Software Homework 2

High-level project description

Please cover all of the questions below. You are welcome to include links to external resources you have created (e.g. Trello boards, EER diagrams etc.)

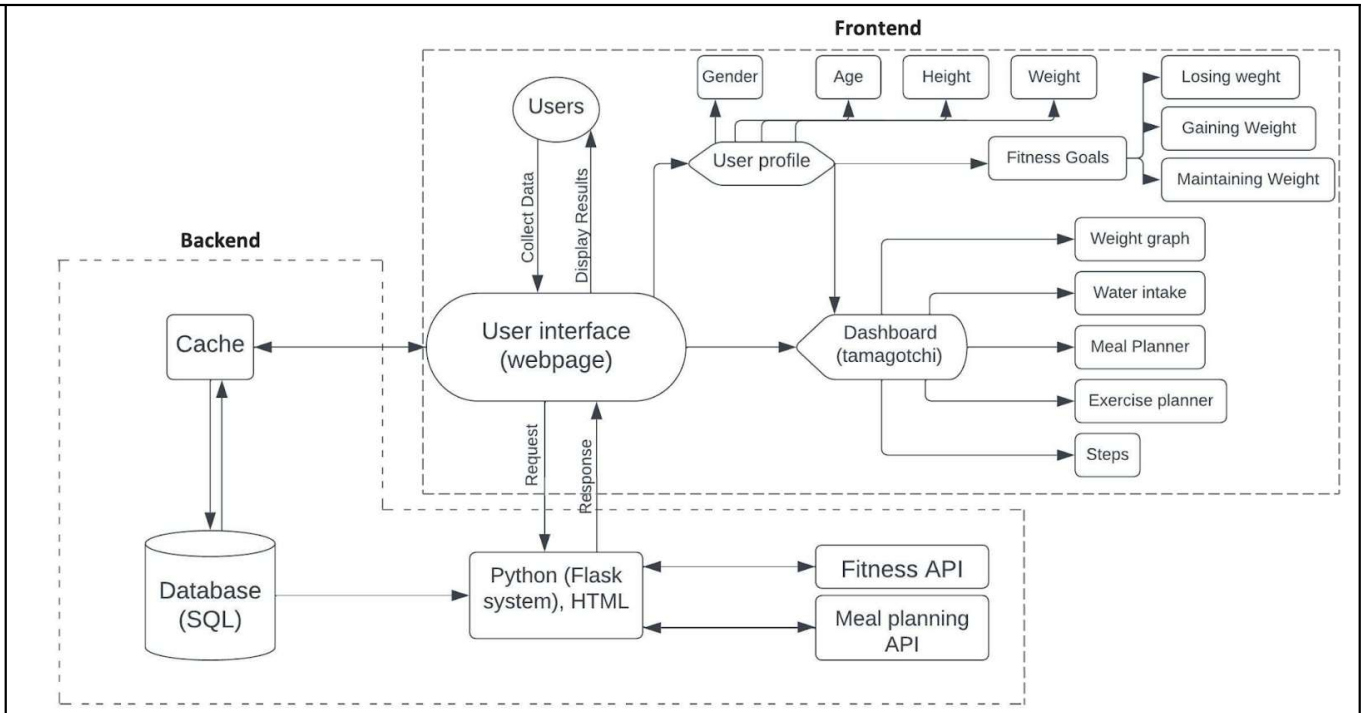
TRELLO BOARD LINK: https://trello.com/b/2PWnzEUL/cfg-project

1	**What are you building?[Ayesha]**
	For our group project, we are collectively looking to make fitness and healthy eating more enjoyable and easy for consumers. We will be creating a website with personalised user profiles. The idea of the project combines scientific advice and healthy meal plans along with a virtual tamagotchi game. There will be options to lose weight, gain, or maintain your weight, and personalised health advice and meal plans will be generated to help the user achieve their goals. The users BMI will be calculated after they input their weight and height, and based on their personal goal they will be advised on how many calories they should burn/gain per day to meet their goals within a given timeframe. Random recipes will be generated and given to the user based on how many calories they would like to consume. The virtual tamagotchi will be a fun game for the user to play to keep up with their fitness goals. Their virtual tamagotchi character's health will be based on the progress they have made toward their fitness goals.The tamagotchi will say things like, 'I'm thirsty', to remind the user to keep up with their daily water intake. Options to feed the tamagotchi the same things the user has consumed during the day will be available. Users will be able to create their own user profiles, linking them to their own personal space and virtual tamagotchi. Users will also be given randomly generated motivational quotes and advice, to keep the user entertained and on track.By linking a fitness application with a fun game we can motivate more people to easily meet their goals and maintain a healthy lifestyle, while enjoying the process.
2	**What does it do and what kind of problem does it solve?[Jeanette]**
	For our project we are looking to create a website game and design digital pets which users can adopt and look after and get information to achieve healthier living. We would like to offer a solution where users can unwind from daily stress and at the same time be able to plan for and get rewarded for healthier living. We want to use gamification to make exercising, dieting and planning healthy meals easy and fun. The user can create an account on the website, start the game by adopting a digital pet,and the pet will have similar functions like a Tamagotchi, where the user needs to do actions like feeding the digital pet food, telling it to go to sleep, to do some exercise and more. This will be further linked to healthy living by the user entering their BMI and if they have any health related goals, for example diet and exercise goals. By doing the game

	activities with the digital pet, the activities will be linked to the user's goals; for example when feeding the digital pet, the user will be giving suggestions of healthy recipes to both feed the digital pet but also for them to cook for themself. Another example, when the user selects to exercise the digital pet, the pet will play up and ask how much exercise the user have done (will try different query formulations to make it interesting for the user) and the user can then enter the data, this will be input for a function in the back end which will calculate the % of exercise the the user need to complete to achieve their diet goal. To ensure it is fun and also allow the user to unwind and provide motivation, we are planning to design a type of randomiser function which will greet the user with a motivation quote each time the user signs in. In conclusion, our project will provide a solution to more than one problem, it is designed to allow the user to unwind and have some fun, have easy access to healthy meal recipes, be able to enter and keep track of fitness goal(s).
3	**What are the key features of your system?[Olivia]**

	• The program will allow the user to create an account which will store their height and weight.
	  • The user's username, login information, height and weight will be stored in a database.
	  • The database will be connected to the Python program through the mysql database connector.
	  • User management functions will allow the program to add users, check for unique usernames, search users etc.
	• The program will tell the user how long to do a specific exercise for, in order to burn x amount of calories based on the height and weight stored in the database combined with the fitness API.
	  • The program will calculate the user's BMI based on the height and weight information stored in the database, combined with a BMI API.
	  • There will be a list of exercises stored in the program.
	  • The program will allow the user to select a specific type of exercise.
	  • The program will allow the user to input the amount of calories they would like to burn.
	  • Based on this the program will perform a calculation for how long the exercise should be done for, this result will then be returned to the user.
	• The user will be able to create a randomised meal based on calorie requirements.
	  • The program will allow the user to enter ingredients they would like for their meal.
	  • It will also allow the user to input a calorie limit for their meal.
	  • The user inputs will be combined with a recipe API and from this it will output a meal/recipe based on the inputs entered.
	• The user will have a virtual tamagotchi that is kept alive based on user inputs.
	  • Users will be able to input exercise, steps, food and water intake into the program.
	  • These inputs will affect the health of the tamagotchi.
	  • A variety of Python functions will dictate how the health of the tamagotchi is affected by the different types of input from the user.

4	**Provide a sample architecture diagram of your system.[Nazo]**



5 **Describe the team approach to the project work.[Akarsha]**

The team consists of 5 members - Akarsha, Ayesha, Jeanette, Nazo and Olivia. As we are a newly formed team and still becoming familiar with agile methodologies, we will not be following agile strictly. This is ideal, especially considering the short duration of this project and also the flexibility of this approach. A Trello board (link on top of page) contains the project idea, objective and goals so that we are able to prioritise what tasks need to be completed, those still in progress and pending in accordance with the goals and objectives of the project. Utilising Trello is advantageous as it is accessible to all team members and team members can allocate themselves to certain tasks.

One week sprints will be held until the project deadline, and at the end of each sprint, a team meeting will be held via zoom to discuss the progress made, any issues that may have arisen in addition to also conducting project planning for the following week's sprint by setting sprint goals and amending the project backlog if required. We will also use this meeting to reflect on how close we are to project goals and also reflect on the past week. Further meetings may be held if required on an ad-hoc basis.

The website will be made by linking the API's and using JSON in Python. HTML files in python will be used to add both text and style to the webpage. A GitHub Repository has been made and will be used for version control and

	project sharing. This is ideal as it enables multiple collaborators to work on the code remotely and also revert any changes if required.