Data Modeling Puzzle

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Here the situations and stories that can be modeled in the Data Modeling Puzzle

Example real estate Little Whinging

Situation

A property management database needs to be created for a settlement in Little Whinging. The settlement consists of several multi-storey apartment blocks. There is one apartment per floor. An apartment can be vacant, or have a maximum of one tenant. Each block can have one or more caretakers and one caretaker can be responsible for several blocks.

Example the Rocky Mountains hiking club

Situation

A hiking club has several mountain huts where rooms are offered. Each hut has several rooms. The price for a room depends on the season. These prices are summarized in a price list. Each room is assigned to a price list and the same price list can apply to several rooms. The rooms can be booked by people and over time one person can book several rooms and one room can be booked by several people.

Example school of music

Situation

In a music school, several teachers teach different instruments. Students can learn several instruments and attend individual lessons. This means that they have lessons with one teacher on one instrument.

With the help of a database it should be possible to find out how many teachers teach which instruments, which instruments are learned by how many students in class and which student learns the most instruments.

Example animals in the enchanted forest

Situation
Lily Luna goes to school in Hogwarts. She loves to go into the forbidden forest even though this is dangerous. As she knows almost all animals personally for her the forest is not a secret any more. Therefore she wants to save her knowledge about the animals in a data base.

Here her notes about the animals:
Hippogriff:
- name: "Buckbeak"
- type: "Magical Beast"
- habitat: "Forbidden Forest"
- wingSpan: 12.5
- loyalty: "Fierce but loyal to those who show respect"

Unicorn:
- name: "Moonlight"
- type: "Beast"
- habitat: "Clearing in the Forbidden Forest"
- hornColor: "Silver"
- magicalAbility: "Healing powers"

Acromantula:
- name: "Aragog"
- type: "Beast"
- habitat: "Deep in the Forest"
- legCount: 8
- venomous: true

Thestral:
- name: "Shadow"
- type: "Magical Beast"
- habitat: "Gloomy areas of the Forest"
- invisibleToMost: true
- affinityToDeath: "Can only be seen by those who have witnessed death"

Centaur:
- name: "Firenze"
- type: "Being"
- habitat: "Centaur glade in the Forest"
- celestialKnowledge: "Expert in celestial navigation"
- archerySkills: true