

ONLINE FITNESS PLATFORM

MSIS 2613: DATABASE MANAGEMENT SYSTEMS

MEHAK AGRAWAL
SHRUTHI SURESH
PADMA RISHITHA PUSAPATI
SAMHITA KOMANDUR SREENIVASA





INTRODUCTION

- Achieve your fitness goals with personalized workout plans meticulously designed to align with your unique needs and preferences.
- Seamlessly integrate your fitness journey into your daily life with our platform, ensuring accessibility across all devices whether you're at home or on the move.
- We're really drawn to online fitness because it's a great way to stay healthy and active. There's something genuinely fascinating about understanding what goes into it and how it all works.
- After extensive research into various fitness platforms in the market, one that particularly caught our attention was Chloe Ting's. Inspired by her approach, we've incorporated additional features to enhance and expand upon her innovative ideas.

TRACKING

REFERENCE WEBSITE



Day 1 Day 2 Day 3 Rest Day Day 5 Day 6 Rest Day >

2021 WEIGHTLOSS CHALLENGE
MARCH 2021
⌚ 21 days ⏳ 30-40 min/day
↳ Weight Loss, Full Body
↳ Fitness Mat

DETAILS
This 3-week weight loss challenge will get your entire body sweating with HIIT, cardio, abs and full body workouts. This program is suitable for all fitness levels as there are no jumping and low-impact variations throughout, and no equipment is required.

[View Less](#)

⌚ 21 days ⏳ 30-40 min/day

2021 Weight Loss Challenge

⌚ 21 days ⏳ 30-40 min/day

2021 Hourglass Challenge

⌚ 28 days ⏳ 20-43 min/day

2021 Flat Stomach Challenge

ONLINE + TRAINING

WORKOUT PLAN



21 days

30-40 min/day

2021 Weight Loss
Challenge



EXERCISE PLAN

Full Body Warm Up

Warm Up

29M views • Jan 21

Weight Loss Fat Burn

Full Body

18M views • Mar 21

Defined Abs Workout

Abs

23M views • Mar 21

Standing Full Body HIIT

Full Body

11M views • Jan 21

Best Cooldown Stretches

Cooldown

18M views • Jan 21

EXERCISE



Bouncing High Knees

1:42



Squat Reach Squat

2:51



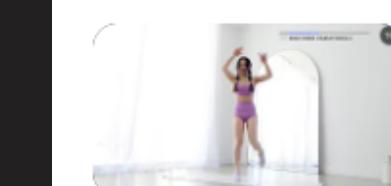
Squat Pulses

3:11



Lateral Step Claps

3:52



Set Two with High Knee Variation

4:41



Squat

RECIPE

USER ACCOUNT

Start This Challenge

With an account you can start a challenge with your schedule adapted to your calendar, and access more features!

[Create an Account](#)[Log In](#)

EXTRA FEATURES

Today's Workout Completed!
Track your daily workouts and your progress on your fitness journey



Teamwork Makes the Dream Work:
Join a team challenge to motivate one another and work out together



Popular Categories



High Protein
118 recipes

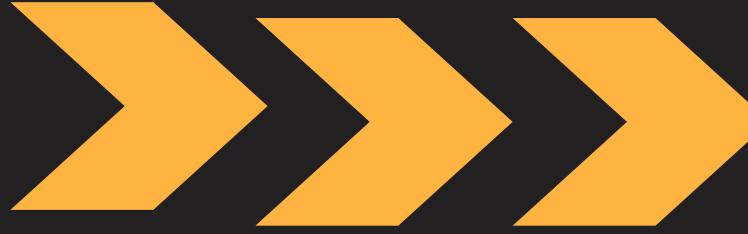


Low Carb
88 recipes

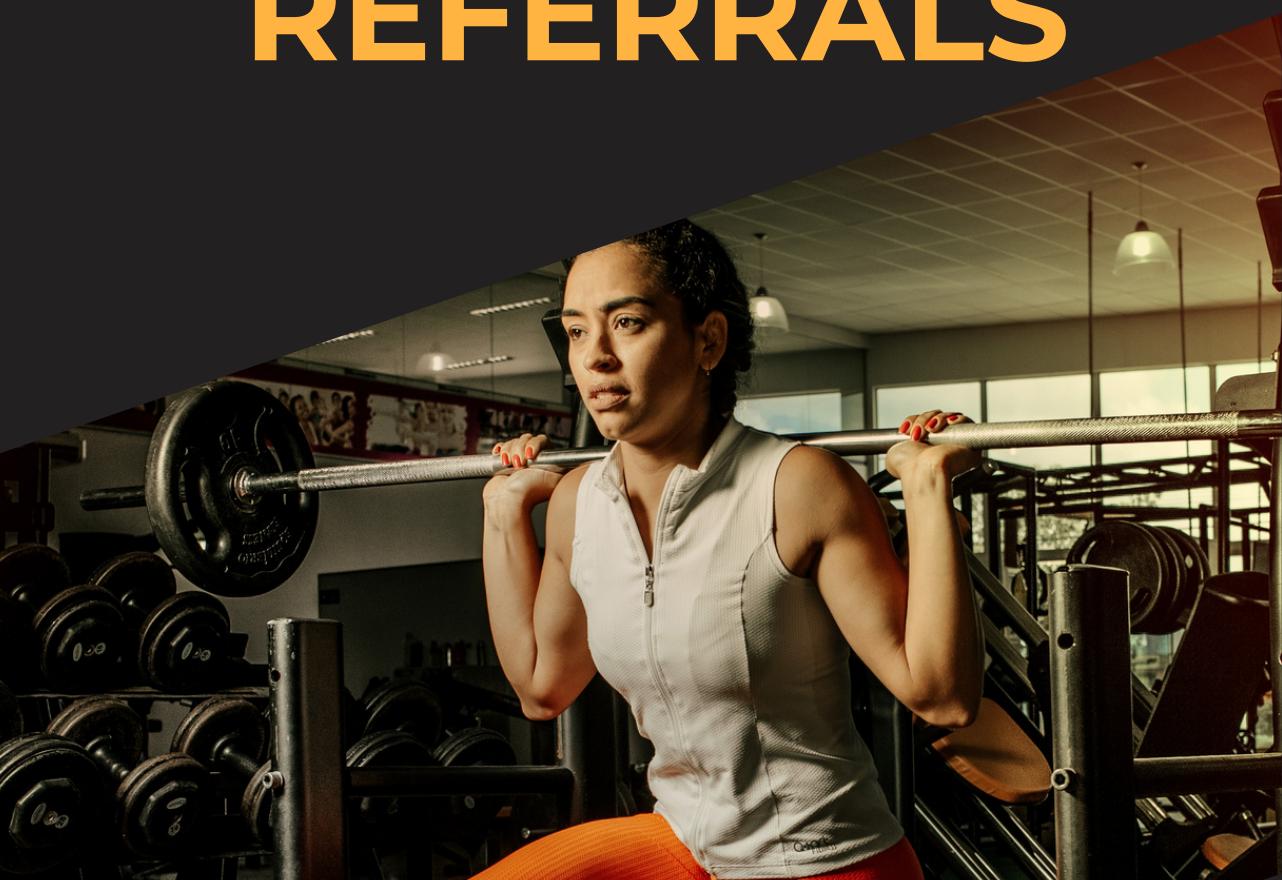
4.7

Matcha Protein Pancakes

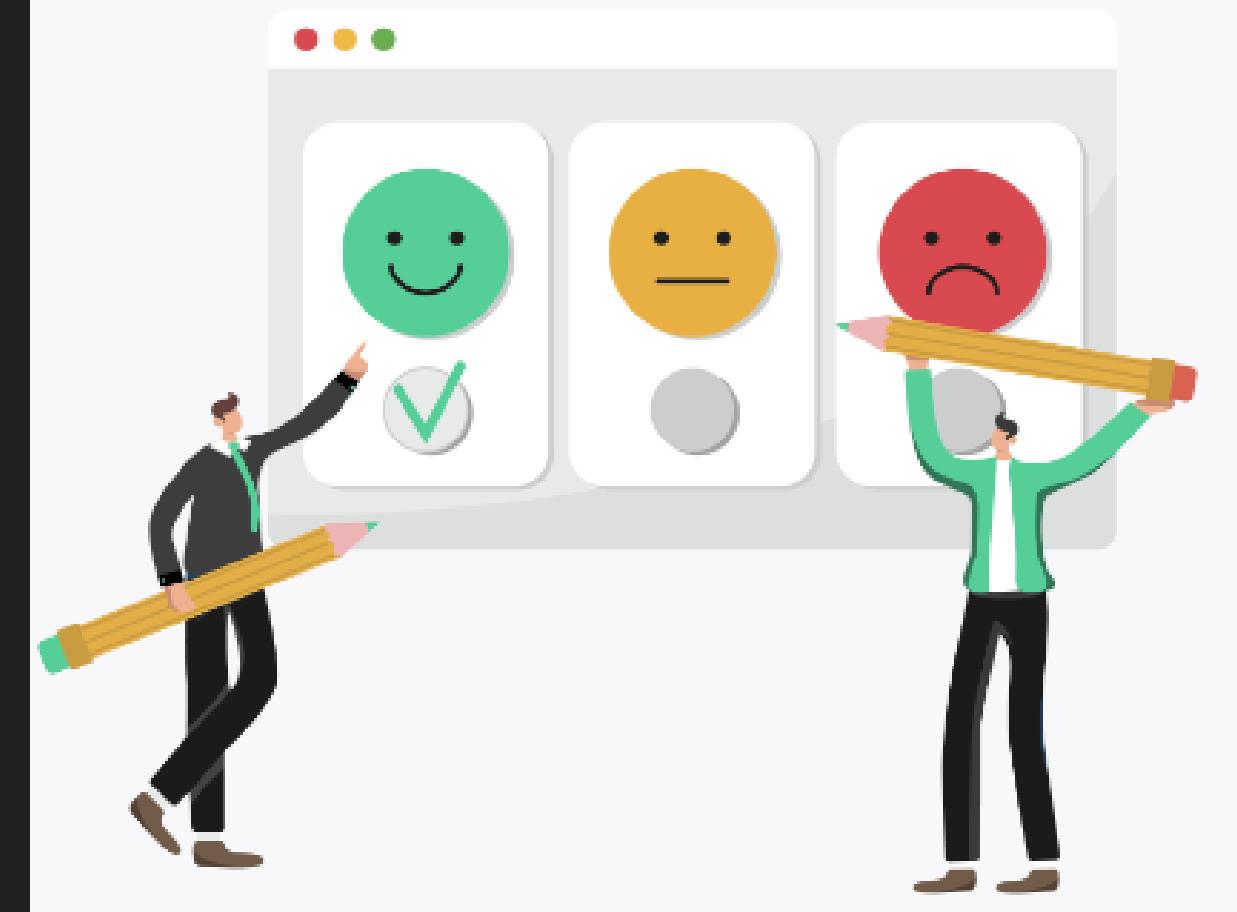
ADDITIONAL TABLES



REFERRALS



FEEDBACK



MEMBERSHIP



Login

PK	LoginID	Int
	Password	String
	LoginTime	DateTime
	Type	String

Customer

PK,FK	CustomerID	Int
	Name	String
	Referred MemberID	Int
	Referral Discount	Int
	BMI	Int

Feedback

PK	FeedbackID	Int
FK	CustomerID	Int
	Feedback	String
	Rating	Int

ENTITIES

BMI

PK,FK	CustomerID	Int
	Height	Int
	Weight	Int
	BMI	Int

Membership

PK,FK	MembershipType	String
	CustomerID	Int
	BaseAmount	Int
FK	PlanID	Int

WorkoutPlan

PK	PlanID	Int
	PlanName	String
	PlanType	String
FK	TrainerID	Int
	PlanAmount	Int

Trainer

PK,FK	TrainerID	Int
	Name	String
	Specialization	String
FK	FeedbackID	String

ExercisePlan

PK	ExercisePlanID	Int
FK	PlanID	Int
FK	CustomerID	Int
	Sets	Int
	Repetitions	Int
	ExercisePlanName	String

Session

PK	SessionID	Int
FK	CustomerID	Int
FK	PlanID	Int

NutritionPlan

PK, FK	PlanID	Int
	Description	String

ENTITIES

Feedback_Trainer_Association

PK, FK	FeedbackID	Int
PK, FK	TrainerID	Int

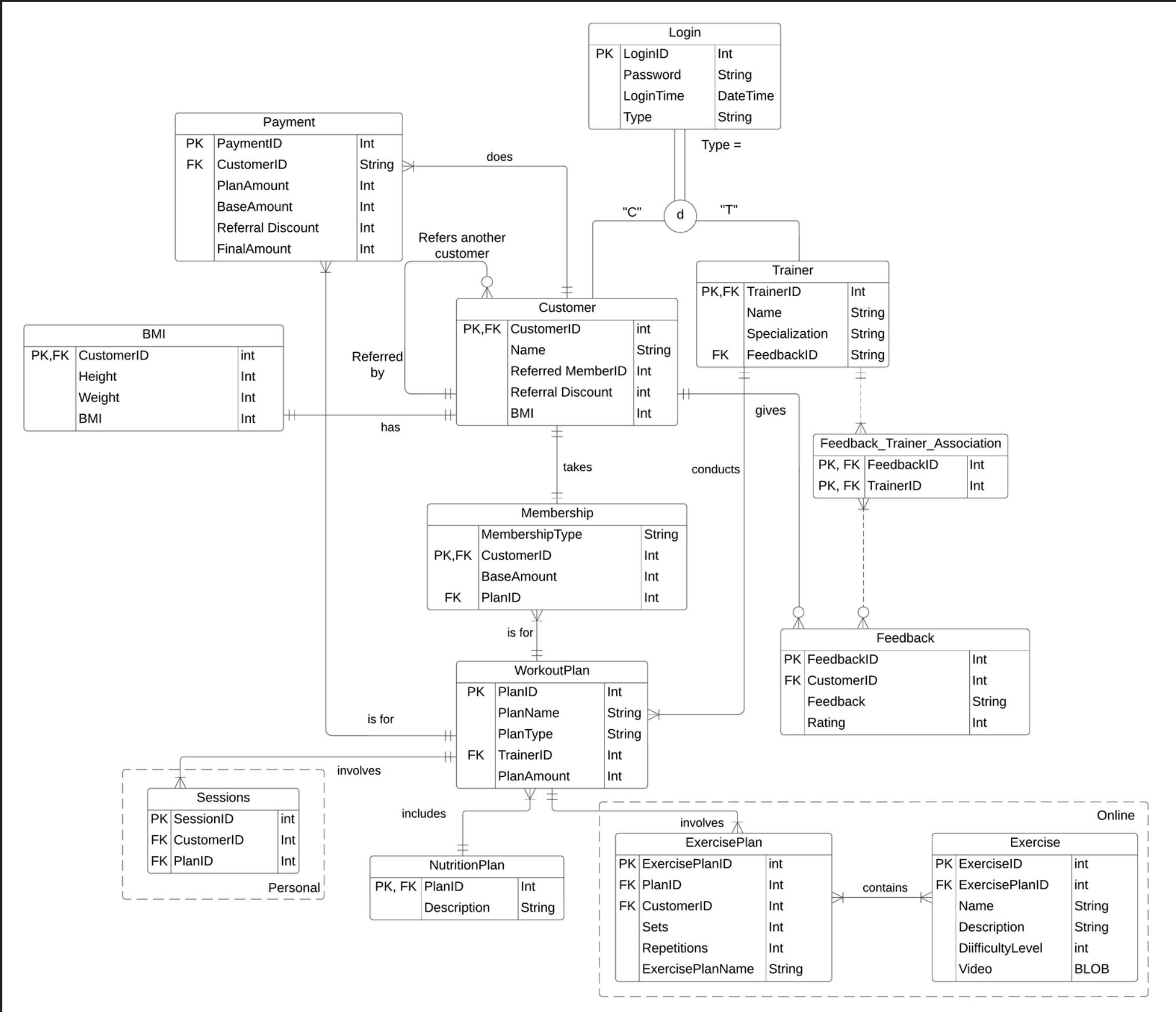
Exercise

PK	ExerciseID	Int
FK	ExercisePlanID	Int
	Name	String
	Description	String
	DifficultyLevel	Int
	Video	BLOB

Payment

PK	PaymentID	Int
FK	CustomerID	String
	PlanAmount	Int
	BaseAmount	Int
	Referral Discount	Int
	FinalAmount	Int

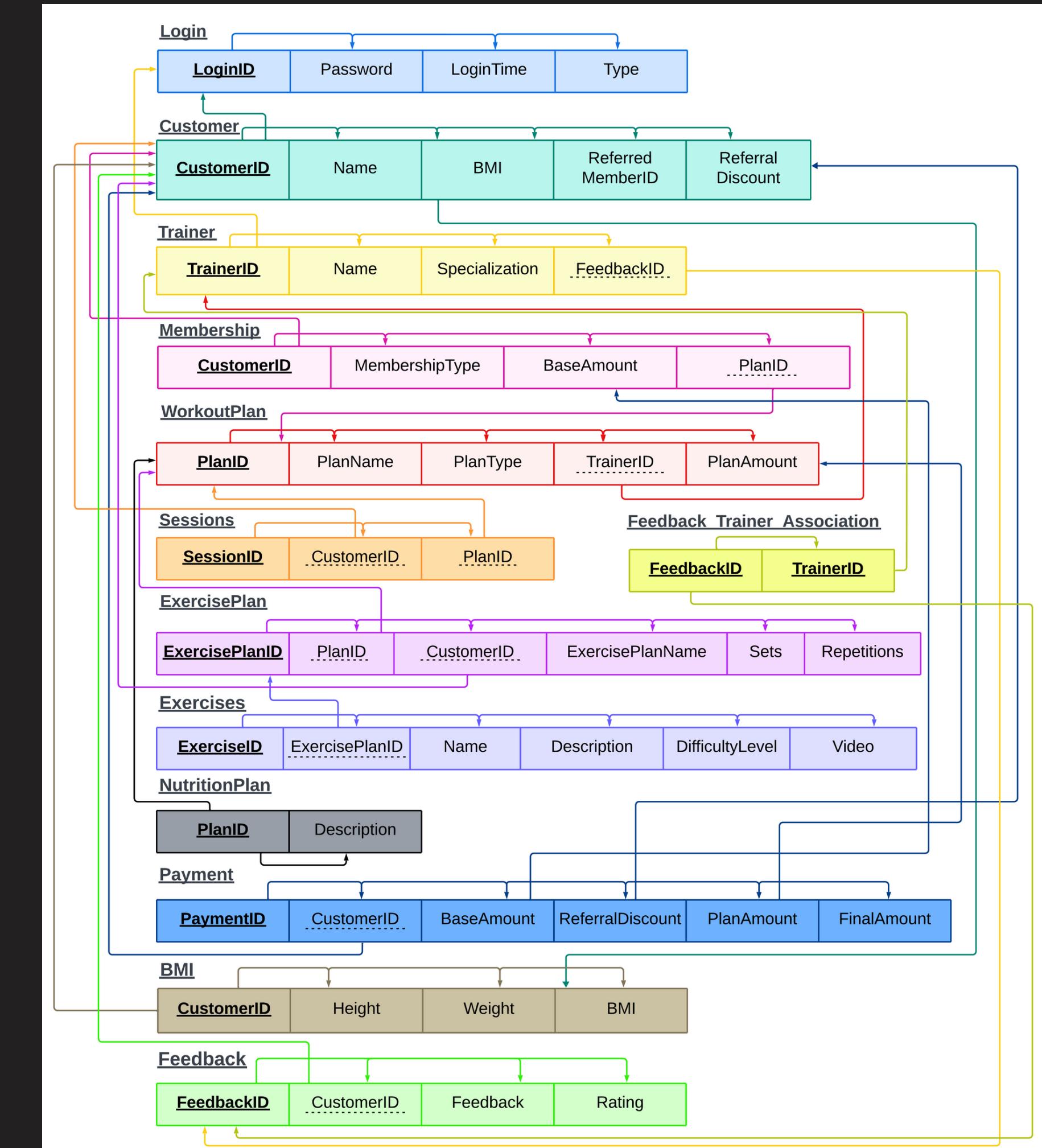
EER MODEL





3RD NORMAL FORM

- Converting into 1NF
 - WorkoutPlan into WorkoutPlan, Sessions, ExercisePlan, Exercise and NutritionPlan
 - Customer into Customer and BMI
- Converting into 2NF
 - Membership from Customer and WorkoutPlan
 - Customer into Customer and Payment
- Converting into 3NF
 - Customer into Customer and Payment
 - Feedback_Trainer_Association



-- Create Login table

```
CREATE TABLE Login (
    loginId INT PRIMARY KEY,
    password VARCHAR(255),
    login_time DATETIME,
    type VARCHAR(50)
);
```

Login

loginId	password	login_time	type
1001	hashed_password	2024-03-11 09:15:32	Customer
1002	hashed_password	2024-03-11 10:15:32	Customer
1003	hashed_password	2024-03-11 10:15:32	Customer
1004	hashed_password	2024-03-11 10:15:32	Trainer
1005	hashed_password	2024-03-11 10:15:32	Trainer
NULL	NULL	NULL	NULL

-- Create Customer table

```
CREATE TABLE Customer (
    CustomerID INT PRIMARY KEY,
    Name VARCHAR(100),
    Referred_MemberID INT,
    ReferralDiscount INT,
    BMI INT,
    FOREIGN KEY (CustomerID) REFERENCES Login(loginId),
    FOREIGN KEY (Referred_MemberID) REFERENCES Customer(CustomerID)
);
```

Customer

CustomerID	Name	Referred_MemberID	ReferralDiscount	BMI
1001	Referred Member	NULL	0	23
1002	John Doe	1001	10	25
1003	Sharon Doe	1002	0	28

-- Create Trainer table

```
CREATE TABLE Trainer (
    TrainerID INT PRIMARY KEY,
    Name VARCHAR(100),
    Specialization VARCHAR(50),
    FeedbackID INT,
    FOREIGN KEY (TrainerID) REFERENCES Login(loginId),
    FOREIGN KEY (FeedbackID) REFERENCES Feedback(FeedbackID)
);
```

Trainer

TrainerID	Name	Specialization	FeedbackID
1004	Anushka Sharma	Yoga	1001
1005	Michael Johnson	Strength Training	NULL
NULL	NULL	NULL	NULL

-- Create Feedback table

```
CREATE TABLE Feedback (
    FeedbackID INT PRIMARY KEY,
    CustomerID INT,
    Feedback TEXT,
    Rating INT,
    FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID)
);
```

Feedback

FeedbackID	CustomerID	Feedback	Rating
1001	1002	Great workout program! Really enjoyed it.	5
1002	1003	The training sessions were very effective.	4
NULL	NULL	NULL	NULL

```

CREATE TABLE Feedback_Trainer_Association (
    FeedbackID INT,
    TrainerID INT,
    PRIMARY KEY (FeedbackID, TrainerID),
    FOREIGN KEY (FeedbackID) REFERENCES Feedback(FeedbackID),
    FOREIGN KEY (TrainerID) REFERENCES Trainer(TrainerID)
);

```

Feedback_Trainer_Association	
FeedbackID	TrainerID
1001	1004

BMI

```

-- Create BMI table
CREATE TABLE BMI (
    CustomerID INT PRIMARY KEY,
    Height INT,
    Weight INT,
    BMI INT,
    FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID)
);

```

CustomerID	Height	Weight	BMI
1002	170	70	24
1003	165	60	22
NULL	NULL	NULL	NULL

Membership Table

```

-- Create Membership table
CREATE TABLE Membership (
    CustomerID INT PRIMARY KEY,
    MembershipType VARCHAR(50),
    BaseAmount INT,
    PlanId INT,
    FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),
    FOREIGN KEY (PlanId) REFERENCES WorkoutPlan(PlanId)
);

```

CustomerID	MembershipType	BaseAmount	PlanId
1002	Gold	50	3001
1003	Silver	40	3002
NULL	NULL	NULL	NULL

WorkoutPlan

```

-- Create WorkoutPlan table
CREATE TABLE WorkoutPlan (
    PlanId INT PRIMARY KEY,
    PlanName VARCHAR(100),
    PlanType VARCHAR(50),
    TrainerId INT,
    PlanAmount INT,
    FOREIGN KEY (TrainerId) REFERENCES Trainer(TrainerID)
);

```

PlanId	PlanName	PlanType	TrainerId	PlanAmount
3001	Upper Body Strength	Strength Training	1004	60
3002	Cardio Circuit	Cardiovascular	1005	50
NULL	NULL	NULL	NULL	NULL

ExercisePlan

```

-- Create ExercisePlan table
CREATE TABLE ExercisePlan (
    ExercisePlanId INT PRIMARY KEY,
    PlanId INT,
    CustomerId INT,
    ExercisePlanName VARCHAR(100),
    Sets INT,
    Repetitions INT,
    FOREIGN KEY (PlanId) REFERENCES WorkoutPlan(PlanId),
    FOREIGN KEY (CustomerId) REFERENCES Customer(CustomerID)
);

```

ExercisePlanId	PlanId	CustomerId	ExercisePlanName	Sets	Repetitions
4006	3001	1002	Morning Yoga Flow	2	10
4007	3002	1003	Full Body HIIT	3	12
NULL	NULL	NULL	NULL	NULL	NULL

IMPLEMENTATIONS

Customers with Referral

```
SELECT Name  
FROM Customer  
WHERE ReferralDiscount > 0;
```

All Feedbacks for trainer with particular TrainerID

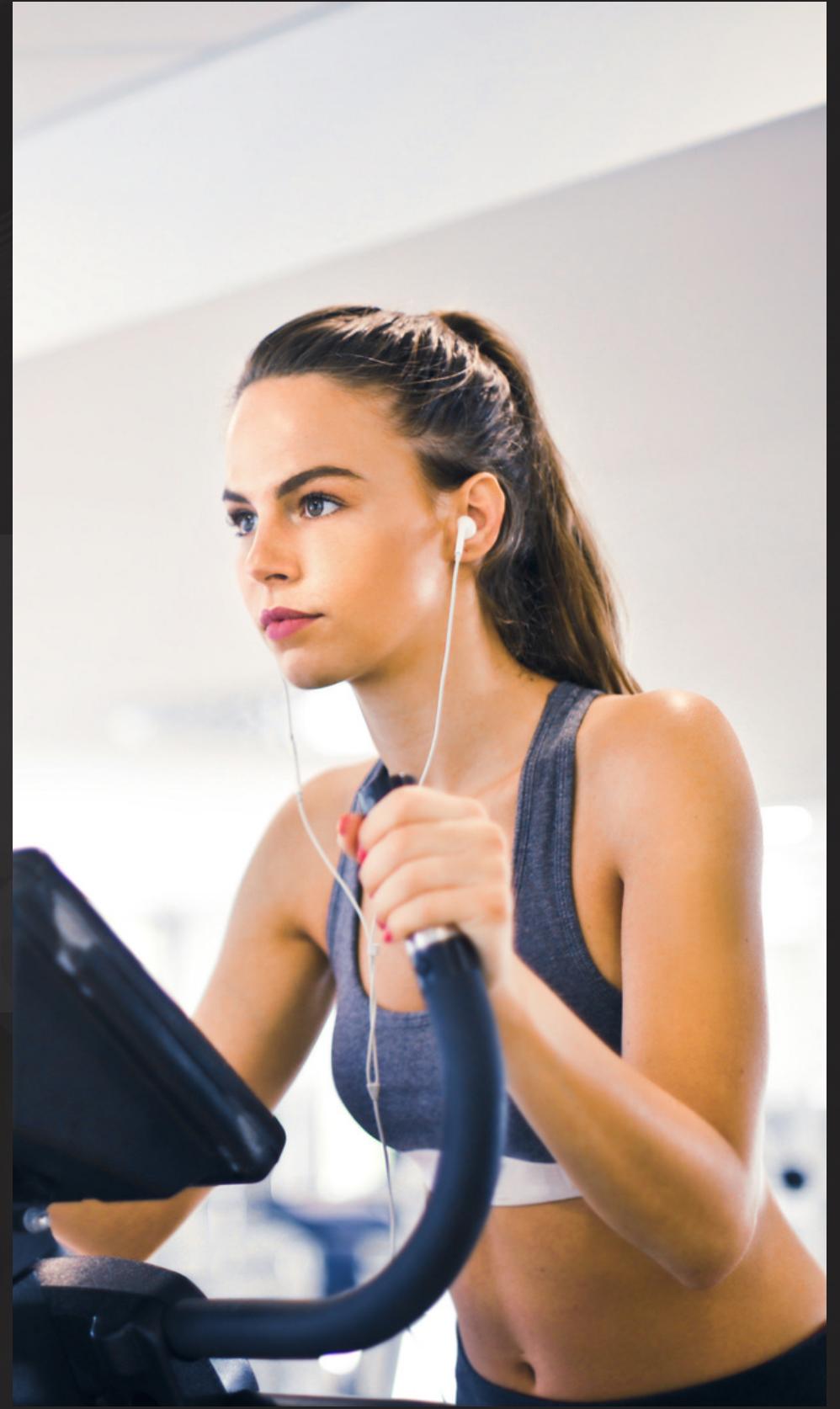
```
SELECT FeedbackID, CustomerID, Feedback, Rating  
FROM Feedback  
WHERE FeedbackID IN (  
    SELECT FeedbackID  
    FROM Feedback_Trainer_Association  
    WHERE TrainerID = 1004  
)
```

Highest Rated Feedback

```
SELECT *  
FROM Feedback  
WHERE Rating = (SELECT MAX(Rating) FROM Feedback);
```

Top 3 rated trainers

```
SELECT t.Name, AVG(f.Rating) AS AverageRating  
FROM Trainer t  
INNER JOIN Feedback_Trainer_Association fta ON t.TrainerID = fta.TrainerID  
INNER JOIN Feedback f ON fta.FeedbackID = f.FeedbackID  
GROUP BY t.Name  
ORDER BY AverageRating DESC  
LIMIT 3;
```



ISSUES & SOLUTIONS

- Data Integrity Constraint
- Incomplete Data Entry
- Data Redundancy
- Data Security
 - Update Anomalies
 - Safe Update Modes



THANK YOU

