

CSE 3521 Database Management Systems
Assignment 1
Marks: 10 (5+5)

1. a) Suppose Mr. X is a pet lover and owns a cat as a pet! From his affection for his cat, he thought of arranging a grooming treat for his cat. However, we have a very few pet grooming salons available. Mr. X was looking for one and there was no detailed information available about any grooming salon on the Internet!

Therefore, to find an easy solution for it, Mr. X thought of building a new software which will provide and manage information about a grooming salon and also thought of building one of his own! For his pet grooming salon management system, help him by **drawing an ER diagram** from his requirements given below,

The pet grooming salon management system will facilitate the management of grooming appointments, pet records, customer information, and salon staff schedules. The system will ensure efficient handling of booking, services, and customer interactions.

The system shall store and manage customer information, including personal details, contact information, and pet ownership details. Customers shall be able to view and update their personal information through a customer portal. Each customer shall have a unique customer ID.

The system shall store and manage pet information, including pet name, species, breed, age, medical conditions, and grooming preferences. Each pet shall be associated with a customer. The system will allow to register with the same pet names however one customer cannot have pets of the same name.

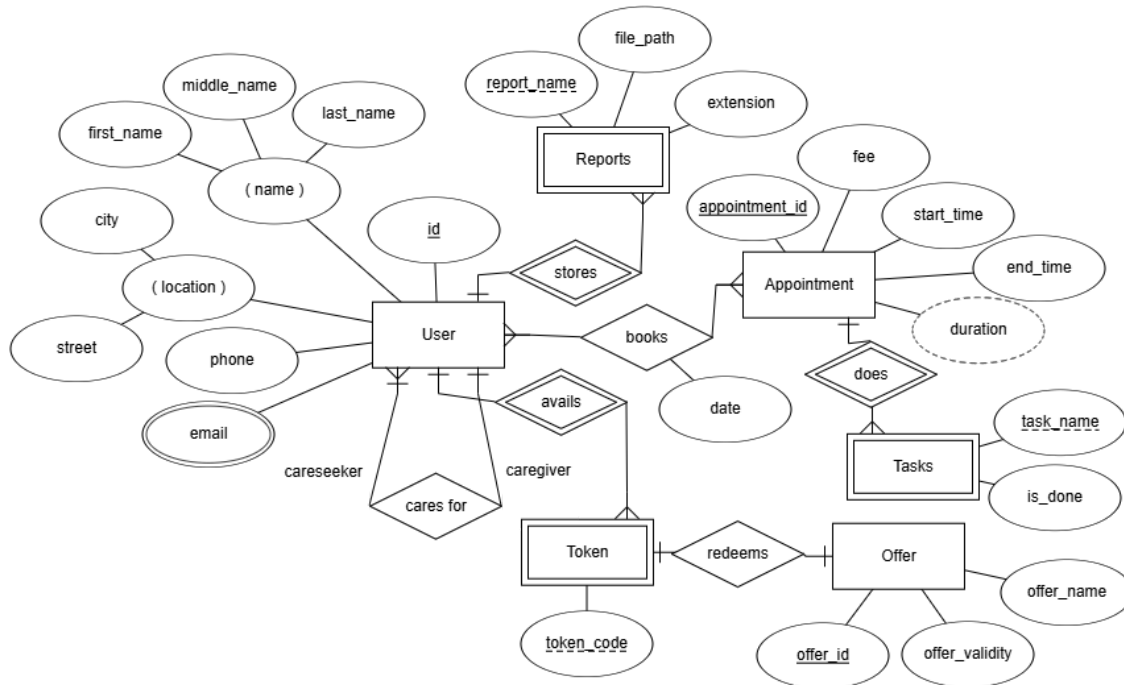
The system shall allow customers to book, modify, or cancel grooming appointments through a customer portal. The system shall check groomer availability and prevent double bookings.

Appointment details shall include customer ID, pet ID, service type, unique groomer ID, appointment date, and time. A customer can have multiple appointments however an appointment can be booked for only one pet.

From the site, one can get information about grooming services offered, including service name, description, duration, and cost. Staff shall be able to add, update, or remove service records. The system shall track the services performed on each pet during appointments.

- b) Explain the concept of associative entity set with an example.

2. a) Draw the Relational Schema of the following ER Diagram:



b) What are the three components of a database system? “Database management systems help us to reduce redundancy and add integrity constraints for better management” to what extent do you agree with this statement. Justify your answer.