HW 4 (Due 2/17)
DS5110
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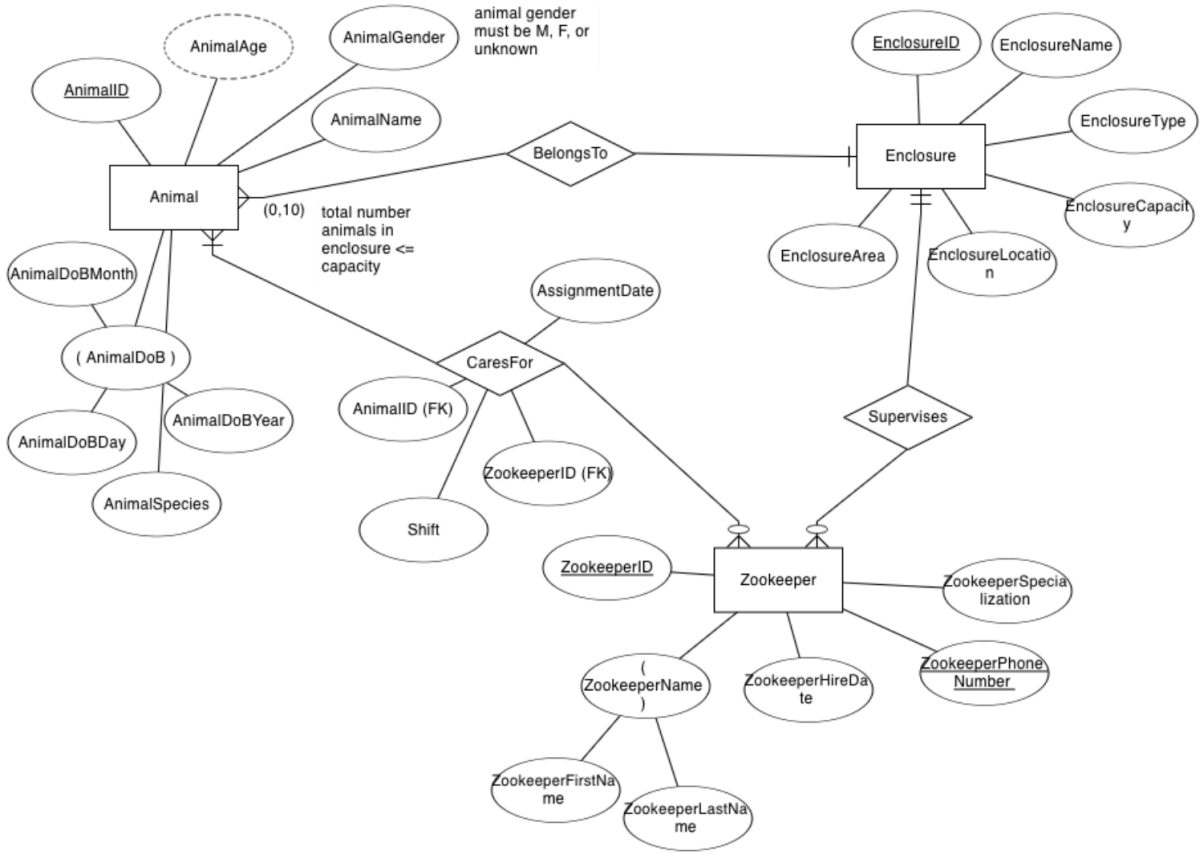

Entities:
Animal:
- Primary key: AnimalID
- Attributes: Name, DoB (composite attribute with month, day, and year), Age as derived (from DoB), species, gender (has to be M, F, or unknown), and species).
- The reason gender is constrained is for health and documentation purposes. Some animals might need to have certain things watched out for depending on their gender, and some species might not “get along well” if there are too many males or females in one enclosure together.

Enclosure:
- Primary key: EnclosureID
- Attributes: Name, Type (this would be like aquatic, reptile, etc), capacity (the number of animals allowed in each habitat. Location would be where it is located inside of the zoo, and area is how big it is.
- The constraint on this is a maximum of 10 animals per enclosure. Why 10? Pretty number for assignment. This would be adjusted depending on what makes the most sense in a real world scenario. But the number of animals having a capacity is for many reasons, including giving the animals room to breathe, not causing resource hoarding or fighting, ease of care (what if you need to grab one specific animal?).

Zookeeper:
- Primary key: ZookeeperID

- Attributes: Name, phone number, name (with first and last), hire date, and specialization (this would be categories of animals like birds, reptiles, aquatic, etc)

Relationships:
BelongsTo (Animal Enclosure):
- Cardinality is (0,10) because of that constraint where one enclosure can handle up to a maximum of 10 animals
- This is a 1:M (one-to-many) relationship where an animal can have up to one enclosure and an enclosure can have many animals.

CaresFor (Zookeeper Animal):
- There is a junction table here to show date the zookeeper was assigned the animal and also the shift. The foreign keys are AnimalID and ZookeeperID.
- Many-to-many relationship, one animal can have many caregivers and one zookeeper can take care of more than one animal.

Supervises (Zookeeper Enclosure)
- shows that one zookeeper can supervise multiple enclosures and one enclosure has one supervisor. Why one supervisor? To show that people are always overworked. How are they supposed to supervise an enclosure on their own AND sleep? You tell me! (The answer is: they don't). On top of that, they can have more than one enclosure to watch! As you can see, I was going for realism here :)