

1. Explain why the data in the table is not in First Normal Form. [5 marks]

The data is not in first normal form because the services attribute has multiple values within one row, which means that it needs to be aggregated.

2. Explain why the data in the table is not in Third Normal Form. [5 marks]

The data in the table is not in 3NF mainly because there are non-primary key attributes that are still transitively dependent on the primary key. In this case, the size and Owner phone number and Owner Last name depends on the Date and time but also depends on the dog's name. More aggregates need to be made for this problem to be solved.

3. Reorganize the attributes into Third Normal Form (create separate aggregates that conform to 3NF). [20 marks]

Appointments: {Date, Time, Dog's Name}

Dog_Info: {Dog's Name, Size, Owner's Phone Number}

Owner_Info: {Owner's Phone Number, Owner's Last Name}

Service_Done: {Date, Time, Services}