firstborn son takes a very long time to make" as she requires to track her ovulation date every day and eat the healthiest food. Even after giving birth, she is mostly occupied with getting the baby medical and nutrient needs. With her working as a full-time tutor, it is not easy to have time to plan her child's life or do anything other than work.

During the interview, she stated "I need it to be easy to use and not too complicated" and prefers a "beautiful with minimalistic design". In addition, she doesn't want to repeatedly enter data again after she logged off. Lastly, she stated, "I don't want anyone to see my data" which shows her concern about the security of her data as she sure doesn't want other people to know. It is clear that her three main problems are tracking ovulation dates, tracking healthy meals and planning her day-to-day life.

Rationale for Proposed Situation

I'll be using Java to construct a web-based application, as it is most suitable for this problem as it can be used to both create a user-friendly and complex application. She also stated "I am usually on my laptop most of the day while I teach my students" which suggests that the application should be run on a desktop. Java would be great as the program I will be using IntelliJ, offers many access to different tools when it comes to creating an easy and attractive UI. It also has a runtime check which allows my program to run error-free, which would be great for me who had just learned Java. It is possible to know the ovulation date by tracking it day by day with either the menstruation cycle or the temperature.

The program needs to be divided into 3 sections for different functions from the 3 main problems my client presented:

- **Ovulation tracking** - This section will allow my client to track her ovulation date with a measurement like temperature, blood pressure or menstruation cycle.

- **Nutrient Intake** - This section will allow my client to track her meal every day and give her advice for the meal

- **Planner** - This section will allow my client to plan her week with necessary information

A graph is applicable since it can see the progression like temperature of the user to see ovulation timing.

Criteria for Success

1. General

    a. Client able to create their own account themselves

        i. Login screen that the user is able to register which will save data used on that account once close

        ii. Login page that will verify username and password with existing database

    b. The user will not be able to see other account data or interfere with it

    c. Have an alert system when logging in for users that hasn't put data for that day

    d. Users will be able to find out when they will expect their baby given the data by the user

    e. Allows to detect abnormal data and display error messages with the appropriate problem and solution

    f. Data inserted onto the table and array would be saved upon closing the application

2. Ovulation Tracker

    a. Client will be able to enter their temperature or weight for the day they have chosen

    b. Client data will be presented on a table with the appropriate column title

c. Client will be able to delete their data for the table row that they selected

d. Client will be able to generate a line graph from the information data that they have on their table

3. Nutrient Intake

a. Client will be able to enter their nutrient information (carbohydrate, proteins, fats, fibre and calories) for the day that client entered the data

b. Client data will be presented on a table with an appropriate column title with an additional field of mass (sum of nutrients mass)

c. Client will be able to delete their data for the table row that they selected

d. Client will be able to create a summary of nutrient intake each day displayed on a table

e. Client nutrient table will be refreshed every day

f. Client will be able to generate a visual indicator of their meal composition

4. Planner

a. Client will be able to add data such as task or location to the table and will be displayed with the corresponding time and day

b. Client will be able to choose the colour of the array table

c. Client will be able to delete their data for the table box that they selected