

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

Primary Key

Foreign Key

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.

Entities, their attributes and examples:

Entity:

Enclosure

Attributes:

enclosure-ID – A003

habitat-type -- forest

size – 20s^2m

main-feature -- waterfall

Entity:

Animal

Attributes:

animal-ID – Panda010

species-name -- Panda

name – Rufus

DOB – 14/02/2021

diet – herbivore

description – shy, big eater, male

enclosure-ID – C013

enclosure-start-date – 06/04/2023

enclosure-end-date – N/A

note – fussy eating today, 04/10/2024

Entity:

Species compatibility

Attributes:

species-A -- Lion

species-B -- penguin

compatibility-rating -- 1

Entity:

Species

Attributes:

species-name -- Monkey

description – cheeky, intelligent

habitat-type – jungle

Example Queries:

1. How many habitats are there suitable for pandas?
2. Which species are the least compatible?
3. How many birds were born in 2023?
4. How many habitats have a cave as their main feature?
5. What habitat is most suited for a lion?