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**School of Computer Science and Engineering**

**SC2006 Software Engineering**

**Functional and Non-functional Requirements**

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# **Functional Requirements**

* 1. Users must be able to register for a new account.
     1. Users must provide the following details: username, name, email, mobile number, password, height, weight and date of birth.
        1. TrainTogether must prompt the user to change username if the username has already been taken.
        2. TrainTogether must prompt the user to change username if the username does not contain at least 6 characters.
        3. TrainTogether must prompt the user to change password if the password didn’t adhere to the system’s requirement: at least 8 characters, at least 1 special character and letters in mixed cases.
        4. TrainTogether must prompt the user to change the email if the email does not contain the “@” character.
        5. Users may choose to upload a picture to be used as their profile picture.
        6. TrainTogether must create a new account for the user if all the

requirements are fulfilled.

* 1. Users must be able to login with their valid email and password.
     1. TrainTogether must be able to validate the user's username and

Password.

* + 1. TrainTogether must direct the user to the main landing page after

validating the user's credentials.

* 1. Users must be able to query for exercise facilities based on the location.
     1. Users must be able to view a map of nearby exercise facilities such as fitness corners.
     2. Users must be able to view the details of the exercise facilities.
        1. The details of the exercise facilities must include details such as its address, postal code, opening hours and website.
  2. Users must be able to query for food facilities based on the location.
     1. Users must be able to filter the food facilities based on health category
        1. The health category includes lower in sugar, higher in wholegrains, lower in calories, no added sugar, source of dietary fibre, eat 2+2 servings of fruits, vegetables daily.
     2. Users must be able to filter food facilities by food type.
        1. The food type must include drinks, western, desserts, snack and kuehs, bubble tea, Chinese, fast food, Malay, Thai, cut fruits, Japanese, Korean, local flavours, Fusion, Indian.
     3. Users must be able to filter food facilities by dining guideline, which is either

Halal or non-halal.

* + 1. Users must be able to filter food facilities by Venue
       1. The venue includes hawker centre, bakery, cafe, kiosk, restaurant, fast food, coffee shop, dessert, F&B on digital platform(s).
    2. Users must be able to filter food facilities by regions
       1. The regions must include East, West, Central, North-East, North
  1. Users must be able to browse exercises.
     1. Users must be able to view detailed instructions on how to perform the exercise.
     2. Users must be able to view the remarks, average ratings for each exercise.
  2. Users must be able to manage their exercise plan.
     1. Users must be able to create new exercise plans.
     2. Users must be able to add new exercises to their exercise plan.
     3. Users must be able to remove exercises from their exercise plan.
     4. Users must be able to delete their exercise plans.
  3. Users must be able to manage reviews for each exercise.
     1. Users must be able to add reviews by leaving a comment for the exercise.
        1. Users must be able to rate the exercise using out of 5 stars.
     2. Users must be able to view all reviews posted by other users of the exercise, including their own.
     3. Users must be able to delete their own reviews.
  4. Users must be able to schedule their exercise.
     1. Users must be able to schedule an exercise plan by selecting a time and date for that particular exercise.
     2. Users must be able to view all of their scheduled exercises.
     3. Users must be able to remove scheduled exercises.
  5. Users must be able to edit their profile.
     1. Users must be able to change their username, mobile number and email address.
     2. Users must be able to change their notification choice.
        1. Users must be able to change their notification choice for exercise reminders
        2. Users must be able to change their notification choice for email notification
     3. Users must be able to update their password.
        1. TrainTogether must prompt the user to enter the user’s current password before updating the password.
        2. Users must enter a password with at least 8 characters, 1 special character, 1 uppercase, 1 lowercase and 1 number.
        3. Users must be able to delete their account.
  6. Users must be able to manage their fitness goals.
     1. Users must be able to add their fitness goals.
        1. Users must clearly specify the goal to be achieved.
        2. TrainTogether must prompt the user to enter a numeric value for their fitness goals.
        3. Users must be able to select a date as a deadline for that particular fitness goal.
     2. Users must be able to edit fitness goals.
     3. Users must be able to delete fitness goals.
  7. Users must be able to calculate their Body Mass Index.
     1. TrainTogether must prompt the user to enter the user's height and weight to

calculate the user's body mass index.

* 1. Users must be able to view their past calories burnt in a barchart format.
  2. Users will be able to view the amount of calories burnt for the day.

# **Other Nonfunctional Requirements**

## **Performance Requirements**

* + 1. TrainTogether must be compatible with the latest version of major web browsers (Chrome, Firefox, Safari, Edge)
    2. The design must have clear navigation toolbars and consistent designs for easy navigability.
    3. Response time of TrainTogether should be no longer than 3 seconds after user’s input.
    4. TrainTogether must be able to handle an increase in traffic by at least 100% without performance degradation.
    5. TrainTogether must be able to store at least 1 million records.

## **Reliability Requirements**

* + 1. TrainTogether must ensure that errors should not crash the application.
    2. TrainTogther must restart within 1 minute if it crashed.

## **Safety Requirements**

* + 1. TrainTogether must have clear and updated documentation for developers to understand and improve the app.
    2. TrainTogether needs to have error prevention functions.
       1. TrainTogether must route users to another page when an error occurs with clear concise error description.
       2. Error Pages should appear when users navigate into an invalid page.

## **Security Requirements**

* + 1. TrainTogether must ensure that every user is valid and has the correct permission to perform actions.
       1. TrainTogether must have OAuth2 Authentication verification before allowing the user access to certain actions**.**