

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.

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Primary keys/Composite primary keys are red coloured

Foreign keys are in blue

Attributes are underlined

Entities are bold

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**Enclosure (entity)** - (Primary key = Unique enclosure no.)

Unique enclosure no.

Main feature

Size

Habitat type

**Animal (entity)** - (Primary key = Unique animal ID)

Unique animal ID

Animal Name

date\_of\_birth

Diet

Description

**Zoo keeper note** - (Primary Key = Zoo keeper note ID)

Comment on animal made by keeper

Date the comment was made by the keeper

Unique animal ID

Zoo keeper note ID

**Animal enclosure Record** - (Primary key = Animal enclosure Record ID)

Animal enclosure Record ID

Unique animal ID (This is the foreign key)

Start date (date put in enclosure)

End date (if animal is transferred to another enclosure)

Unique enclosure no. (This is the foreign key)

**Species** - (Primary Key = Name of Species)

Name of Species

Description of the species

Habitat type

**Compatibility (event entity)** - (Primary key =Compatibility ID)

Compatibility ID

Species A (with details from species entity)

Species B (with details from Species entity)

Compatibility\_rating

**Species enclosures (entity)** - (Primary key = Species in enclosure ID)

Species enclosure ID

Max no. of animals (of particular species)

Unique enclosure no.

Name of species