NIMHACA

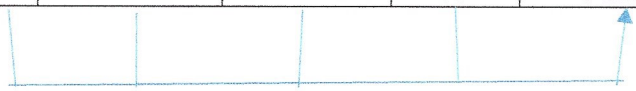
9/20

Normalization Complete
Normalization Exercise
BIS 638 – Database Management for Business Systems

The following table shows a partial list of appointments for a pet grooming salon:

GroomingAppointment

ApptID	ApptDate	ApptTime	CustID	CustPhone	PetName	TechID	ServiceID	ServiceName
1265	9/10/03	9:00 AM	75	989-687-2432	Jack	6	100	Bath
1265	9/10/03	9:00 AM	75	989-687-2432	Jack	3	105	Nail Trimming
1266	9/10/03	9:30 AM	24	989-655-7448	Bailey	3	112	Teeth Brushing
1267	9/10/03	10:00 AM	51	989-721-3487	Winston	5	101	Haircut
1267	9/10/03	10:00 AM	51	989-721-3487	Winston	5	105	Nail Trimming
1268	9/10/03	11:00 AM	63	989-248-5821	Jack	2	100	Bath



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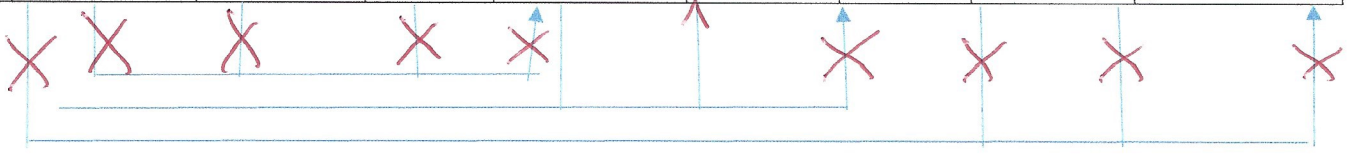

Field Descriptions:
ApptID – ID number of the appointment
ApptDate – date of the appointment
ApptTime – time of the appointment
CustID – ID number of the customer
CustPhone – phone number of the customer
PetName – name of the pet being groomed
TechID – ID number of the technician performing the grooming service
ServiceID – ID number of the grooming service being performed (an appointment can include multiple services)
ServiceName – name of grooming service being performed

As indicated above, the new tables shall have unique primary keys which are determinants of a functional dependency. The technical table has TechID as a composite primary key which is applicable to connect the serviceID to the ServiceName in connection to the client's requirements.

Apartment (ApptID, ApptDate, ApptTime, CustID)

- 1NF – the status is attained since the requirements of relation are attained.
- 2NF – the status is attained since there is no partial functional dependency.
- 3NF – the status is attained since there are no transitive functional dependencies.

Technical (Tech ID, ApptID, ServiceID, ServiceName)

- 1NF – the status is attained since the requirements of relation are attained.
- 2NF – the status is attained since there is no partial functional dependency since the primary key is not composite.
- 3NF – the status is attained since there are no transitive functional dependencies.

Customer (CustID, CustPhone, PetName)

- 1NF – the status is attained since the requirements of relation are attained.
- 2NF – the status is attained since there is no partial functional dependency.
- 3NF – the status is attained since there is a primary key in relation.

The 3NF tables are as follows:

Apartment (ApptID, ApptDate, ApptTime, CustID)
~~**Technical (Tech ID, ApptID, ServiceID, ServiceName)**~~
Customer (CustID, CustPhone, PetName)

SERVICE (SERVICEID, SERVICENAME)
TECH (APPTID, SERVICEID, TECHID)