**Please complete the following activity and submit one MS Word document with your solution:**

Consider the following relation:

Pet (Pet#, PetName, AmountOwed, HandlerID, HandlerName, WalkCode, WalkInfo, HandlerWalkFee, WalkDate)

This relation concerns data about pets sheltering at the Humane Society and their handlers (employees and volunteers) who take them for a walk.  The following dependencies exist in the Pet Entity:

Pet# --> PetName, AmountOwed, HandlerID, HandlerName  
HandlerID --> HandlerName  
WalkCode --> WalkInfo, HandlerWalkFee  
Pet#, HandlerID, WalkCode --> WalkDate

QUESTIONS (to be answered each separately, please use ****MS Word**** and attach below when submitting):

1. Convert (showcase) Pet to ****1NF**** (First Normal Form) based on the functional dependencies given.

**HumaneSociety.accdb**

Pet# PetName ~~AmountOwed~~  HandlerID HandlerName WalkCode WalkInfo HandlerWalkFee WalkDate

**ENTITY PET HANDLER WALK\_SCHEDULE**

Attribute Pet# HandlerID WalkCode

PetName HandlerFName WalkDate

HandlerLName WalkTime

HandlerWalkFee

1. Convert to a set of relations in ****3NF**** (Third Normal Form - i.e. relationships between ****Entities****).

1

**PET**

\*Pet#

PetName

**HANDLER**

\*HandlerID

HandlerFName

HandlerLName

HandlerWalkFee

1

**TRANSACTION**

\*TID

HandlerID

Pet#

WalkCode

∞

∞

**WALK\_SCHEDULE**

\*WalkCode

WalkDate

WalkTime

∞

1

3. Answer: the database design needs to include an ****Attribute**** for the date of the Pet's last walk. In which ****Entity/Table**** would you place this Attribute, and why?

WALK\_SCHEDULE ENTITY has the attribute WalkDate through which we can calculate last walk and WalkInfo in general does not give any information so with the help of WalkDate and WalkTime we can point out the exact date and time for Pet’s last walk.

1. Each **Handler** (can have) *one and only one* **WalkSchedule**. - No, can have multiple
2. Each **Handler** (can have) *one or many* **WalkSchedule**. - Yes
3. Each **WalkSchedule** (can have) *one and only one* **Handler**. - No, can have multiple
4. Each **WalkSchedule** (can have) *one or many* **Handler**. -Yes