SW Engineering CSC648/848 Summer 2021

FitHub

Project Application And Name: Find a fitness partner - “FitHub”

Team Info: Team 07 | Error 404

Team Members:

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Milestone: Milestone 3

Date: 22 July 2021

History:

Version	Date
M3V1	22 July 2021
M2V2	22 July 2021
M2V1	08 July 2021
M1V2	13 July 2021
M1V1	22 June 2021

Table Of Contents

1. Data Definitions V3

1. Guest user: A user who hasn't registered or provided their information to FitHub

   1.1 Registration: Ability to register for an account

   1.2 User name: Necessary to have username

   1.3 Email: Necessary to have email

   1.4 Password: Necessary to have password

   1.5 Accept terms of use: Necessary to accept terms of use

   Description: guest user will have the following attributes,

   - Guest id, INT
   - Email id, VARCHAR(80)
   - Is register, TINYINT

2. Registered user: A user who has successfully created their account with FitHub and can access all the app features

   2.1 Login: Necessary to have username and Password

   2.2 User interests: This information will be used by FitHub to show recommendations of people with similar interest

   2.3 User Profile: All the user-related information that can be used to create its profile

   2.4 User logs: Previous workout partners or events that the user has been to can be looked at in the user logs

   2.5 Activities: All the indoor and outdoor activities that Fithub allows a user to search or select as interest.

   Description: register user will have the following attributes,

   - Reg id, INT
   - User id, INT
   - Phone, VARCHAR(12)
   - Address, TEXT
   - Zip code, VARCHAR(5)
   - Activity type, TEXT

- Birthdate, DATE

3. Gym membership: A user’s gym membership information. This information will be used in order to send buddy pass request by other users
   3.1 Buddy Pass Owner: A user having gym membership and willing to share his gym pass with a friend so that they can workout together
   Description: gym membership will have the following attributes,
   - Gym id, INT
   - Reg id, INT
   - Gym Name, VARCHAR(45)
   - Gym Location, VARCHAR(45)
   - Zip code, INT
   - Membership start date, VARCHAR(45)
   - Membership expiry date, VARCHAR(45)

4. Events:
   4.1 A user shall post events
   4.2 Events shall be viewed by other users
   4.3 Users can join the event
   Description: event will have the following attributes<
   - Event id, INT
   - Reg id, INT
   - Start time, INT
   - End time, INT
   - Date start, DATE
   - Date end, Date

5. Friends:
   5.1 Users that match based on interest
   5.2 Users that match based on location
   5.3 Users can send friend request

5.4 Users can accept friend request

Descriptions: friends will have the following attributes,

- User id, INT
- Reg id, INT
- Name, VARCHAR(40)
- Contact info, VARCHAR((50)
- send/accept request, TINYINT

6. Friend List:

6.1 User shall have a friends list

Description: A friends list will have the following attributes,

- Reg_id, INT
- Name, VARCHAR(40)
- Contact info, VARCHAR(50)

7. Private chat:

7.1 Users shall be friends

7.2 Users can send private messages from friends list

Description: private chat will have the following attributes,

- User id, INT
- Reg id, INT
- Name, VARCHAR(40)
- Date, DATE
- Time, TIME

8. Group chat:

8.1 Users shall be friends

8.2 Users can have group conversation

8.3 Users can invite other friends

Description: group chat will have the following attributes,

- User id, INT
- Reg id, INT
- Name, VARCHAR(40)
- Date, DATE
- Time, TIME

9. Clubs:

    9.1 Users can create clubs

    9.2 Users can join/send request

    9.3 clubs can be public/private

    Description: clubes will have the following attributes,

    - Club id, INT
    - Reg id, INT
    - Open to all, TINYINT

10. Club owner:

    10.1 Clubs can only have one owner

    Description: club owner will have the following attributes<

    - Club owner id, INT
    - Reg id, INT
    - User id, INT
    - Date started, DATE

11. Club List:

    11.1 List of clubs users can view

    11.2 List of clubs users can join

    Description: club list will have the following the following attributes,

    - User id, INT
    - Reg id, INT
    - Name, VARCHAR(40)

2. Functional Requirements V3

P1 (Mandatory)

Guest User:

1. Guest users shall be able to view events posted by other users.
2. Guest users shall be able to select their interests.
3. Guest users shall be able to register.
4. Guest users shall be able to Log in as registered users.
5. Guest users shall be able to access the homepage.
6. Guest users shall be able to access the About us page.
7. Guest users shall be able to access the Contact us page.
8. Guest users shall be able to access the Support page
9. Guest users shall be able to delete their account from FitHub

Registered User:

11. Registered users shall be able to access homepage

12. Registered users shall be able to access About us page

13. Registered users shall be able to access Contact us page

14. Registered users shall be able to access Support Page

15. Registered users shall be able to send workout invites to other users.

16. Registered users shall be able to select their interests

17. Registered users shall be able to edit their information

18. Registered users shall be able to update their profile picture

19. Registered users shall be able to delete their profile picture

20. Registered users shall be able to deactivate their account

22. Registered users shall be able to change their account passwords

26. Registered users shall be able to delete their account from Fithub

Searching People

27. Registered users shall be able to have a certain number of swipes per day.

28. Registered users shall be able search for buddies with similar interest
29. Registered users shall be able search for buddies nearby
30. Registered users shall be able to filter search options based on their interests.
31. Registered users shall be able to filter search options based on how far they are willing to travel.

Friends

33. Registered users shall be able to find friends to exercise with.
34. Registered users shall be able to add other registered users as friends.
35. Registered users shall be able to access their friend list
36. Registered users shall DM (direct message) other registered users only if they are friends.
37. Registered users shall have multiple friends if they choose to.
38. Registered users shall have 0 friends if they choose to.
39. Registered users shall have the ability to unfriend a former friend.
40. Register users shall have the ability to block a former friend.
41. Register users shall have the ability to report a former friend.
43. Registered users shall view friend's event postings.
44. Registered users shall be able to decline friend requests.
45. Registered users shall be able to accept friend requests.

Events

46. Registered users shall be able to create events
47. Registered users shall be able to delete events they created
48. Registered users shall be able to edit the events they created
49. Registered users shall be able to join an event
50. Registered users shall be able to exit from an event
51. Registered users shall be able to rejoin an event
52. Registered users shall invite people to events they created

Chats

70. Registered users shall be able to create a private chat
78. Registered users shall be able to reject to join in a private chat
80. Registered users shall be able to accept to join in a private chat

Web Application

89. Web Application shall have About us Page
90. Web Application shall have Contact us page
91. Web Application shall ask user to log in
92. Web Application shall display user's profile
93. Web Application shall show notifications to the user
94. Web Application shall show friend requests
95. Web Application shall allow user to check their messages
96. Web Application shall allow user to check event dates they are planning to go
98. Web Application shall allow user to change password of their account
99. Web Application shall allow user to deactivate their account
101. Web Application shall show the logs of user activities
102. Web application shall show events occurring nearby
103. Web Application shall show people recommendation with similar interest
104. Web Application shall allow user to log out
105. Web Application shall allow user to delete the account
106. Web Application shall allow user to see list of friends
108. Web Application shall allow user to search for people using various filter options
109. Web Application shall show people recommendation with similar interest

P2 (Desired)

Registered User:

24. Registered users shall be able to send an introductory message to a different user in their search result.
25. Registered users shall be able to share their real time location with FitHub

Buddy Pass

82. Registered users shall be able to view people with gym membership
83. Registered users shall be able to put request to access buddy pass
84. Registered users shall be able to accept the request to access buddy pass
85. Registered users shall be able to reject the request to buddy pass

Web Application shall show buddy pass requests

History logs

86. Registered users shall access their event visits in logs
87. Registered users shall access their workout pairing information in logs
88. Registered users shall be able to access their workout partner's information from logs

Registered User:

21. Registered users shall be able to save their frequent searches

Searching People

32. Registered users shall be able to remove people from their search results

P3 (Opportunistic)

Friends

42. Registered users shall view friend's club postings.

Clubs

53. Registered users shall be able to create the club
54. Registered users shall be able to update the picture of the club they created
55. Registered users shall be able to edit the club name they created
56. Registered users shall be able to delete the club they created
57. Registered users shall be able to delete the club picture they created
58. Registered users shall be able to send request to join the club
59. Registered users shall be able to leave a club

60. Registered users shall be able to send request rejoin a club
61. Registered users shall be able to add members to the club they created
62. Registered users shall be able to remove members from the club they created
63. Registered users shall be able to post in club
64. Registered users shall be member of multiple clubs
65. Registered users shall be admin of multiple clubs
66. Registered users shall be able to invite people to club
67. Registered users shall be able to accept the joining request for club they created
68. Registered users shall be able to reject the joining request for club they created

Chats

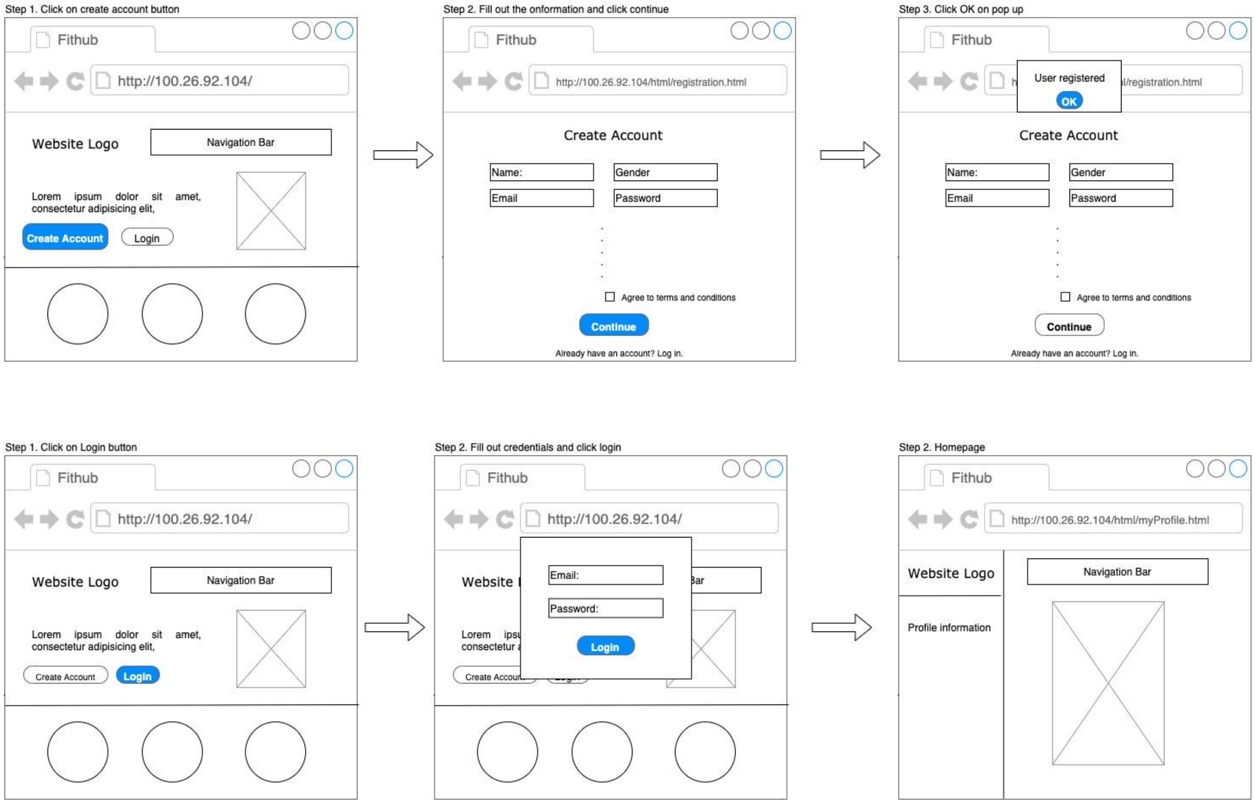
69. Registered users shall be able to create a group chat
71. Registered users shall be able to invite friends to the group chat
72. Registered users shall be able to remove people from group chat
73. Registered users shall be able to add unknown people from the chat
74. Registered users shall be able to post in the group chat
75. Registered users shall be able to leave a group chat
76. Registered users shall be able to dissolution the group chat they cheated
77. Registered users shall be able to recall their posts
79. Registered users shall be able to reject to join in a group chat
81. Registered users shall be able to accept to join in a group chat

Web Application

97. Web Application shall allow user to check updates of the club
107. Web Application shall allow user to see list of clubs

3. Wireframes Based on your Mockups/Storyboards V2

1. Registration and log in


Step 1. Click on create account button

Step 2. Fill out the onformation and click continue

Step 3. Click OK on pop up

Step 1. Click on Login button

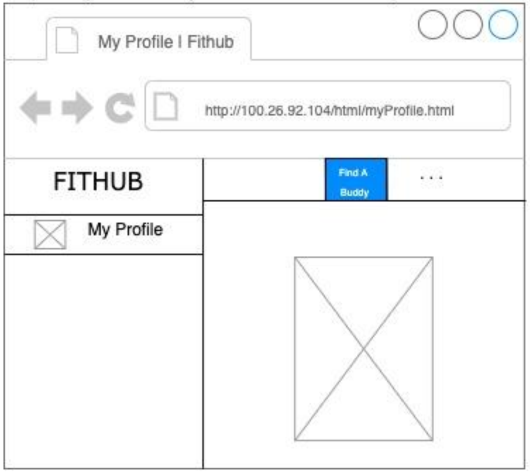
Step 2. Fill out credentials and click login

Step 2. Homepage

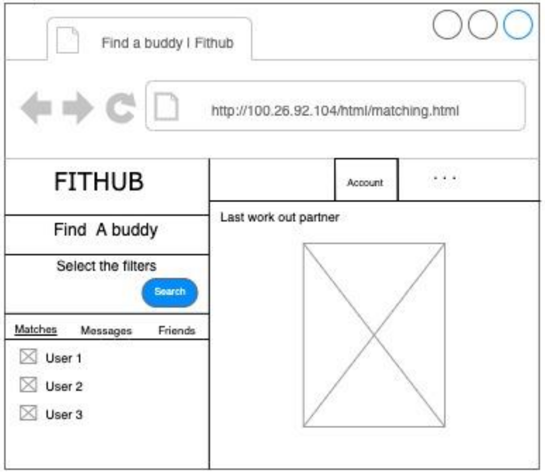
Fithub
http://100.26.92.104/
Website Logo
Navigation Bar
Lorem ipsum dolor sit amet, consectetur adipisicing elit,
Create Account
Login
http://100.26.92.104/html/registration.html
Create Account
Name:
Gender
Email
Password
Agree to terms and conditions
Continue
Already have an account? Log in.
User registered
OK
Email:
Password:
Login
http://100.26.92.104/html/myProfile.html
Profile information

2. Finding a Partner

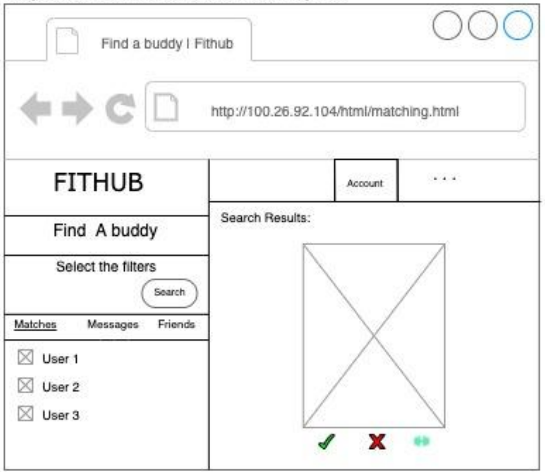
Step 1: Log in succesfully and click on "Find a buddy"



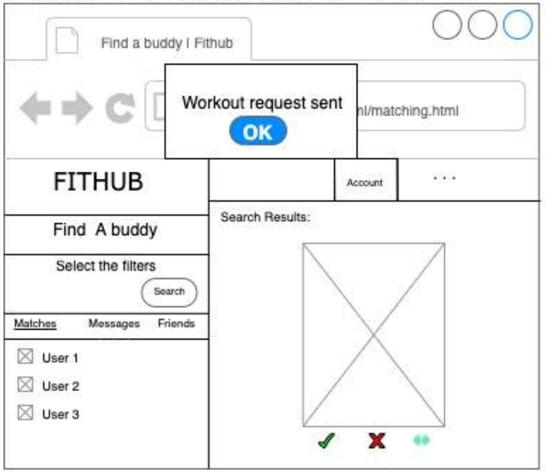
Step 2: Select filters and click search



Step 3: Click on tick to send workout request

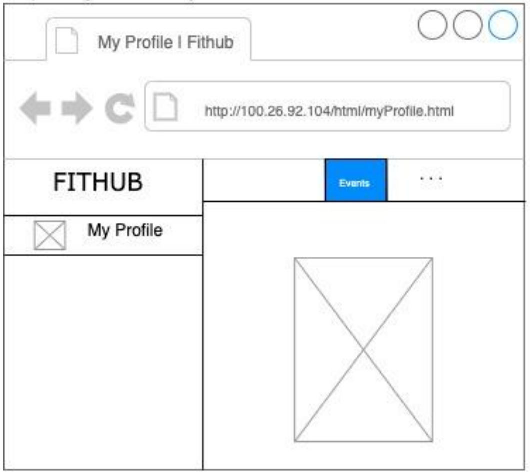


Step 4: Click ok on the pop up and your request has been sent

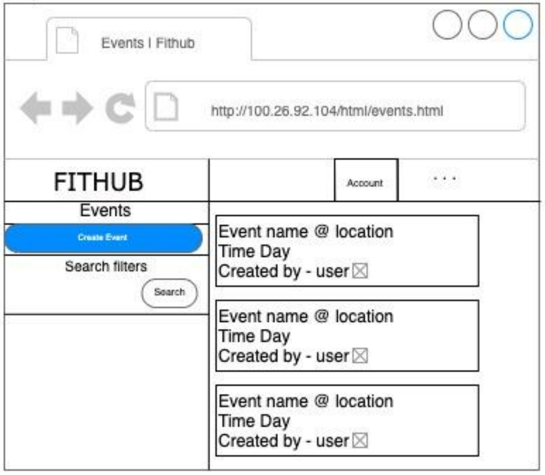

Workout request sent

3. Posting Events

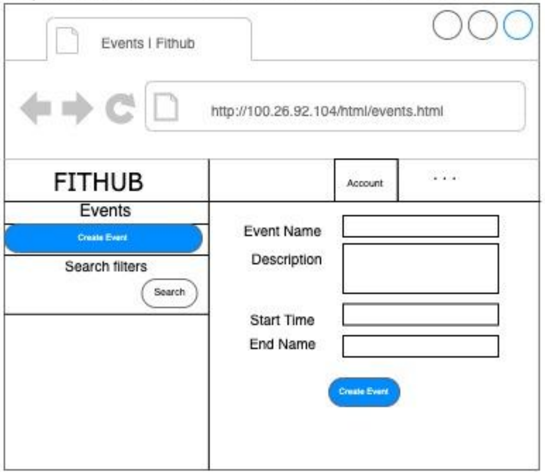
Step 1: Log in succesfully and click on "Events"



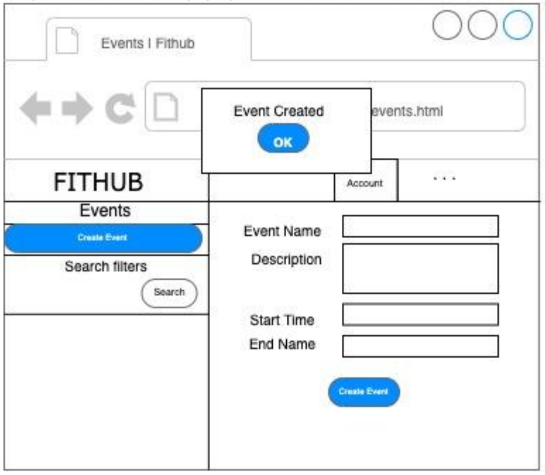
Step 2: Click on "Create Event" button



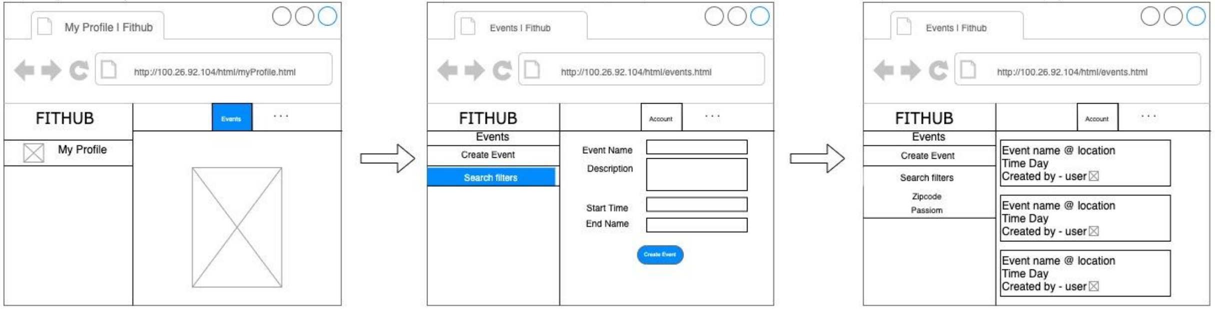
Step 3: Fill out the event information and click on Save event



Step 4: Click OK on the pop up, The event will be created



4. Finding events

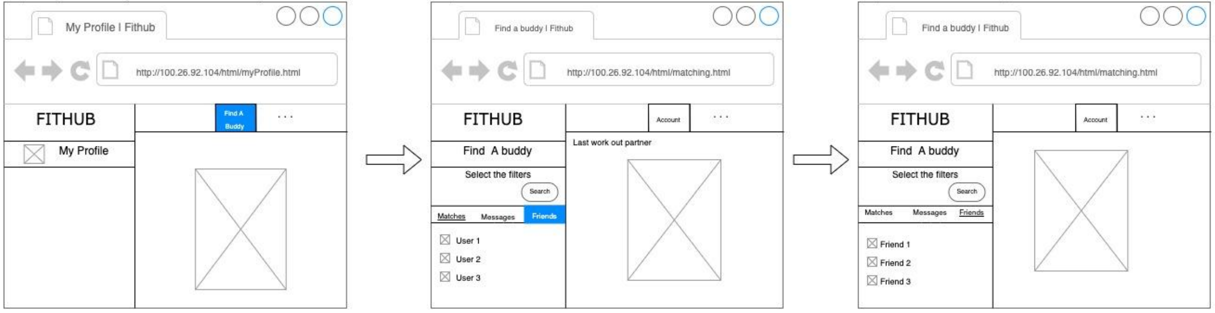


Step 1: Log in succesfully and click on "Events"

Step 2: Click on "Search filter" button, select parameters and Continue

Step 3: The search results will be displayed

5. Friends

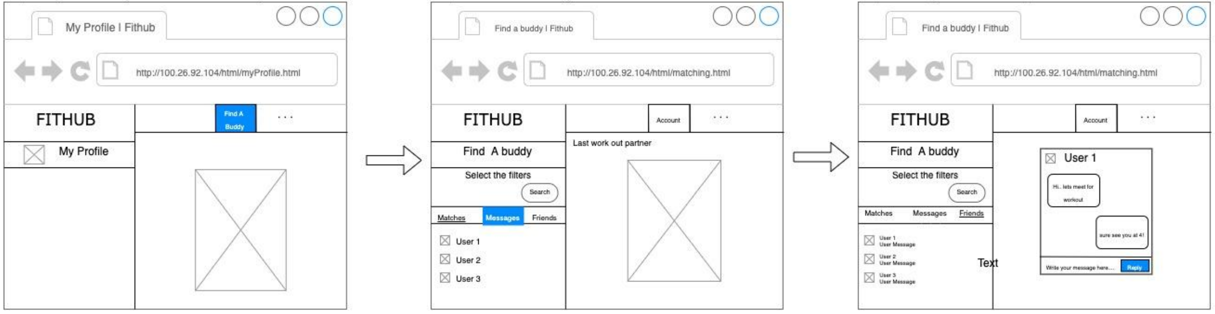


Step 1: Log in succesfully and click on "Find a buddy"

Step 2: Click on the Friends tab

Step 3: List of friends shall appear there

6. Private Chat



Step 1: Log in succesfully and click on "Find a buddy"

Step 2: Click on the Messages tab

Step 3: Messages section shall appear there

Hi.. lets meet for workout

sure see you at 4!

4. High level database architecture and organization V2

- ***DB organization:***

  1. ***Business rules:***

     a. Guest User:
        - A guest shall have one account
        - A guest shall be at most one registered user
        - A guest shall be able to search many Users
        - A guest shall be able to view many events

     b. Registered User:
        - A registered user shall have one account
        - A registered user shall be able to search many Users
        - A registered user shall be able to create and delete many events
        - A registered user shall be able to send, cancel, accept and reject many workout requests
        - A registered user shall have many gym memberships
        - A registered user shall send, cancel, accept and reject many friend requests

     c. Account:
        - An account shall be associated with a guest user or a registered user
        - An account shall have all the information of a user
        - An account shall be accessed by a single credentials combination only (username-password)

     d. Events:
        - An event shall be created and deleted by a Registered User
        - An event shall be viewed by many Users

e. Clubs:

- An club shall be created and deleted by a Registered User
- An club shall be joined by many Registered Users

f. Gym Membership:

- A gym membership shall belong to a registered user
- A gym membership shall have option for at most one buddy pass

g. History Logs:

- A history log shall belong to a registered user
- A history log shall have information related to user activities

h. Blocked Users:

- A block list shall have many users blocked by other users
- A block list shall be used by many registered users

i. Buddy pass:

- A buddy pass belongs to a gym membership
- A buddy pass shall be used by any registered user

j. Friend request

- A friend request shall be sent by a registered user
- A friend request shall be canceled by a registered user
- A friend request shall be accepted by a registered user
- A friend request shall be rejected by a registered user

k. Workout request

- A workout request shall be sent by a registered user
- A workout request shall be canceled by a registered user
- A workout request shall be accepted by a registered user
- A workout request shall be rejected by a registered user

2. ***Entities:***

   a. Guest User (Strong)

      - user_id: unique user id to identify the guest user
      - email_id: unique email id associated with a user
      - is_registered: if the user is a registered user

   b. Registered User (Weak)

      - reg_id: unique user id to identify the registered user
      - user_id: id associated with a guest user
      - phone: contact no of the registered user
      - address: address of the registered user
      - location: city name of the registered user
      - zipcode: zipcode of the registered user
      - activity_type: like if the user is interested in indoor/outdoor activities
      - workout_type: kind of workout user prefers to carry out

   c. Account (Weak)

      - acc_id: unique id for the account entity
      - reg_id: id associated with a registered user
      - username: used to log in account
      - password: password to log in account

   d. Events (Weak)

      - event_id: unique id for the events entity
      - reg_id: id associated with registered user
      - description: more info about the event
      - start_time: start time for the event
      - end_time: end time for the event
      - from_date: start date for the event
      - to_date: end date for the event

e. Clubs (Weak)
    - club_id: unique id for the clubs entity
    - reg_id: id associated with a registered user
    - description: more information on the club
    - open_to_all: if other registered users can join without invite

f. Gym Membership (Weak)
    - gym_id: unique id for the gym membership info
    - reg_id: id associated with a registered user
    - gym_name: gym name the user has membership for
    - gym_loc: location of the gym
    - gym_zipcode: zipcode in which the gym is located
    - buddy_pass: does it have the option for buddy pass
    - share_pass: if the registered user is willing to share his buddy pass
    - membership_start_date: start date for gym membership
    - membership_expiry_date: end date for gym membership

g. History Logs (Weak)
    - log_id: unique id to identify the log of a registered user
    - reg_id: id associated with a registered user
    - activty_info: information on the user activity
    - is_workout_request: if log is for workout request
    - is_friend_request: if log is for friend request
    - is_buddy_pass_request: if log is for buddy pass request
    - is_block_user: if log is for blocking a user
    - is_club_request: if log is for a club request

h. Blocked Users (Weak)
    - block_id: unique id to for blocking entity
    - block_from_reg_id: id associated with a registered user who is blocking

- block_to_reg_id: id of the registered user who is being blocked
- block_date: date the user was blocked
- block_time: time user was blocked

i. Buddy pass (Weak)

- bp_id: unique id for the buddy pass entity
- reg_id: id associated with a registered user
- gym_id: buddy pass belong to which gym
- to_reg_id: registered user id with whom the buddy pass is being shared
- date_used: the date on which the user is sharing buddy pass
- amount: amount user collects for the buddy pass mechanism

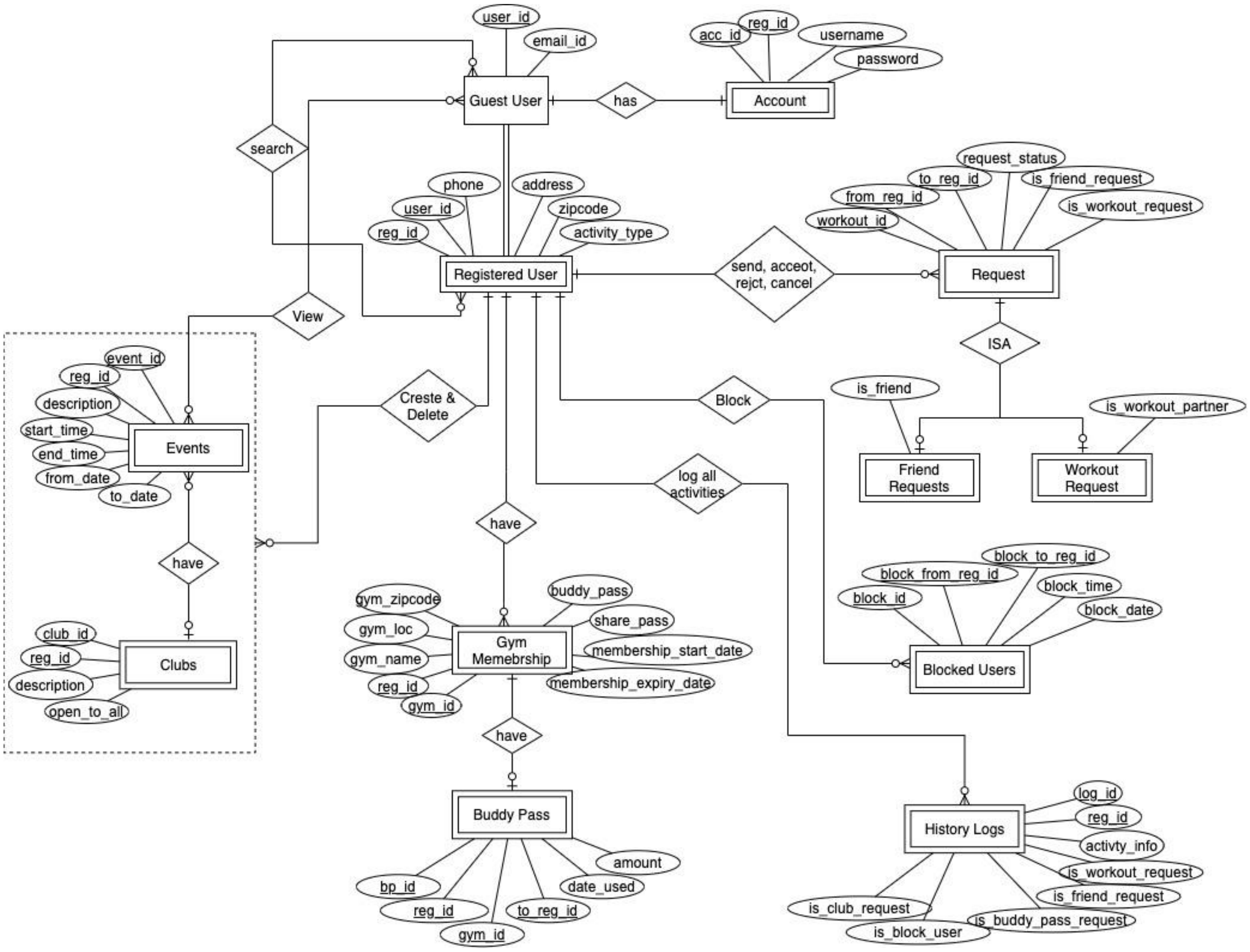
j. Friend request (Weak)

- friend_id: unique id for the friend entity
- from_reg_id: id of a registered user who is sending friend request
- to_reg_id: id of a registered user to whom the request is sent
- request_status: status of the request as sent, cancel, accept, reject

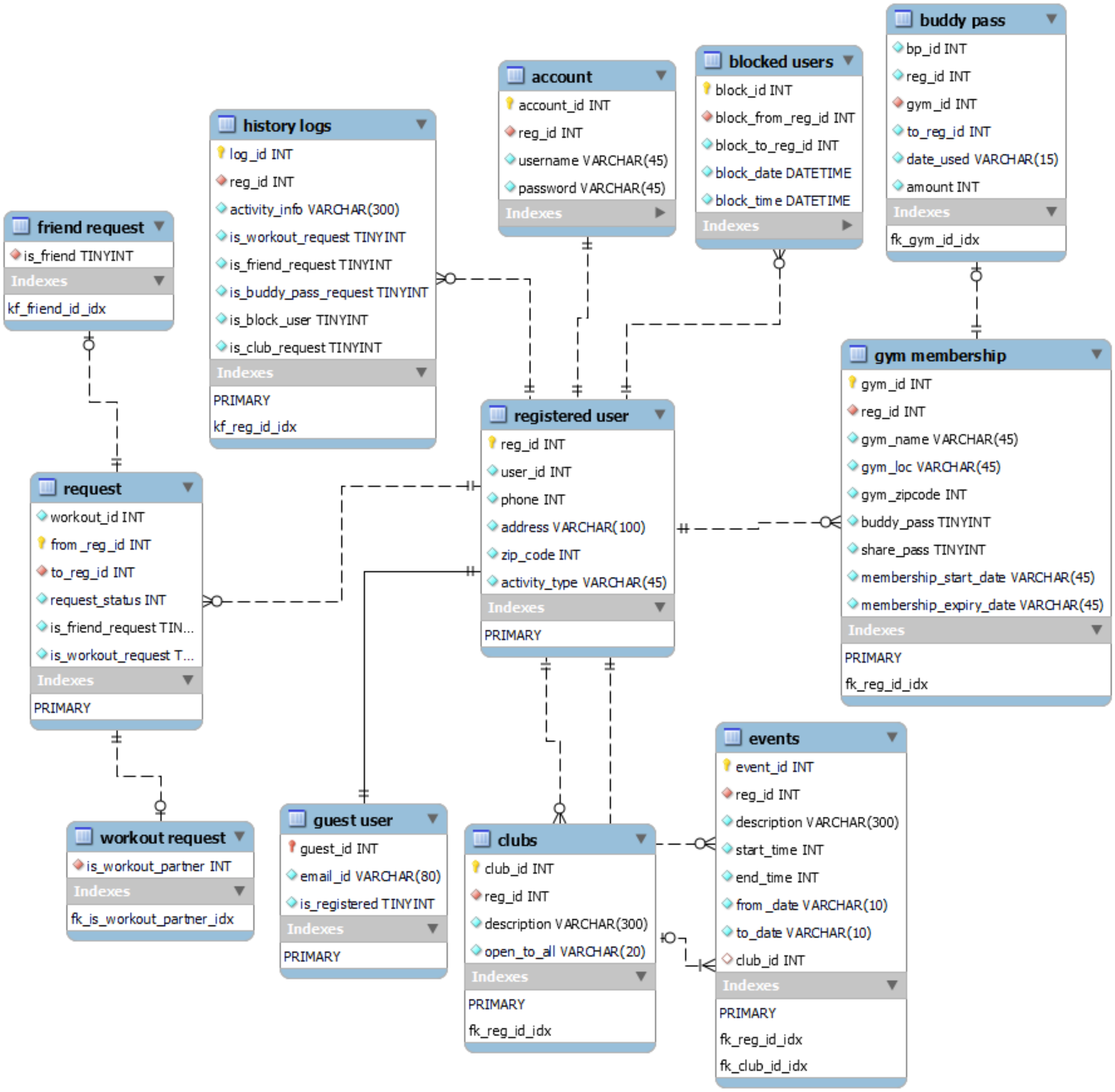
k. Workout request (Weak)

- workout_id: unique id for the workout entity
- from_reg_id: id of a registered user who is sending workout request
- to_reg_id: id of a registered user to whom the request is sent
- request_status: status of the request as sent, cancel, accept, reject

3. ERD:


user_id
email_id
Guest User
has
Account
acc_id
reg_id
username
password
search
Registered User
phone
address
user_id
zipcode
reg_id
activity_type
send, acceot, rejct, cancel
Request
request_status
to_reg_id
is_friend_request
from_reg_id
is_workout_request
workout_id
ISA
is_friend
is_workout_partner
Friend Requests
Workout Request
View
event_id
reg_id
description
start_time
end_time
from_date
to_date
Events
Creste & Delete
Block
log all activities
have
have
Clubs
club_id
reg_id
description
open_to_all
gym_zipcode
gym_loc
gym_name
reg_id
gym_id
Gym Memebrship
buddy_pass
share_pass
membership_start_date
membership_expiry_date
have
Buddy Pass
bp_id
reg_id
gym_id
to_reg_id
date_used
amount
block_to_reg_id
block_from_reg_id
block_id
block_time
block_date
Blocked Users
History Logs
log_id
reg_id
activty_info
is_workout_request
is_friend_request
is_buddy_pass_request
is_club_request
is_block_user

4. Database Model:



5. ***DBMS:***

The database chosen to develop the project is MySQL since it is well known RDBMS, easy to use and many GUI tools are available for the development and maintenance of the MySQL database.

- ***Media storage:***
  - ‣ The media used in the FItHub app will be images of the profile pictures and club pictures.
  - ‣ They will be stored in the **file system** and the format of image will be JPEG/ JPG/ PNG.

- ***Search/filter architecture and implementation:***

  ‣ Search Algorithm:
  - ◦ The input to the search algorithm shall be provided from the search bar.
  - ◦ The user will input only usernames to search from the search bar
  - ◦ The input will be looked into the database
  - ◦ The output for the search algorithm will be the list of usernames that fully / partially matches the user input in the ascending order

  The DB fields that will be searched here is :
  - ◦ Table: Account
    - → username

  ‣ Filter Algorithm:
  - ◦ The input to the filter algorithm shall be provided by clicking on search button from the filters section
  - ◦ The user will be given the option to search based on the location, indoor/outdoor activities, workout type by selecting the appropriate filters.
  - ◦ These filtered inputs shall be looked into the database. These fields shall also be indexed in the database for quick search results.

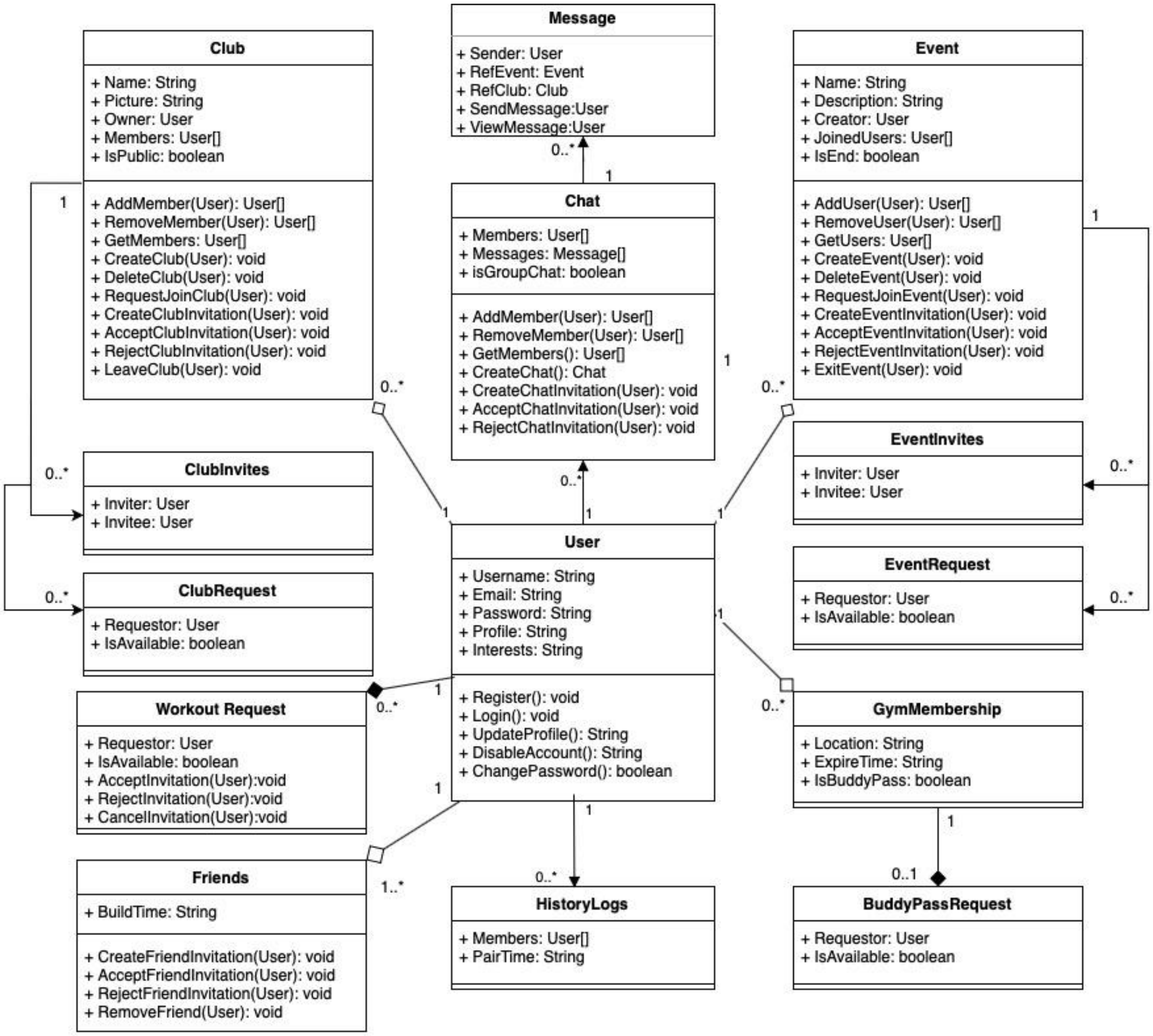
- The output for the search algorithm will be the list of items that match the user's filter input. The information in each item fetched from the database will have the username, location, zip code, activity_type, workout_type.

  The db terms that will be searched here is :

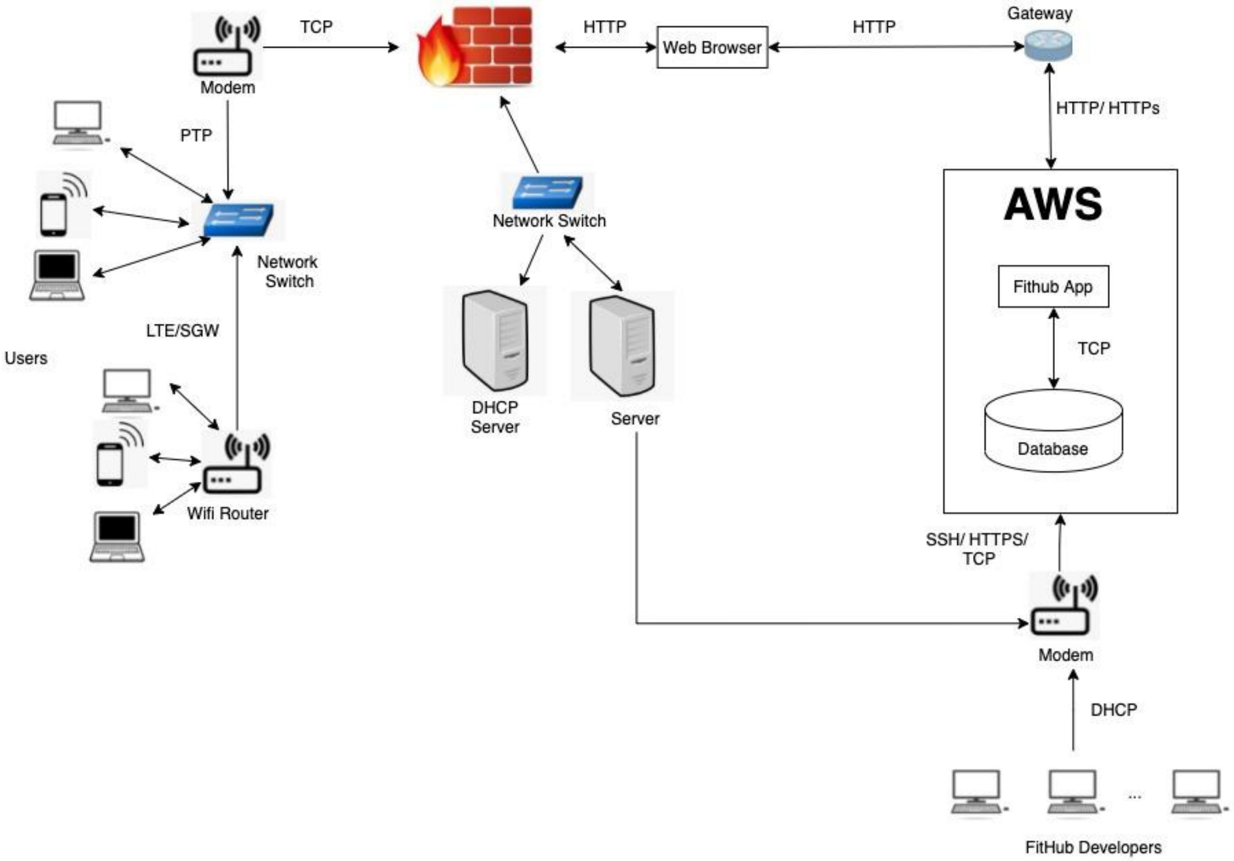
- Table: Account
  - → username
- Table: Registered User
  - → location
  - → zipcode
  - → activity_type
  - → workout_type

5. High Level Diagrams V2

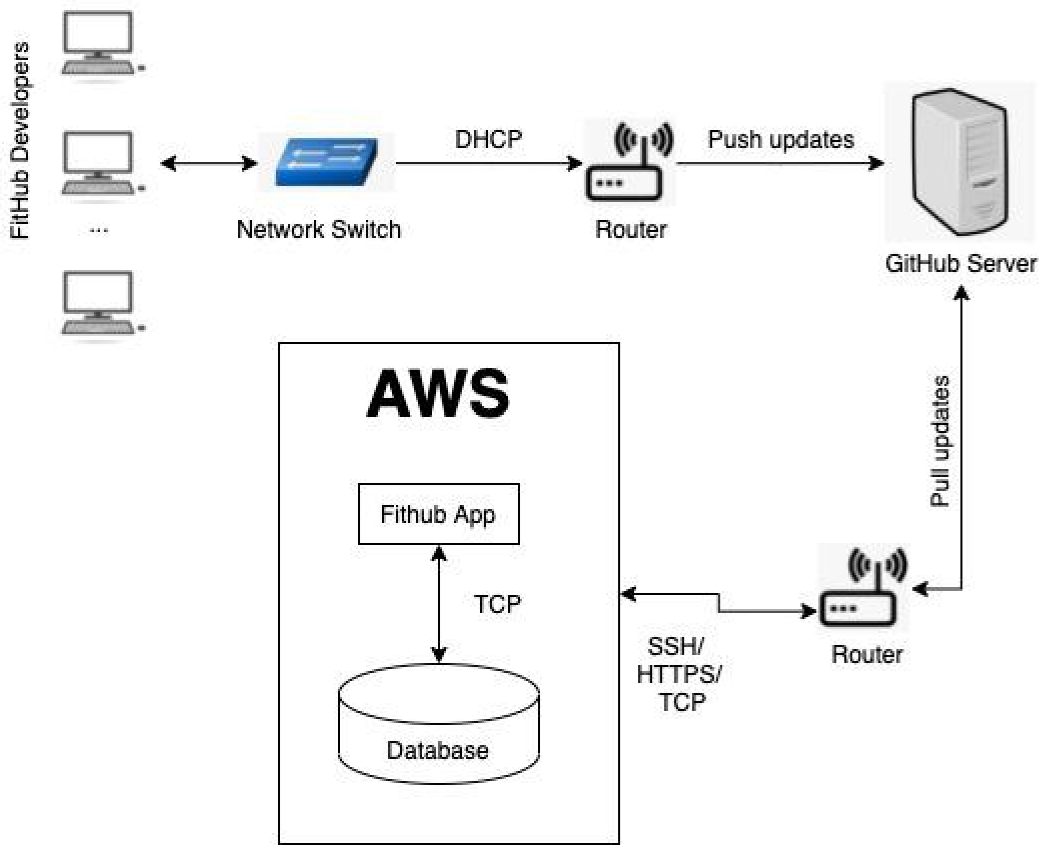
UML:



Application Network Diagram:



Deployment Diagram:



6. List of Contributions in this milestone (detailed including contributions to the horizontal prototype)

Team Member	Contribution
Vidhi Vora ***(Team Lead)***	*As a Team Lead:* ‣ Ensuring all the requirements are met and adhering to the M3 guidelines ‣ Assigning and supervising the task progress, organizing regular team meetings and the agenda ‣ Resolving queries, discussing the concepts for the M3 *As a Team Member (Milestone 2):* Full Contribution to following sections: ‣ Wireframes Based on your Mockups/Storyboards Partial Contribution to following sections: ‣ - *Horizontal Prototype:* ‣ Create event API ‣ Login API ‣ My Profile page
Johnson Nguyen ***(Backend Lead)***	Full Contribution to following sections: ‣ - Partial Contribution to following sections: ‣ - *Horizontal Prototype:* ‣ Find a buddy page ‣ Creating sessions for log in
Roberto Simental ***(Frontend Lead)***	Full Contribution to following sections: ‣ Partial Contribution to following sections: ‣ *Horizontal Prototype:* ‣ Events Page ‣ Event profile page

	‣ Design fixes on pages
Michael Satumba ***(Frontend Member)***	Full Contribution to following sections: ‣ Partial Contribution to following sections: ‣ *Horizontal Prototype:* ‣ Find a buddy page ‣ My Profile page
Eduardo Hernandez ***(Backend Member)***	Full Contribution to following sections: ‣ Data definitions Partial Contribution to following sections: ‣ *Horizontal Prototype:* ‣ Creating sessions for log in ‣ Create event page ‣ Testing for bugs
Zhinan Zhao ***(Backend Member)***	Full Contribution to following sections: ‣ Partial Contribution to following sections: ‣ *Horizontal Prototype:* ‣ Creating sessions for log in ‣ Search events API ‣ Search bar in home page header
Ziming Wang ***(Frontend Member)***	Full Contribution to following sections: ‣ Partial Contribution to following sections: ‣ *Horizontal Prototype:* ‣ Event profile page

(implementation of session is still in progress)