Group 46: Buff Beavers
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Executive Summary

Through the few weeks of reviews and feedback from our peers, we had received lots of beneficial feedback in helping improve our website. In the beginning, we had to decide whether we wanted a database system and front end based on a user or the management of Buff Beavers as a whole, as it would help guide our next decisions. Another piece of advice was to change up our entities for classes and gym_classes as it was confusing and decide for where attributes would make more sense. As for functionality, it was said that we should at least implement it in at least one of our entities so that it would allow for users to filter out or look for specific pieces of information based on an attribute. In addition, to ensure that there would not be foreign keys that do not exist, a dropdown menu should be implemented in forms that would require an entry for a foreign key. It was also pointed out that we were missing a M:M relationship between the entities which was part of the requirement for the website.

After taking in all the suggestions, we had gone ahead and decided to change the goal of the project to manage chains of gyms instead of focusing solely on one gym. We can manage information about gyms, users, trainers, workout entries, class descriptions, and class schedules. Based on that, the classes and gym_classes entities were changed to classes describing what classes were and gym_classes displayed where classes were at and what classes were offered at that location. The gym_classes was also made into the intersection table between gyms and classes. In each of the forms (creating/inserting and editing) that required any foreign keys referencing other tables, a dropdown menu was implemented so that only existing foreign keys can be used, and users cannot enter random ones that do not exist and run into an error.

a) **Overview**
  i) Our gym, Buff Beavers is a popular chain of gyms that welcomes everyone that wants to improve their fitness game. There are currently 2,000 members across all of our gyms that workout regularly each month. The $30.00 membership fee provides users with classes with which they can sign up for, some classes include but not limited to aquatics, yoga, weights, and dancing. In addition, they are assigned to personal trainers based on their goals who they can consult and workout with. Lastly, users have the option to use a web app that will assist them with tracking their workouts on what day they exercised and what they did that day.

b) **Database Outline, in Words**
  - **gyms** - stores basic business information about the gym
    - gymID: int, unique, not NULL, PK
    - location: varchar(255), not NULL
    - numUser: int
    - numTrainer: int
    - Relationship:
      - 1:M between gym and users, with gymID as FK in users
  - **users** - stores information about the user
    - userID: int, unique, not NULL, PK, auto_increment
    - firstName: varchar(255), not NULL
    - lastName: varchar(255), not NULL
    - gymID: int, not NULL, FK
    - location: varchar(255), not NULL
    - email: varchar(255), not NULL
    - birthday: date format
    - trainerID: int, not NULL
    - Relationship:
      - 1:M between users and workout_entries, with userID as FK in workout_entries
      - M:1 between users and trainers, with userID as FK in trainers
      - M:1 between users and gym, with userID as FK in gym
  - **workout_entries** - stores information about the entry of the workout
    - entryID: int, unique, not NULL, auto_increment, PK
    - userID - int, not NULL
    - date: date format, not NULL
    - workoutName - varchar(255)
    - workoutSet - int
    - workoutRep - int
    - workoutWeight - int
    - Relationship:
      - M:1 between workout_entries and users with userID as FK in workout_entries

- **trainers** - stores information about the trainer assigned to users
  - trainerID: int, unique, NOT NULL, auto_increment, PK
  - gymID: int, not NULL
  - firstName: varchar(255), not NULL
  - lastName: varchar(255), not NULL
  - numTrainee: int, not NULL
  - Relationship:
    - 1:M between users and trainers, with userID as FK in trainers
    - M:1 between trainers and gym, with gymID as FK in trainers
- **classes** - stores information about classes offered at the specific gym
  - classID: int, not NULL, auto_increment, PK
  - className: varchar(255)
  - description: text, not NULL
  - Relationship:
    - M:N between gyms and classes
- **gym_classes** - intersection table for gyms and classes
  - classID: int, unique, not NULL, FK
  - gymID: varchar(255), not NULL, FK,
  - location: varchar(255), not NULL
  - meetingTime: time, not NULL,
  - startDate: date format, not NULL,
  - endDate: date format, not NULL
  - numEnrolled: int
  - numRemaining: int

c) **Entity-Relationship Diagram**
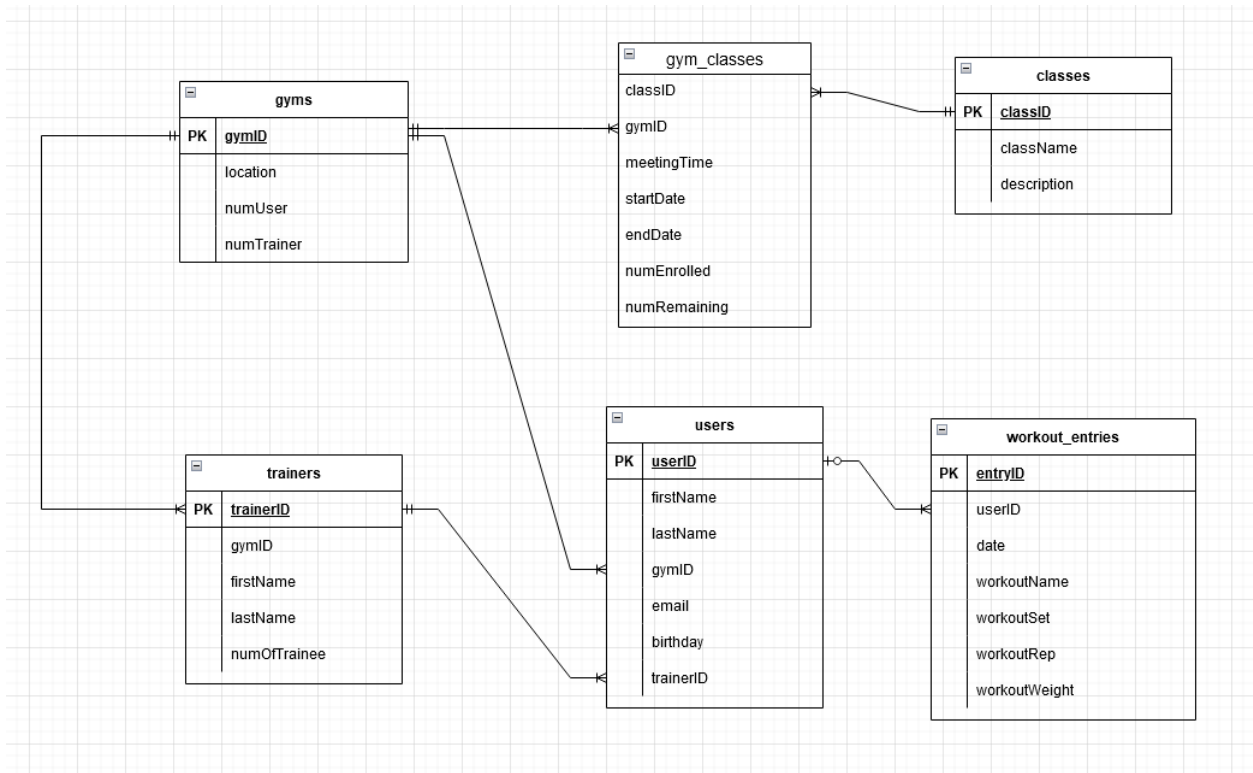
d) **Schema**
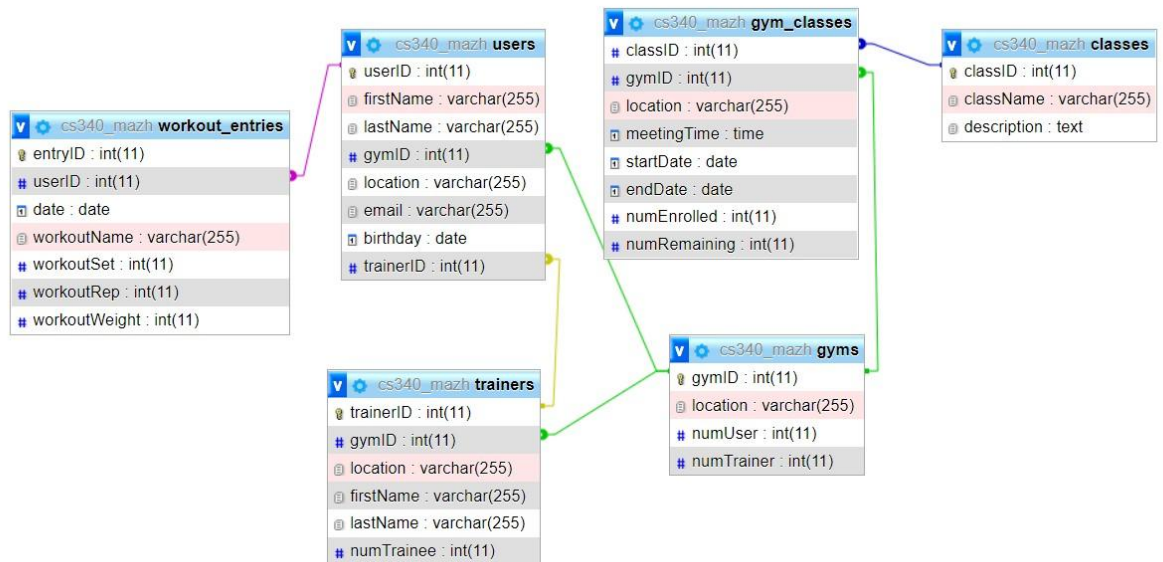
e) Example Data

gyms

gymID	Location	numUser	numTrainer
1	Portland	1000	25
2	Corvallis	700	10
3	Salem	300	5

users

userID	firstName	lastName	gymID	email	birthday	trainerID
1	Benny	Beaver	1	BennyBeaver@oregonstate.edu	1942-06-05	3
2	Miguel	Cabrera	3	CabreraM@hello.com	2001-06-10	2
3	Ananya	Jaiswal	2	JaiswalA@hotmail.com	1992-06-10	1

gym_classes

classID	gymID	meetingTime	startDate	endDate	numEnrolled	numRemaining
3	1	13:00 PM	2022-06-10	2022-08-10	22	8
1	3	17:30 PM	2022-04-25	2022-05-25	5	25
2	2	18:00 PM	2022-05-01	2022-09-01	30	0

classes

classID	className	description
3	Aquatic Exercises	A class that teaches a variety of swimming styles and basic swimming techniques
1	Beginner Weight Lifting	Introduces newcomers to lifting and how to safely and properly workout with weights
2	Badminton	Learn how to play badminton, can be in pairs or solo.

gym_classes

classID	gymID	time	startDate	endDate	numEnrolled	numRemaining
3	Portland	12:00:00 PM	2022-06-10	2022-08-10	22	8
1	Salem	7:30:00 PM	2022-04-25	2022-05 -25	5	25
2	Corvallis	8:00:00 AM	2022-05-01	2022-09-01	30	0

trainers

trainerID	gymID	firstName	lastName	numTrainee
1	3	Justin	Chang	3
2	1	John	Doe	2
3	2	Steven	Smith	2

workout_entries

entryID	date	userID	workoutName	workoutSet	workoutRep	workoutWeight
1	2021-01-10	1	bencc	5	10	135
2	202101-12	1	deadlift	4	8	155
3	202101-13	2	Bicep Curls	3	12	25

SCREENSHOTS OF UI

READ/INSERT/DELETE Gyms

| Home | Gyms | Users | Trainers | Workout Entries | Class Descriptions | Class Schedules |

Gyms

Gym ID	Location	Number of Users	Number of Trainers	Edit	Delete
1	Portland	1000	25	Edit	Delete
2	Corvallis	700	10	Edit	Delete
3	Salem	300	5	Edit	Delete
4	Seattle	521	23	Edit	Delete
5	Miami	600	30	Edit	Delete

Add a New Gym

Location: [   ] Number of Users: [   ] Number of Trainers: [   ]

[Add Gym]

EDIT Gyms

Editing Gym:

Gym ID	Location	Number of Users	Number of Trainers
2	Corvallis	700	10

Edit Gym

Location: [Corvallis] Number of Users: [700] Number of Trainers: [10]

[Edit Gym] [Cancel]

READ/INSERT/DELETE Users

| Home | Gyms | Users | Trainers | Workout Entries | Class Descriptions | Class Schedules |

Enter a User ID to access all their information

Search user | Search

Users

User ID	First Name	Last Name	Gym ID	Email	Birthday	Trainer ID	Edit	Delete
1	Benny	Beaver	2	BennyBeaver@oregonstate.edu	1942-10-14	3	Edit	Delete
2	Miguel	Cabrera	3	CabreraM@hello.com	2001-08-23	2	Edit	Delete
3	Ananya	Jaiswal	1	JaiswalA@hotmail.com	1992-06-10	1	Edit	Delete

Add a New User

First Name: [____] Last Name: [____] Gym ID: [Corvallis ▾] Email: [____] Birthday: [mm/dd/yyyy 📅] Trainer ID: [Steven Smith ▾]

[Add User]

EDIT Users

Editing User:

User ID	First Name	Last Name	Gym ID	Email	Birthday	Trainer ID
2	Miguel	Cabrera	3	CabreraM@hello.com	2001-08-23	2

Edit User

First Name: [Miguel] Last Name: [Cabrera] Gym ID: [Salem ▾] Email: [CabreraM@hello.com] Birthday: [08/23/2001 📅] Trainer ID: [John Doe ▾]

[Edit User] [Cancel]

READ/INSERT/DELETE Trainers

| Home | Gyms | Users | Trainers | Workout Entries | Class Descriptions | Class Schedules |

Trainers

Trainer ID	Gym ID	First Name	Last Name	Number of Trainees	Edit	Delete
1	1	Justin	Chang	3	Edit	Delete
2	3	John	Doe	2	Edit	Delete
3	2	Steven	Smith	2	Edit	Delete

Add a New Trainer

Gym ID: [Portland ▾] First Name: [_____] Last Name: [_____] Number of Trainees: [_____]

[Add Trainer]

EDIT Trainers

Editing Trainer:

Trainer ID	Gym ID	First Name	Last Name	Number of Trainees
2	3	John	Doe	2

Edit Trainer

Gym ID: [Salem ▾] First Name: [John] Last Name: [Doe] Number Of Trainees: [2]

[Edit Trainer] [Cancel]

READ/INSERT/DELETE Workout Entries

Home	Gyms	Users	Trainers	Workout Entries	Class Descriptions	Class Schedules

Enter a User ID to access all of their workout entries.

User ID [   ] [Search]

Workout Entries

Entry ID	User ID	Date	Workout Name	Workout Sets	Workout Reps	Workout Weights	Edit	Delete
1	1	2021-01-10	bench	3	10	135	Edit	Delete
2	1	2021-01-12	deadlift	5	8	155	Edit	Delete
3	2	2021-01-13	bicep curls	4	12	25	Edit	Delete

Add a New Workout Entry

User ID: [Benny Beaver ▾] Date: [mm/dd/yyyy 🗓] Workout Name: [   ] Number of Sets: [   ] Number of Reps: [   ] Weight Used: [   ]

[Add Workout]

EDIT Workout Entries

Editing Workout Entries:

Entry ID	User ID	Date	Workout Name	Workout Sets	Workout Reps	Workout Weights
2	1	2021-01-12	deadlift	5	8	155

Edit Workout Entry

User ID: [Benny Beaver ▾] Date: [01/12/2021 🗓] Workout Name: [deadlift] Workout Sets: [5] Workout Reps: [8] Workout Weight: [155]

[Edit Workout Entries] [cancel]

READ/INSERT/DELETE Class Descriptions

| Home | Gyms | Users | Trainers | Workout Entries | Class Descriptions | Class Schedules |

Class Descriptions

Class ID	Class Name	Description	Edit	Delete
1	Aquatic Exercise	includes variety of swimming styles and basic swimming techniques.	Edit	Delete
2	Beginner Weight Lifting	Introduces newcomers to lifting and how to safely and properly workout with weights.	Edit	Delete
3	Badminton	Learn how to play badminton, can be in pairs or solo.	Edit	Delete

Add a New Class

Class Name: [_____] Description: [_____]

[Add Class Description]

EDIT Class Descriptions

Editing Class Description:

Class ID	Class Name	Description
2	Beginner Weight Lifting	Introduces newcomers to lifting and how to safely and properly workout with weights.

Edit Class Description

Class Name: [Beginner Weight Lifting] Description: [Introduces newcomers to lif]

[Edit Class Descriptions] [Cancel]

READ/INSERT/DELETE Class Schedules

| Home | Gyms | Users | Trainers | Workout Entries | Class Descriptions | Class Schedules |

Class Schedules

Class ID	Gym ID	Meeting Time	Start Date	End Date	Number of Users Enrolled	Number of Spots Remaining	Edit	Delete
3	1	13:00:00	2022-06-10	2022-08-10	22	8	Edit	Delete
1	3	17:30:00	2022-04-25	2022-05-25	5	25	Edit	Delete
2	2	18:00:00	2022-05-01	2022-09-01	30	0	Edit	Delete

Add a New Class Schedule

Class ID: [Badminton ▾] Gym ID: [Portland ▾] Meeting Time: [--:-- -- 🕐] Start Date: [mm/dd/yyyy 📅] End Date: [mm/dd/yyyy 📅] Number Enrolled: [_____] Number Remaining: [_____]

[Add Class Schedule]

UPDATE Class Schedules

Editing Class Schedule:

Class ID	Gym ID	Meeting Time	Start Date	End Date	Number of People Enrolled	Number of Slots Remaining
1	3	17:30:00	2022-04-25	2022-05-25	5	25

Edit Class Schedule

Class ID: [Aquatic Exercise ▾] Gym ID: [Salem ▾] Meeting Time: [05:30 PM 🕐] Start Date: [04/25/2022 📅] End Date: [05/25/2022 📅] Number Enrolled: [5_____] Number Remaining: [25_____]

[Edit Class Schedules] [Cancel]