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# **Software Requirements Specification for 6PMGym**

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## Functional Requirements:

The app shall provide a platform for gym enthusiasts, where the beginners among them can learn from more experienced ones.

1. Every user shall create an account in order to use the app.
  - 1.1. The user shall fill in a form when creating an account.
    - 1.1.1. The form shall include the user's email address.
    - 1.1.2. The form shall include a field for the user to retype his or her email address to confirm.
    - 1.1.3. The form shall include the user's username.
    - 1.1.4. The form shall include the user's password.
    - 1.1.5. The form shall include a field for the user to retype his or her password to confirm.
  - 1.2. After the creation of the account for the first time, the app shall require the verification of the provided email address before the user is able to login to the app.
  - 1.3. Once the user verifies their email address, the user shall be able to create their own user profile.
    - 1.3.1. The user profile shall contain an optional profile image.
    - 1.3.2. The user profile shall contain the user's gender.
    - 1.3.3. The user profile shall contain the user's date of birth.
    - 1.3.4. The user profile shall contain the user's general level of experience.
    - 1.3.5. The user profile shall contain the total exercise time of the user.
    - 1.3.6. The user profile shall contain an optional description of the user.
      - 1.3.6.1. The description shall contain the individual strength(s) of the user.
      - 1.3.6.2. The description shall contain the individual interest(s) of the user.
2. Every user shall be required to login in when he or she first starts the app
  - 2.1. The user shall need to type his or her email address.
  - 2.2. The user shall need to type his or her password.
  - 2.3. The app shall provide a password reset functionality if the user forgets his or her password.
    - 2.3.1. The app shall require the user to type his or her email.
    - 2.3.2. The app shall send an email to the user to change his or her password.
  - 2.4. The app shall remember the user after the first login and subsequently will not require the user to enter his or her login details.
3. The app shall have a home page.
  - 3.1. The home page shall contain three tabs at the bottom of the page.
    - 3.1.1. The first tab shall be the map displaying the locations of all the gyms in Singapore.
      - 3.1.1.1. The display will be in the form of a map of Singapore with pins marking the location of gyms in Singapore.
      - 3.1.1.2. The user is able to tap on a pin to view details of that particular

- gym.
- 3.1.1.2.1. The app shall display the address of the selected gym.
- 3.1.1.2.2. The app shall display current weather information at the location of a selected gym.
- 3.1.1.2.3. The app shall display the opening hours of a selected gym.
- 3.1.1.2.4. The app shall display a list of gyms within 5 kilometers of the selected gym.
- 3.1.2. The second tab shall be the home tab showing information regarding the user's current sessions.
  - 3.1.2.1. The user shall be able to create their own session.
  - 3.1.2.2. The user shall be able to join another user's unmatched session.
- 3.1.3. The third tab shall be the user's profile details.
  - 3.1.3.1. The user shall be able to reset his or her password.
  - 3.1.3.2. The user shall be able to update his or her profile.
- 4. The app shall provide the function to search for the nearest gym from the user.
  - 4.1. The app shall provide the weather forecast of the next 3 hours of the user's current location.
  - 4.2. The app shall display a map of the user's current location and the location of any gym within a 5 kilometer radius from the user.
  - 4.3. The app shall allow the user to enter a custom postal code search criteria
    - 4.3.1. A list of gyms within 5 kilometers of the specified postal code shall be displayed.
    - 4.3.2. The distance between each of the gyms and the user shall be displayed.
  - 4.4. The usage rate of each of the gyms shall be displayed.
  - 4.5. The user shall be able to select a gym from the list to view more details of that gym.
    - 4.5.1. The name of a selected gym shall be displayed.
    - 4.5.2. The operating hours of a selected gym shall be displayed.
    - 4.5.3. The address of a selected gym shall be displayed.
- 5. The user shall be able to post sessions.
  - 5.1. The user shall specify the date of the session.
  - 5.2. The user shall specify the time slot of the session.
  - 5.3. The user shall specify the location of the gym the user is going to.
  - 5.4. The user shall specify the focus of the session.
  - 5.5. The user shall be able to indicate his or her level of experience in this particular focus.
  - 5.6. The user shall be able to indicate if he or she requires a partner of the same gender.
  - 5.7. The user shall not be able to post more than one session in the same time slot.
- 6. The app shall recommend sessions with similar session preferences to users who have posted at least one session.

- 6.1. The app shall recommend sessions to users when all of the following requirements are met:
  - 6.1.1. A recommendation shall happen when two sessions have overlapping time slots.
  - 6.1.2. A recommendation shall happen when two sessions have the same location.
  - 6.1.3. A recommendation shall happen when two sessions have the same focus.
  - 6.1.4. A recommendation shall happen when the gender preference of the two sessions are agreeable.
  - 6.1.5. A recommendation shall not happen when both participants are inexperienced.
7. The user shall be able to browse all existing sessions that have not been matched yet that matches the user's search criteria.
  - 7.1. The user shall be able to filter the sessions according to their preference.
    - 7.1.1. The user shall be able to choose his or her preferred gym location.
    - 7.1.2. The user shall be able to choose the focus of the session.
    - 7.1.3. The user shall be able to choose his or her session focus.
      - 7.1.3.1. The user shall specify his or her level of experience in that particular focus.
    - 7.1.4. The user shall be able to choose the gender of the partner.
    - 7.1.5. The user shall be able to specify the time of the session.
8. The user shall be able to join any unmatched session if there is no time conflict with his or her existing sessions.
  - 8.1. When the user joins a session, the app will change the flag of the session to matched.
  - 8.2. The partner shall be notified that their session has been matched.
  - 8.3. An "experienced" user shall be able to join any unmatched session.
  - 8.4. An "inexperienced" user shall only be able to join sessions with "experienced" partners.
9. The app shall support check-in functionality.
  - 9.1. The app shall only allow a user to check-in for a session if the user is within 10 metres of the predefined gym determined by the user's GPS location.
  - 9.2. The app shall only allow a user to check-in for a session if the user arrives within 15 minutes of the session's start time.
  - 9.3. The app shall send a notification to a user when his or her partner has arrived if he or she has not arrived yet.
  - 9.4. The app shall record the check-in status of both users for each session
    - 9.4.1. The record shall contain the check-in time of both users.
    - 9.4.2. The record shall contain a flag indicating if the session was successful or failed.
      - 9.4.2.1. The session shall be marked as successful in the record if both users have successfully checked-in.

- 9.4.2.2. The session shall be marked as failed in the record if either or both users failed to checked-in.
- 9.4.3. If a user fails to show up for a matched session, that user shall be temporarily banned from creating or joining any other session for 72 hours.
- 10. The user shall be able to provide feedback after their session ends.
  - 10.1. The user shall be able to rate their session on a scale of 1 to 5.
  - 10.2. The user shall be able to comment on their session after it ends.
  - 10.3. The user shall be able to select some adjectives from a given list that accurately describes their partner.
- 11. The user shall be able to cancel sessions with varying levels of penalty.
  - 11.1. If the user cancels the session before the session is matched, there shall be no penalty imposed.
  - 11.2. If the user cancels the session after the session is matched but there is still at least one hour before the start of the session, there shall be no penalty imposed.
    - 11.2.1. The partner shall receive an email notification in the event of a session cancellation.
    - 11.2.2. The app shall change the flag of the session back to unmatched.
  - 11.3. If the user cancels the session after the session is matched and there is less than one hour before the start of the session, the user who canceled the session shall be temporarily banned from creating or joining any other session for 24 hours.

## **Non-Functional Requirements:**

- 1. The website shall finish loading within 2 seconds.
- 2. The session shall be automatically archived after it has expired.
- 3. The app shall send an email within 3 minutes after the user requires to reset his or her password.
- 4. The app shall handle at least 99% of fatal exceptions.
- 5. The app shall log all errors as and when they occur.

## Data Dictionary:

Term	Definition
User	A User is a person who owns an account and is actively using the app in search of a partner to exercise together at the gym with.
Session	A session is a particular time slot which a user desires to exercise at a particular gym along with some other preferences. Sessions are created by users by specifying what time, which gym, the focus of the session, and whether they would prefer to have a same-gendered partner. A Session can have at most two users who will exercise together. When sessions are created they are known as unmatched sessions. When a partner joins an unmatched session it becomes a matched session.
Partner	Partners are a separate user who is participating in the same session as the user in a matched session.
Match	A match refers to either the case that the app has recommended a suitable partner for the user, or the partner manually joins an unmatched session. A match only happens when certain criteria are met. Refer to Functional Requirement 8 for details
Focus	The type of exercise which the user would like to focus on during their time at the gym. Examples include: High Intensity Interval Training (HIIT), Strength Training, Aerobics, Yoga.
Check-in	A check-in indicates that you have arrived at the gym location. Check-ins can be fulfilled only when the user is within 10 metres of the gym location and within 15 minutes of a session starting time.
Flag	A flag is a true or false indicator which indicates whether a session has been matched. A flag set to "true" denotes a matched session, a flag set to "false" denotes an unmatched session. Any sessions with a flag set to 'false' will appear in the search result list.