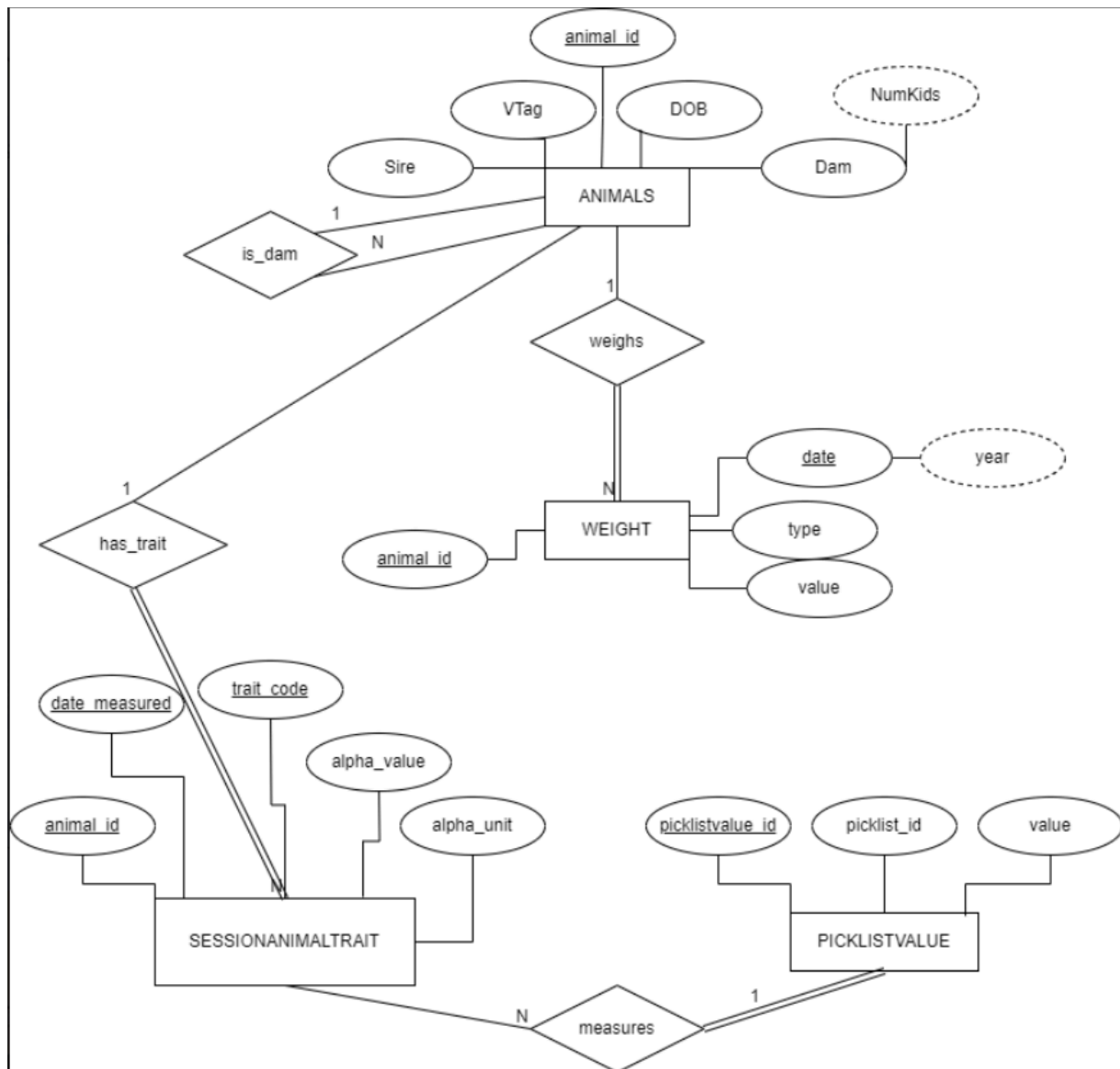
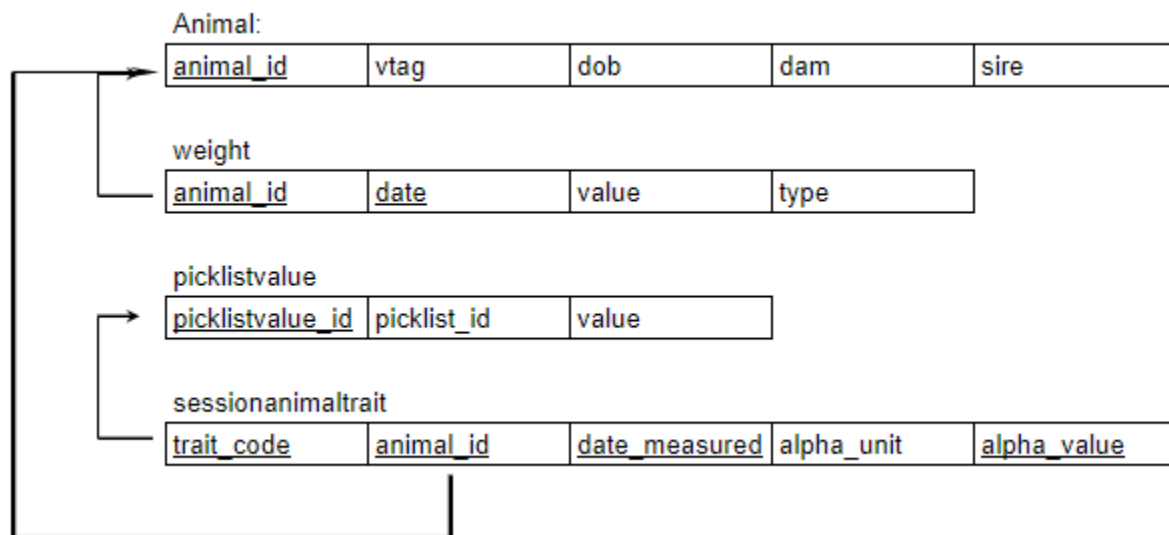


## EER DIAGRAM



## SCHEMA:



## UML USE CASE DIAGRAM:



## ○ ACTORS AND INTERACTIONS

Farmers or animal breeders can use the data to understand the lineage, as well as track health and the weight of their goats by the season of birth. The veterinarian would also use this to keep track of this data for the goats to make sure that everything is within normal ranges. Researchers use it to have an understanding of breeders and how to optimize breeding efforts for the healthiest and heartiest offspring.

## ○ GOALS

Our system allows the end user (generally a goat breeder) to get an understanding of the lineage of the goats, as well as the breeding qualities of the mothers and kids. They can also use it to see average daily weight gain and track the weights of the animal through their dam or birth season cohort, thereby allowing inferences to be made about not only which dams and sires to breed, but in which season to breed them for the optimal offspring.

## ○ SCOPE

Our system's scope is providing lineage history of goats by dam, and providing average daily weight gains by season of birth. This will be delivered via web browser. There will be two separate views per report: the total report: in the case of the progeny report will be a listing of all dams in the database with an expandable table for each dam's children; in the case of the seasonal birth cohort health report this will be a table with the average avg of goats born in each of the four seasons.

- USE CASES

The website:

When the user logs onto the website, they are presented with 2 options: the Progeny Report or the Birth season cohort report. They may click on either option, leading them to the following use cases:

Progeny report

Upon reaching the progeny report, the user may do one of the two following actions:

- search the list on the page
  - The website will be populated with a list of all dams in the database.
  - The user may click on any row to expand the table to show the progeny of that particular dam
- use the search functionality to find a specific dam by their tag (if known).
  - In the upper right hand corner, the user may enter a dam's id number, and the website will expand the table to show that dam's progeny, and will scroll to that area of the website for easy viewing

Birth season cohort report

Upon reaching the Birth season cohort report, the user may perform one of the two following actions:

- Read the provided breakdown by season
  - This will show the average adg (average daily weight gain) of all goats born in that season
- Click a seasons row to see a further breakdown of that season
  - Further breakdown will show results for season and year, allowing further drilldown of the

- DATABASE DESIGN REASONING:

The reasoning behind our database design is that the primary type of data we are working with is weight. Both of our reports revolve around having an understanding of

goats, their breeding, and their weights, tracking this data for goats and understanding how breeders can use this information to achieve their goals of a more healthy and productive herd.