Development

Winter Assignment

Contents

INFORMATION MANAGEMENT GROUP

FitKnight: Rise of the Fitness Crusaders

In Gotham, even Batman understands the need to balance physical fitness and mental strength. But many of Gotham's students feel trapped by academic stress, loneliness, and a lack of a proper fitness routine. Even though they know how important health is, the "villains" of procrastination and self-doubt often leave them unmotivated and inactive. Without a workout buddy like Robin or a supportive community to guide them, staying fit can feel impossible.

Enter FitKnight, the Fitness Buddy Finder—Gotham's fitness ally. Like the Batcave unites heroes, this platform connects people with similar fitness goals. FitKnight helps users discover workout partners, join active groups, and plan routines together. With real-time chat, fitness tips, and a supportive network, it battles the villains of laziness and isolation.

Just as Batman thrives on teamwork, resilience, and innovation, FitKnight brings these values to fitness. It builds a community of support and motivation, inspiring students to become the heroes of their own health journeys—one step, one workout, one partnership at a time.

Objectives

Please don't feel overwhelmed; we have tried to simplify the problem statement for you in order to avoid any confusion.

So, take a deep breath, and dive in!

Essential Features - Your web application MUST contain these features:

1. Authentication

a. Users can sign-up/log in using the following method:

- A unique username and password login.
- During sign-up, users may upload a profile picture or opt for a default picture.
- Users will be asked if they prefer to find a workout buddy or create a fitness group.

b. Based on the choice:

- **Workout Buddy**: During sign-up, users can fill out details like fitness goals, workout preferences (e.g., gym, yoga, running), and availability.

- **Fitness Group Organizer**: Users can add group-specific information, such as activity type, location, and schedule, either during sign-up or later.

The platform consists of two separate portals: one for users looking for a buddy and another for those creating or managing fitness groups.

2. Dashboard

a. **Buddy Finder POV**:

- View recommended workout buddies based on preferences and proximity.

- See available fitness groups to join (redirect to group page on click).

- Implement filters for buddy matching or group search (e.g., activity type, skill level, location).(P.S.:- You may use Distance Matrix API for proximity filter)

b. **Group Organizer POV**:

- Manage created fitness groups (e.g., edit group details or activity schedules).
- View requests from users wanting to join their groups.
- Implement filters to search for workout buddies (e.g., proximity, availability).

3. Group Page

a. This page should include:

- Group details: activity type, schedule, location, and description.

- Member list: Display current group members with their profile information.
- Interaction options: Join requests and a group chat feature.

b. Include group organizer details for members to reach out directly.

4. Profile

a. **Buddy Profile**:

- **Personal Information**: Name, profile picture, about, and fitness goals.

- **Fitness History**: Activities or milestones (e.g., number of runs completed).
- **Contact Details**: Phone number, email (optional visibility based on privacy settings).

b. **Group Profile**:

- **Personal Information**: Name and profile picture of the organizer.
- **Goals:** Activities organised by the group,or its daily goals
- **Contact Details**: Phone number, email (optional visibility based on privacy settings).

5. Notification Feed

a. **Buddy Finder POV**:

- Notifications about new buddy matches or groups that fit their preferences.
- Updates on join requests or messages received in chats.

b. **Group Organizer POV**:

- Notifications about join requests from users.
- Updates on new messages in group chats.

MOBILE DEVELOPMENT

1. Authentication

a. User Sign-Up/Login Methods:

- **Unique Username and Password:**
    - Users can create an account with a unique username and password.
    - Option to upload a profile picture or use a default one.
    - Users select one of the following roles during sign-up:
        - Find a Workout Buddy
        - Create/Manage a Fitness Group

b. Role-Based Onboarding:

- **Workout Buddy:**
    - Users fill out fitness details:
        - Fitness goals
        - Workout preferences (e.g., gym, yoga, running)
        - Availability
- **Fitness Group Organizer:**
    - **Users provide group-specific details:**
        - Activity type
        - Location
        - Schedule (can be updated later).

Dual-Portals:

- **Separate interfaces for:**
    - Buddy Finders: To discover workout buddies.
    - Group Organizers: To create/manage fitness groups.

2. Dashboard

a. Buddy Finder Perspective:

- Recommended Buddies:
    - List of workout buddies based on preferences and proximity.
- Available Groups:
    - View fitness groups with redirection to group details.
- Filters:
    - Filter buddies/groups by activity type, skill level, and location.
    - *(Proximity can leverage Distance Matrix API)*

b. Group Organizer Perspective:

- Manage Fitness Groups:
    - Edit group details and schedules.
- Join Requests:
    - View and approve/reject user requests to join groups.
- Filters:
    - Search for workout buddies based on proximity, availability, etc.

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3. Group Page

- Group Details:
    - Activity type, schedule, location, and group description.
- Member List:
    - Display profiles of current group members.
- Interactions:
    - Group chat feature for real-time communication.
    - Ability to send join requests.
- Organizer Details:
    - Contact information to reach the group organizer directly.

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4. Profile

a. Buddy Profile:

- Personal Information:
    - Name, profile picture, fitness goals, and bio.
- Fitness History:
    - Activities or milestones (e.g., completed runs).
- Contact Details:
    - Phone/email with optional privacy settings.

b. Group Profile:

- Organizer Information:
    - Organizer name, profile picture, and contact details.
- Group Goals:
    - Activities organized by the group and daily/weekly goals.
- Privacy Settings:
    - Optional visibility of phone and email.

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5. Notification Feed

a. Buddy Finder Perspective:

- Real-time notifications for:
    - New buddy matches.
    - Groups that match their preferences.
    - Updates on join requests and group chats.

b. Group Organizer Perspective:

- Real-time notifications for:
    - New join requests.
    - Updates on group chats.

Note: Implement notifications using WebSockets for real-time updates. Alternatively, use a polling mechanism to refresh the feed every 5 seconds.

Brownie Points

Your application may or may not contain these features, but implementing them will help your project stand out!

1. **Authentication**-Instead of using plain vanilla username and password, you can implement the authentication in these alternative ways:
   a. Channeli OAuth
   b. Email/phone-number and password authentication, where email/phone is verified through OTP.
   c. GoogleOAuth

2. Implementing the Realtime chat feature between Fitness Buddies

3. Implement Email Notifications
   a. Notify Group Organiser entry request of a new member.
   b. Notify a match to the fitness Buddy.

4. Hosting the application on a server, allowing public access through URL.

PS: Brownie points will be awarded for the extra effort only if all essential features mentioned above are successfully implemented

Important Instructions

1. Out of both problem statements only one needs to be done either Web Development or Mobile Development .
2. **Project Deadline** : It is a three week long project which needs to be submitted on time , no late submissions will be accepted.
3. Development Assignment is only for 2nd year students. 1st year students can participate in MergeFest .

Frequently Asked Questions

1. Is this an individual or group project?

This is an individual project .

2. Is hosting necessary?
Brownie points for hosting, but be sure to include your app setup instructions in the README file of your GitHub repository!

3. What tech stack can I use?
You are free to use anything and everything to build your web application!

4. Can I follow online tutorials?
Yes, of course! However, we do not encourage direct copies. We expect you to understand and take inspiration from tutorials, but the core effort should be your own

Still, have a Question? Ask Us!

We at IMG are here to help throughout your development from a learner to a web developer. Just ping us at any point if you are stuck; we surely like to stick to the motto, "Help will always be provided to those who ask for it."

Remark: Please post your queries on the [discord server.](#) We would be delighted to see your progress. Even if you don't reach the end, what's most important is that you learned something new. That's all that matters to us. We're always looking for talented developers and designers who have a constant desire to learn and grow. So, please submit your code to us via a GitHub link for a public repository. If your hard work is reflected in your code, you may even get a chance to directly appear for recruitment interviews.

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All the best!

Stay tuned, as we will soon release the submission form on our recruitment site and social media pages. Keep following us for updates.