

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**.

Answer:

1. Animal (Entity):

Attributes:

- Animal_ID (Primary Key) – 12345
- Name – Lion
- Date_of_birth – 12/05/2020
- Diet – Non - Vegetarian
- Description – Male Lion, height 1.2m
- Species_ID (Foreign key) – 23456

2. Enclosure (Entity):

Attributes:

- Enclosure_Number (Primary Key) - 01234
- Habitat type – Forest
- Habitat size – 30,000 Square m
- Main feature – Stream of water

3. Species (Entity):

Attributes:

- Species_Name (Primary Key) – Panthera Leo Leo
- Description – Strong, compact bodies, powerful teeth and jaw for catching prey
- Habitat - Forest

4. Compatibility (Entity):

Attributes:

- SpeciesA (foreign key) – 23456
- SpeciesB (foreign key) – 78900
- Compatibility_rating – 4

5. Enclosing Animal (Event Entity):

Attributes:

- Enclosing_log_ID (Primary key) – 37294
- Enclosure_Number (Foreign key) – 01234
- Animal_ID (Foreign key) – 12345
- Start_date – 12/03/2024
- End_date – 15/08/2024

6. ZooKeeper Notes:

Attributes:

- Note_ID (Primary key) - 12
- Animal_ID (Foreign Key) - 12345
- Animal_Notes – Didn't eat well today
- Note_Date – 30/05/2024

7. Species Enclosed:

Attributes:

- Enclosure_Number (Foreign Key) - 01234
- Species_Name (Foreign Key) – Panthera Leo Leo
- Max_num_of_species - 4