MDEV:
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1. **Based on your previous experience you know you must do the following:** Organize the Data captured logically to form data groups/Tables **[15 Marks]**
    a. List and show the groups separately (prior to drawing the table in the following questions)

Trainers	Gym Class	Gym Supervisor	School	Certification
Trainer ID	Gym Class ID	Gym Supervisor ID	School ID	Certification ID
Trainer Name	Gym Class Name	Gym Supervisor Name	School Name	Certification Name
Trainer Home Address Street	Gym class Location (room number in building)	Certification ID	School Contact Email	Certification Description
Trainer Address City	Gym Class Supervisor ID	School ID		
Trainer home Address Province/State				
Trainer Address Country				
Trainer Email Address				
Certification ID				
School ID				

2) Determine & list the primary keys – clearly identifying each related table

Trainer – Trainer ID(PK)
Gym Class: Gym class ID(PK)
Gym Supervisor: Gym Supervisor ID(PK)
Certification – Certification ID(PK)
School – School ID(PK)

3) Determine & list the foreign keys - clearly identifying each related table

Trainer: - Trainer Certification ID, Trainer Supervisor ID(FK)
Gym Class: - Gym class Supervisor ID(FK)
Gym Supervisor:- Gym supervisor certification ID(FK)

4)
Determine the data types to be assigned to each data item captured – as shown APPENDIX A -(

- Trainer Name: VARCHAR
- Trainer Home Address Street: VARCHAR
- Trainer Address City: VARCHAR
- Trainer Home Address Province/State: VARCHAR
- Trainer Address Country: VARCHAR
- Trainer Email Address: VARCHAR
- Trainer Certification Name: VARCHAR
- Trainer Certification Description: VARCHAR
- Trainer ID: INT
- Trainer/Supervisor School Name: VARCHAR
- Trainer/Supervisor School ID: INT
- Trainer/Supervisor School Contact Email: VARCHAR
- Gym Class Name: VARCHAR
- Gym Class Location: VARCHAR
- Gym Class ID: INT

- Gym Class Supervisor ID: VARCHAR
- Gym Supervisor Name: VARCHAR
- Gym Supervisor ID: INT
- Gym Supervisor Certification ID: INT
- Gym Supervisor Certification Name: VARCHAR
- Gym Supervisor Certification Description: VARCHAR

5) Determine and briefly explain **all** the relationships that will exist between tables in the database

Trainer to Gym Class: Many-to-Many Relationship (A Trainer can teach multiple Gym Classes and a Gym Class can be taught by multiple Trainers)

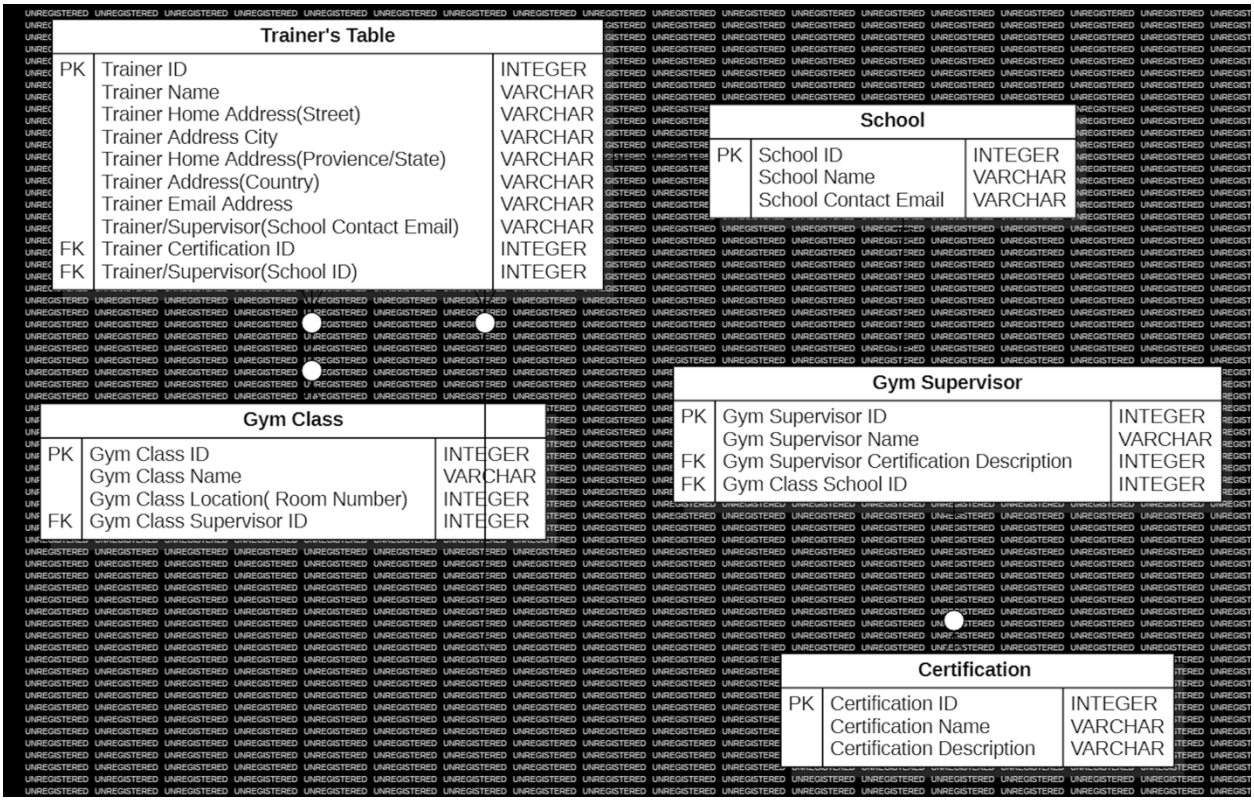
Gym Class to Gym Supervisor: One-to-One Relationship (Each Gym Class has one Gym Supervisor and a Gym Supervisor manages one Gym Class)

Trainer to Certification: One-to-One Relationship (Each Trainer has one Certification and a Certification belongs to only one Trainer)

Gym Supervisor to Certification: One-to-One Relationship (Each Gym Supervisor has one Certification and a Certification belongs to only one Gym Supervisor)

Trainer/School Relationship: One-to-Many Relationship (A Trainer or Supervisor can belong to only one school but a school can have multiple Trainers/Supervisors)

6) Create an entity relationship diagram for all tables showing the associations between each


Trainer's Table
PK Trainer ID INTEGER
Trainer Name VARCHAR
Trainer Home Address(Street) VARCHAR
Trainer Address City VARCHAR
Trainer Home Address(Provience/State) VARCHAR
Trainer Address(Country) VARCHAR
Trainer Email Address VARCHAR
Trainer/Supervisor(School Contact Email) VARCHAR
FK Trainer Certification ID INTEGER
FK Trainer/Supervisor(School ID) INTEGER
School
PK School ID INTEGER
School Name VARCHAR
School Contact Email VARCHAR
Gym Class
PK Gym Class ID INTEGER
Gym Class Name VARCHAR
Gym Class Location(Room Number) INTEGER
FK Gym Class Supervisor ID INTEGER
Gym Supervisor
PK Gym Supervisor ID INTEGER
Gym Supervisor Name VARCHAR
FK Gym Supervisor Certification Description INTEGER
FK Gym Class School ID INTEGER
Certification
PK Certification ID INTEGER
Certification Name VARCHAR
Certification Description VARCHAR