Part 1: Cracking the Database Code

1 **I define the purpose of a database and how data is presented to users. Without me, users would see raw, unstructured data. Who am I?**
 Hint: I provide different perspectives of stored data to different users.

2 **I am a blueprint for organizing data within a database. I come in hierarchical, network, relational, and object-oriented forms. Who am I?**
☐**Hint:** I define how data is stored, accessed, and related.

3 **I am a system that manages databases, handling storage, retrieval, and security. Who am I?**
 Hint: I am the brain behind the database, making sure data is structured and accessible efficiently.

4 **I separate how data is stored, how it's structured, and how users see it. I have three levels—external, conceptual, and internal. Who am I?**
 Hint: I am an architectural model ensuring database independence.

Part 2: The Entity-Relationship Riddle

5 **I represent a real-world object in a database, such as a student, car, or book. Who am I?**
Hint: In an ER diagram, I am depicted as a rectangle.

6 **I define the category of similar real-world objects, like all students or all cars. Who am I?**
Hint: I group entities with the same characteristics.

7**I describe properties of entities, like a student's name or an employee's salary. Who am I?**
 Hint: In an ER diagram, I am an oval connected to an entity.

8 **I link two or more entities together, such as "Student Enrolled in Course." Who am I?**
Hint: I show associations between entities and am represented by a diamond.

9 **I describe the number of entities that can participate in a relationship—one-to-one, one-to-many, or many-to-many. Who am I?**
 Hint: I define the relationship's cardinality.

Bonus Challenge: Draw It!

Now that you've solved the clues, can you sketch an **E/R diagram** for a **university database** with the following?
✔**Entities:** Student, Course, Professor

✔**Attributes:** Name, ID, Age, Department

✔**Relationships:** A student enrolls in a course, a professor teaches a course

 Think you got it? Test your knowledge by explaining how these pieces fit together!