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CSAI 202 - Fall 2023

Introduction to Database Systems >Fitness Tracker < Team Number: 08

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Fitness Tracker Management system

1) Analysis:

a)Proposed Project Description

The Fitness Tracker Management System will help individuals and fitness enthusiasts monitor, manage, and optimize their physical fitness, health, and wellness. This application provides a user-friendly platform to track workouts, nutrition, health metrics, and personal goals. It encourages users to stay motivated, make informed health decisions, and achieve their fitness objectives Effectively.

b)Problem Statement

The fitness tracker application requires a database to store and manage data about user profiles, the workouts, nutrition plans, health information for each user and their goals and progress. The database needs to effectively model the relationships between users, their activities, progress, and fitness plan the nutritionist recommends and the fitness plans the coaches might put.

c) System Users and Privileges

Administrator – Has full access can Create, Suspend, modify user accounts, workouts, nutrition information.

Registered Users - Can Create/view/update their own user profile, Log and track daily workouts,

nutrition, goals. Can view dashboards and reports based on their data.

Trainer - Can view clients' dashboards. Can create/update workout plans and goals for clients.

d)Entities and brief description

1. User Profiles: - represent individuals who use the fitness tracker system. User profiles store

information such as name, contact details, age, gender, and fitness goals.

2. Workouts: - refer to specific exercise routines or activities that users perform.

These can include

cardio, strength training, yoga, or any other form of physical activity.

3. Workout Plans: - Workout plans are structured schedules that guide users through their fitness

journey. These plans may include daily or weekly routines with specific exercises and goals.

4. Nutrition Data: - Nutrition data tracks dietary information related to users' meals and intake.

includes details like calories consumed, macronutrient breakdown (carbs, proteins, fats), and meal

timings.

5. Trainers and Coaches Profiles: - represent fitness professionals who guide users. Trainers provide

personalized workout plans, nutritional advice, and motivation.

6. Support Requests: - Users can submit support requests for assistance with technical issues, workout

modifications, or general queries

7. Health Metrics: - capture vital information about users' well-being. Examples include weight, body

mass index (BMI), blood pressure, heart rate, and sleep patterns.

8. Goals: - represent users' fitness objectives. These could be weight loss, muscle gain, improved

endurance, or achieving specific performance milestones.

9. Challenges: - encourage users to participate in fitness-related competitions or achieve specific

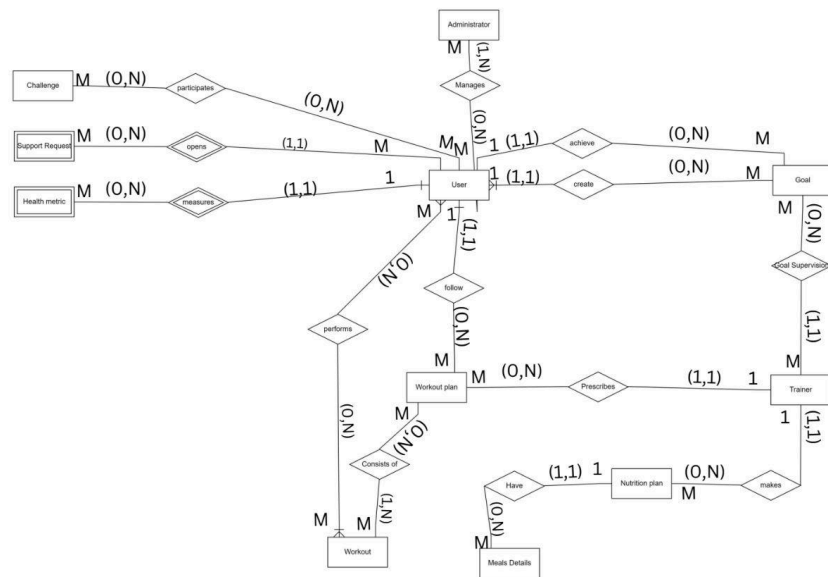
milestones within a set timeframe.

e) Relationships and brief description

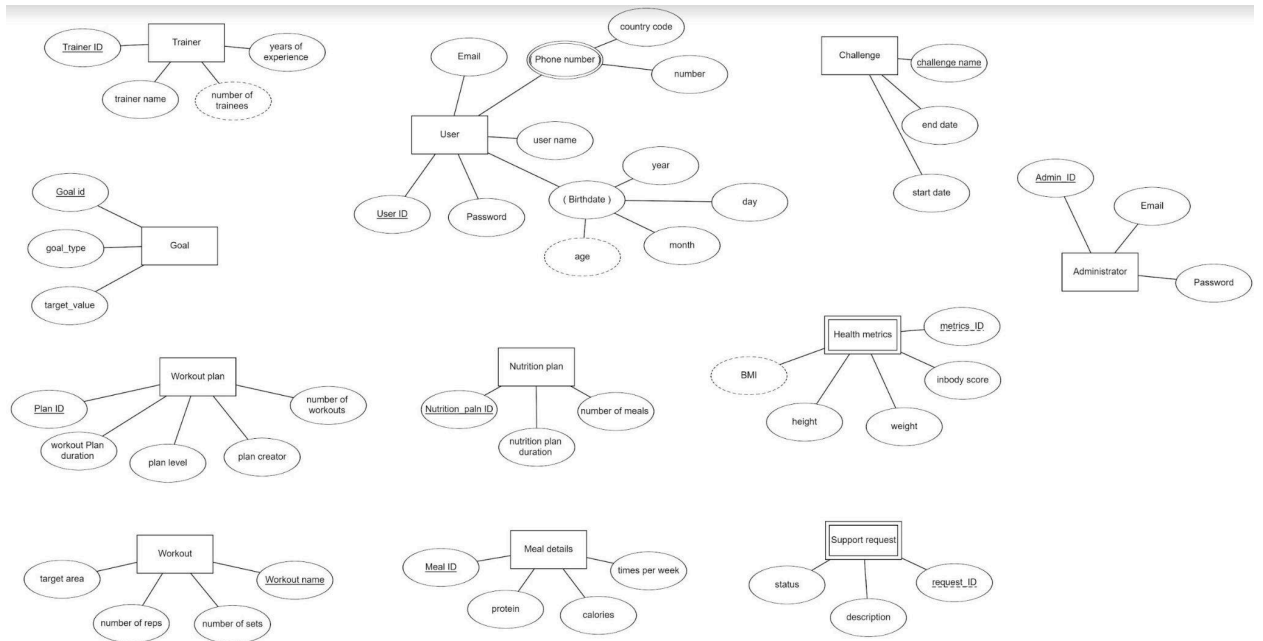
1. User Performs Workouts - A user can perform multiple workout routines, which are logged as workout records in the system.
2. Trainer Makes Nutrition plans – depending on the user's goal to gain weight or build muscle or lose fats , the trainer logs a specific nutrition plan for the user to follow
3. User Creates Goals - Users can create multiple goals related to their fitness, like weight loss, muscle gain, etc.
4. User Follows Workout Plans - Users can follow structured workout plans that have schedules of exercises and activities.
5. User Measures Health Metrics - Users can record metrics like weight, BMI, body fat percentage, etc. over time.
6. Trainer Prescribes Workout Plans - Trainers can create workout plans for users to follow.
7. User Participates in Challenges - Users can join fitness challenges and competitions.
8. User Achieves Goals - Goals get marked as achieved once users meet the defined target.
9. workout plan Consists of workouts- Workouts can be part of workout plans.
10. Trainer Goal Supervision Goal- Trainer plays a role in supervising goals set by a user.
11. user Opens Support request- maintain a record of user interactions with the support services
12. Administrator Manages User- empowers administrators to manage user
13. Nutrition plan Have Meals Details - helps in detailing and organizing specific meal-related information

2) Design

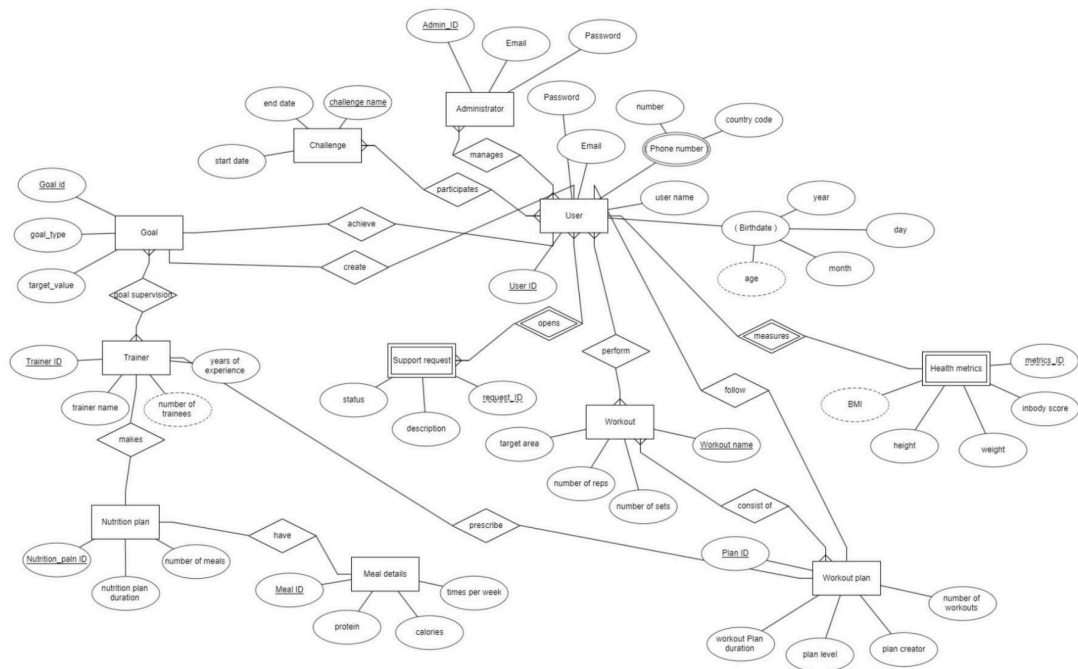
a) ERD Relationship



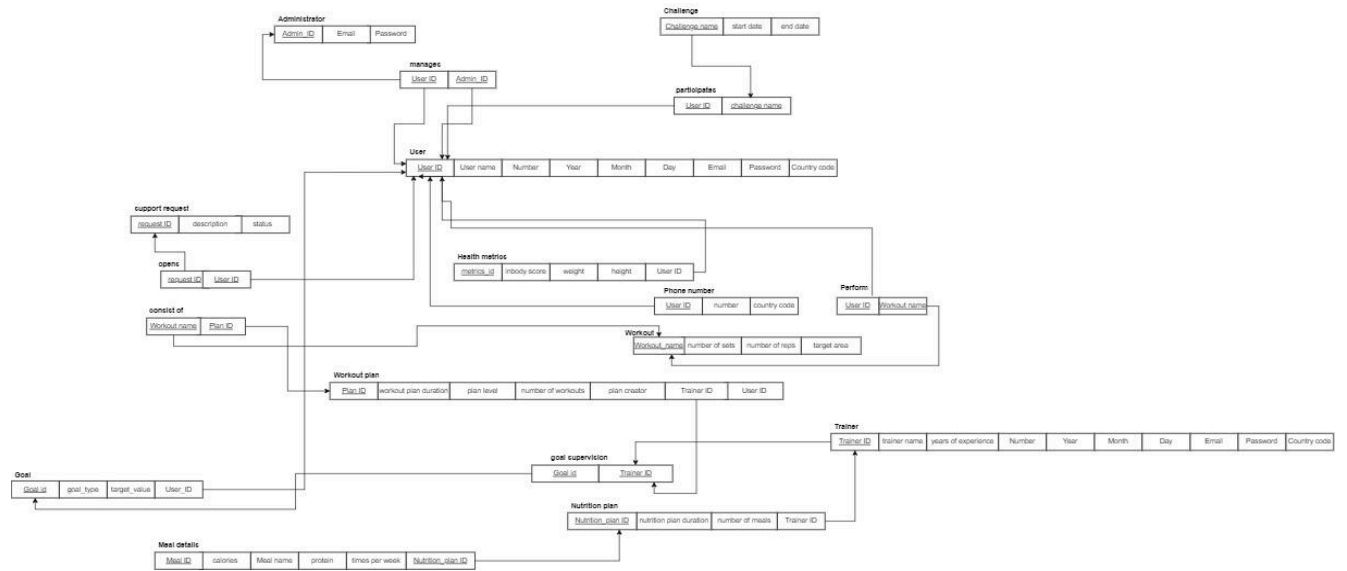
b) ERD Attributes



c) Final ERD



d) Schema diagram



3) Implementation

1- Home Page (Index)

Welcome To The Fitness Tracker

Take care of your body. Healthy lifestyle leads to better quality of life.

The main idea is to have our members enjoy their fitness trainings in classy and private settings.

Sign Up

Login

This Page is the Home Page that shows a description of our Project “ the Fitness Tracker “

And it contains two buttons : the first button is for sign up and the second for Log in , when the person who use the web click on sign up it will direct him to the (Sign up page), and when the person who use the web click on Login it will direct him the (Login Page).

- **Description:**
 - Display a description of the Fitness Tracker project.
 - Contains two buttons: "Sign Up" and "Log In."
- **Functionality:**
 - Clicking on "Sign Up" directs the user to the Sign Up Page.
 - Clicking on "Login" directs the user to the Login Page.

2- Sign Up Page

Sign Up


Name

Email

Please use the following Email prefixes:
Admin: a-
User: u-
Trainer: t-

Password

ConfirmPassword

BirthDate 

Phone

CountryCode

The Sign Up Page is For all the people who enter the web .

They write all the information that is required in this Page as : Name , Email , Password, Birthdate , Phone Number , Country code .

In email there is a note : if the person who make the sign up is trainer he should starts his/her email with t- ,

If the person who makes the sign up is User he should start his/her email with u- .

If the person who makes the sign up is Admin he should start his/her email with a- .

After the person fills in all the details he will click on Confirm and it will direct him / her to the Success Page .

- **Description:**
 - Allows Person to sign up by providing personal information.
- **Functionality:**

- User enters Name, Email, Password, Birthdate, Phone Number, Country Code.
- Email must have prefixes (a-, u-, t-) for Admin, User, and Trainer.
- After filling in details, clicking "Confirm" redirects to the Success Page.

Success Page

Your data has been submitted successfully!

Here is the Success page that tells the person that all his information was submitted successfully. Informs the user that their information was submitted successfully.

3- Login Page

Login

Email:

Password:

Log in

This is the Login Page the person should login using his / her email and password . if he login using the email of the user he will directly go to the page of the User . If he login using the email of the admin he will directly go to the page of the Admin . If he is a Trainer he will directly go to the Page of the Trainer.

- **Description:**
 - Allows users to log in using their email and password.
- **Functionality:**
 - Depending on the user type (Admin, User, Trainer), redirects to the corresponding page.

4- Admin Page

List of Trainers

trainerId	Name	number	Country Code	Email	Birth date	Action
						Delete

List of Users

Userid	Name	number	Country Code	Email	Birth date	Action
						Delete

The Page of the Admin contains two Tables .

The First table for the trainers' information . The second table for the Users' information.

And the admin can take the action of deleting one of them from the system.

Description:

- Displays two tables for Trainers' and Users' information.
- Admin can take actions to delete users or trainers from the system.
- Admin can add new users , trainers.

Sample after adding some data

List of Trainers

[Add New Trainers](#)

TrainerID	Name	number	Country Code	Email	Birth date	Action
9	yousef	92001822	Egypt	t-yousef.gindy@gmail.com	1/1/2001 12:00:00 AM	Delete
10	Maged	92001890	Egypt	t-Maged.gindy@gmail.com	1/5/2002 12:00:00 AM	Delete
11	Nohe	92001811	Egypt	t-Noha.gindy@gmail.com	1/18/2001 12:00:00 AM	Delete
12	yousra	9796123	Egypt	t-yousraa.ahmed@gmail.com	5/19/2004 12:00:00 AM	Delete
13	lama	92001822	Egypt	t-lama@gmail.com	10/5/2001 12:00:00 AM	Delete

List of Users

[Add New Users](#)

UserID	Name	number	Country Code	Email	Birth date	Action
7	rana	92001822	Egypt	u-Rana.gindy@gmail.com	1/10/2007 12:00:00 AM	Delete
8	Aya	92001190	Egypt	u-Aya.mohamed@gmail.com	10/10/1999 12:00:00 AM	Delete
9	lamees	92101190	Egypt	u-Lameesa@gmail.com	10/5/2002 12:00:00 AM	Delete

5- Trainer Page

Nutrition Plan and Meals of User

Trainer Id	Nutrition Plan id	Nutrition plan duration	Meal Name	Meal Id	Number of Meals	Time per week	Calories	Protien	Action
									Edit Delete

The Trainer page Contains all the nutrition Plan and Meals of the User , as the trainer is the one who can manage these things to the user .

The Trainer decides the nutrition plan duration , meal name , number of meals , time per week , calories , Protein for the user , so the trainer is the person who takes the Action of edit or delete in this table's information.

- Description:
 - Contains nutrition plans and meals for users.
- Functionality:
 - Trainer manages nutrition plan details (duration, meal name, etc.).
 - Trainer can edit or delete entries in the table.
 - Trainer can add new plan for users.

Sample after adding Some date

Nutrition Plan and Meals of User

[New Plan For Users](#)

TrainerID	Nutrition_plan ID	Nutrition_plan Duration	Meal Name	Meal ID	Number_of_meals	Times_per_week	Calories	Protien	Action
5	33	33	egg	22	3	22	11	22	Edit Delete
6	0	12	oat	0	6	15	200	25	Edit Delete

6- User Page

User Portal

My Health

My Workout Plan

My Goals

My Nutrition Plan and
Meals

My Support Request

The page of the User Contains 5 options :

1- My Health : when the user clicks on it he /she will directly go to the page of (health).

2- My Workout Plan: when the user clicks on it he / she will directly go to the page of the(workout Plan) .

3- My Goals: When the user Clicks on it he/ she will directly go to the page of the(Goals) .

4- My Nutrition Plan and Meals: When the user clicks on it he/ she will directly go to the page of (Nutrition Plan and Meals) .

5- My Support Request : when the user clicks on it he/ she will directly go to the page of (Support Request).

Description:

- Contains options for My Health, My Workout Plan, My Goals, My Nutrition Plan and Meals, My Support Request.

7- Health page

My Health

Userid	Metrics Id	inbody Score	Weight	Height	Action
					Edit Delete

In this page the user adds information about his/her health like: Inbody score, weight , height . and he/ she can take action to edit it or delete it all and write it again .

Description:

- Users add health information like Inbody score, weight, and height.
- Users can edit or delete health information.
- User can add new health plan

Sample After adding data

My Health

[Add new Health Metric Plan](#)

User ID	Metrics ID	inbodyScore	Weight	Height	Action
5	12	140	60	56	Edit Delete

8- Workout Plan Page

Workout Plan

User Id	Plan ID	Workout Plan Duration	Plan Level	Number of Workouts	Trainer Id	Plan Creator	Workout Name	Number of Sets	Number of reps	Target Area	Action
											Edit Delete

This Page contains information about the workout plans that he / she will do according to what the trainer tells him / her , and information about workout like: Workout Name, Number of sets , number of reps and Target Area that also the trainer helps him / her in . He / she can also take action in them .

Description:

- Displays workout plans with details (Workout Name, Sets, Reps, Target Area).
- Users can take actions on workout plan entries.
- User can add new plan .

Sample After Adding some data

My Workout plan

[Add new Workout Plan](#)

UserID	Workout Plan Duration	Plan Level	Number Of Workouts	Workout Name	Number Of Sets	Number Of Reps	Target Area	Action
11	12	Beginner	12	Arnold Press	12	15	chest	Edit Delete

9- Goals Page

Goals

User Id	Trainer Id	Goal Id	Goal_type	Target_Value	Action
					Edit Delete

This Page contains information about the goals of the user like: Goal type and Target Value . The user can take actions in .

Description:

- Displays information about the user's goals (Goal type, Target Value).
- Users can take actions on goal entries.
- User can add new goal.

Sample After Adding data

Goal Plan

Add new Goal					
User ID	Trainer ID	Goal ID	Goal Type	Target Value	Action
5	19	13	leg	13	Edit Delete

10- Nutrition Plan

My Nutrition Plan and Meals

TrainerID	UserID	Nutrition_planID	Nutrition_planDuration	MealName	MealID	Number_of_meals	Times_per_week	Calories	Protien
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This Page the User cannot write anything in it as the Trainer is the only one who can manage it through his/ her page , so the user can only see his / her nutrition plan and Meals details .

Description:

- Users can view their nutrition plan and meal details managed by the Trainer.

11- Support Request

Support Request

Description:

Submit Request

In this page the User can write a Description , and he / she will get a Request id .

Note: When the user clicks on submit request he will direct to a page that shows a message that the request submitted correctly.

Description:

- Users can write a description for support requests.

12- Submit Request

In this page when the User clicks on the Submit request button in the Support request Page he / she will directly go to this page .

Your request has been submitted successfully and you will receive your request code within 24 Hours !