CS360 Object Modeling Handout 3

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This scenario describes the Zookeeper's problem space and use cases to describe example behaviors in the zoo. *L. J. Waguespack, Ph.D.*

The Bentley Zoo Behavior Narrative

We need to explore three activities that are part of normal operations at the Bentley zoo.

The first is the setting up of diets for all the animals. This is a specialized task that requires some advanced knowledge about the animals and their needs. Therefore, we're adding a new employee to the zoo model, a veterinary nutritionist who is qualified to prescribe special diets for each of the animals. We want to model the process that the veterinarian goes through to set up each diet for the animals. Use your imagination and remember we're looking for something that's useful not necessarily perfect. We can refine the behavioral model with the users later on.

The second task to model is the preparation of the list of food deliveries to the animals by the feeder staff. We're looking for the list of each set of foods that need to be delivered by any particular feeder. Remember that feeder staff are assigned to specific zoo areas. Remember that for efficiency it would be very nice if the list of meals were arranged in the order of the cages that the animals live in. Use your imagination and remember we're looking for something that's useful not necessarily perfect. We can refine the behavioral model with the users later on.

The third task is the actual delivery of the meals to the animals. The feeder needs to account for every meal delivered and keep track of the time that each animal was fed. You can assume that the serving list was prepared in advance of this activity so the task here is rather straightforward, go through the list and serve the food! You can discard the serving list once you've completed the delivery process. Use your imagination and remember we're looking for something that's useful not necessarily perfect. We can refine the behavioral model with the users later on.

Object Modeling the Bentley Zoo

Given the narrative above together with the zoo narratives previously, your task is to develop a useful Use Case diagram(s) to depict the activity witnessed by the zoo workers in these tasks.

Once you've completed the Use Cases you can begin to explore which classes in your Class diagram would interact with each other, in what sequence, and with what messages to model the effect of the Use Cases you've developed above.

Although our focus is on the zoo, we will continue to frame the model in terms that would allow direct transition to a computerized information system that would perform the "behaviors" we've documented in the use cases. A sequence diagram would be like a detail "script" of messages and classes involved indicating what would have to take place in a "fully automated" zoo environment. The sequence diagramming activity will lead you to consider adding new attributes, services and even classes to your zoo model to explain and describe the behaviors needed.

This is how object modeling is down in an iterative, circular and elaborative process.

The specific behavior you're being asked to model in this domain is the process of meal preparation for the animals in the zoo. Which classes in our model know how to perform which part of the task of getting all the animals fed?