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; **species A, species B, 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.

Notes:

- **Entities**: Represents a real-world concept. It can be anything that's unique & has significance in a given field.
- **Attributes:** Characteristic or properties of the entity

Types of keys:

- **Primary key:** Ensures that every row in a table has a unique identifier.
- **Composite key:** A table which has two primary keys
- **Candidate key:** Are attributes that uniquely identify a record
- **Foreign key:** A field that links two tables together by using the primary key

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1. **Enclosures**
   Entity: Enclosures
   Attributes:
   - Habitat types
   - Size
   - Main features

   Primary Key: Enclosure's unique number

2. **Animal**
   Entity: Animal
   Attributes:
   - Name
   - Date of Birth
   - Diet
   - Description

   Primary Key: Unique animal ID

3. **Animal in Enclosure**
   Entity: Enclosed animals
   Attributes:
   - Start date
   - End date

   Composite Key: Unique animal ID & Enclosure's unique number

4. **Species**
   Entity: Species
   Attributes:
   - Description
   - Habitat type

   Primary Key: Species Name

5. **Species compatibility**
   Entity: Species compatibility
   Attributes:
   - Compatibility rating (1-5)

   Primary Key: Species name (Species A, Species B)

6. **Species in enclosure**
   Entity: Enclosed species
   Attributes:
   - Max Animals

   Composite Key: Enclosure's unique number & Species name

7. **Animal Notes**
   Entity: Animal Notes
   Attributes:
   - Date
   - Note text

   Primary Key: Note ID
   Foreign Key: Animal ID