ENTITY RELATIONSHIP DIAGRAM QUESTIONS

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1. Library Management System

A library wants to keep track of its books, members, and loans. Each book has a unique ISBN, title, author, and category. Members have a unique membership ID, name, address, and phone number. Each loan must record the member borrowing the book, the book being borrowed, the loan date, and the return date.

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2. University Course Registration

A university stores information about students, courses, and enrollments. Each student has a unique ID, name, and date of birth. Courses have a course ID, title, and credit hours. A student can enroll in multiple courses, and each enrollment records the semester, year, and grade.

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3. Online Shopping System

An e-commerce platform tracks customers, products, and orders. Customers have a unique customer ID, name, email, and shipping address. Products have a product ID, name, category, and price. Each order includes the customer who placed it, the products ordered, quantities, and the total price.

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4. Hospital Patient Records

A hospital wants to manage patients, doctors, and appointments. Patients have a unique patient ID, name, date of birth, and medical history. Doctors have a doctor ID, name, specialization, and phone number. Each appointment records the patient, doctor, date, time, and reason for the visit.

5. Sports Club Management

A sports club needs to track its members, coaches, and training sessions. Each member has a unique ID, name, age, and membership type. Coaches have a coach ID, name, and expertise. Each training session records the coach, participating members, date, and type of session.

6. Restaurant Order System

A restaurant tracks its menu items, customers, and orders. Each menu item has a unique item ID, name, category, and price. Customers have a unique ID, name, and contact number. Orders include the customer, the ordered items, quantities, and total cost.

7. Airline Reservation System

An airline manages passengers, flights, and bookings. Passengers have a unique ID, name, passport number, and contact information. Flights have a flight ID, origin, destination, and departure time. Bookings record the passenger, flight, seat number, and booking date.

8. Hotel Booking System

A hotel tracks its guests, rooms, and bookings. Each room has a room number, type, and price. Guests have a guest ID, name, contact details, and payment information. Bookings include the guest, room, check-in date, and check-out date.

9. School Timetable System

A school organizes classes, teachers, and subjects. Each class has a class ID, grade, and section. Teachers have a teacher ID, name, and subject expertise. Subjects are assigned to classes and have details like subject code and name. The timetable records the class, subject, teacher, day, and time.

10. Event Management System

An event management company organizes events and tracks clients and venues. Clients have a client ID, name, and contact details. Events have an event ID, name, date, and client. Venues have a venue ID, location, and capacity.

11. Car Rental System

A car rental company keeps track of cars, customers, and rentals. Cars have a registration number, make, model, and rental price. Customers have a customer ID, name, and license number. Rentals record the car, customer, start date, end date, and total cost.

12. Bank Account Management

A bank wants to manage its customers, accounts, and transactions. Customers have a customer ID, name, and address. Accounts have an account number, type, and balance. Transactions record the account, date, type (deposit/withdrawal), and amount.

13. Movie Theater Booking System

A theater tracks its movies, customers, and bookings. Each movie has a movie ID, title, duration, and genre. Customers have a customer ID, name, and email. Bookings record the customer, movie, showtime, and number of tickets.

14. Pharmacy Inventory System

A pharmacy tracks medicines, suppliers, and orders. Medicines have a unique ID, name, category, and price. Suppliers have a supplier ID, name, and contact details. Orders include the supplier, medicines supplied, quantities, and order date.

15. Music Streaming Service

A music app tracks users, songs, and playlists. Users have a user ID, name, and email. Songs have a song ID, title, artist, and duration. Playlists record the user, playlist name, and songs added.

16. Gym Membership System

A gym keeps track of its members, trainers, and sessions. Members have a member ID, name, age, and membership type. Trainers have a trainer ID, name, and specialization. Sessions record the trainer, participating members, date, and type of workout.

17. Warehouse Inventory Management

A warehouse stores products, suppliers, and shipments. Products have a product ID, name, category, and stock level. Suppliers have a supplier ID, name, and contact details. Shipments include the supplier, products shipped, quantities, and shipment date.

18. Pet Adoption System

An animal shelter tracks pets, adopters, and adoptions. Each pet has a pet ID, name, species, and age. Adopters have an adopter ID, name, and contact details. Adoptions include the pet, adopter, and adoption date.

19. Bookstore Inventory System

A bookstore manages books, authors, and sales. Each book has a book ID, title, genre, and price. Authors have an author ID, name, and nationality. Sales include the customer, books purchased, quantities, and total cost.

20. Tourism Agency System

A travel agency tracks tourists, tours, and bookings. Tourists have a tourist ID, name, and contact details. Tours have a tour ID, destination, duration, and cost. Bookings include the tourist, tour, and booking date.