

For the scenario below identify the entities, their attributes and appropriate keys

Finsbury Happy Zoo

Finsbury Happy Zoo's concept is to show animals together in their habitats. They have a number of enclosures of different habitat types (such as forest or tundra), different sizes (square metres), each having a main feature (such as a stream or a cave). Animals of different species share the same enclosure. Each enclosure has a unique number and there can be several enclosures with the same habitat but with a different main feature or of a different size. Each animal has a unique ID, and their name, date_of_birth, diet and description are stored. When an animal is put in an enclosure, the start date is recorded, and if they are transferred to another enclosure the end date is recorded. Zoo keepers may need to make a note about a particular animal, for example "not eating well today" and this is recorded along with the date. To make sure the animals don't eat each other a species compatibility table is maintained which has the following information; speciesA, speciesB, compatibility_rating (5 for happy neighbours to 1 for bitter enemies). Species are identified by their name, and a description of the species and their habitat type are recorded. Species are matched against enclosures by Zoo staff, and if suitable the maximum number of animals of a particular species for a particular enclosure is recorded to prevent overcrowding.

Entity: Enclosure

Attributes:

Enclosure Number (Unique identifier)
Habitat Type (e.g., forest, tundra)
Size (square meters)
Main Feature (e.g., stream, cave)
Primary Key: Enclosure_Number

Entity: Species

Attributes:

Species Name (Unique identifier)
Species Description
Habitat Type (to match with enclosures)
Primary Key: Species_Name

Entity: Animal

Attributes:

Animal ID (Unique identifier)
Animal Name
Date of Birth
Diet
Animal Description
Foreign Key: Species_Name (from the Species entity)
Primary Key: Animal_ID

Entity: Animal Placement

Attributes:

Start Date (date when the animal was put in the enclosure)
End Date (date when the animal was moved out of the enclosure, if applicable)
Foreign Keys: Animal_ID, Enclosure_Number

Primary Key: Placement_ID

Entity: Zookeeper Notes

Attributes:

Note Text (e.g., "not eating well today")

Date (when the note was recorded)

Foreign Key: Animal_ID (to refer to the animal in question)

Primary Key: Note_ID

Entity: Species Compatibility

Attributes:

Species A (identifier for the first species)

Species B (identifier for the second species)

Compatibility Rating (1-5 scale, where 5 is "happy neighbours" and 1 is "bitter enemies")

Foreign Keys: Species_Name (for both species A and B)

Primary Key: Species_A, Species_B (composite key)

Entity: Enclosure Species Allocation

Attributes:

Maximum Number of Animals (for a particular species in an enclosure)

Foreign Keys: Enclosure_Number, Species_Name

Primary Key: Enclosure_Number, Species_Name (composite key)