

## S14 CSCI3287 Database Project

Here's the assignment for the practical project.

### Begin your design:

Good engineers design first, then implement on their design.

We learned about design and implementation skills. You should be using these to start and complete your project:

- 3 schema architecture
- ER or EER diagrams
- Normalization
- Relational Algebra
- SQL

Here's the database you will build and the queries that are required for this assignment.

Zoo Keepers need a database to store data about the animals that they care for and it helps them to understand food consumption by the animals.

Currently, many of them use a spreadsheet to record these sorts of things: Zoo Keeper Names – first and last, Zoo Phone Number, Zoo Keepers' email address, animal names, species, diet type, and age. For each day the spreadsheet also holds the time of day that the animal was fed, the food and quantity in units that the animal was given and the food and quantity in units that the animal ate. Animals with allergies are also noted in the same spreadsheet. Many zoo keepers at different zoos have contributed to the spreadsheet and they would all like to see some meaningful outputs.

They want the database to show them these outputs:

- A list of animals that have allergies and what they are allergic to.
- A summary by species of foods and the quantities of each food eaten since April 1 2014.
- A list of zoo keepers, the zoo they work for and the names and species of the animals that they care for – one zoo keeper takes care of each animal and a zookeeper has multiple animals to take care of.
- An summary by zoo of one species' average quantity of food consumed. (For example: We might be able to compare across all the zoos that participate what the average quantity of meat eaten by lions is....you can pick any species you like.)
- A list of species that eat in the morning but not at night.

Be sure that you add records to your database for at least 5 zoos, 8 zoo keepers and 20 animals from 3 species. Record a week's worth of meals for each animal.

Have fun!