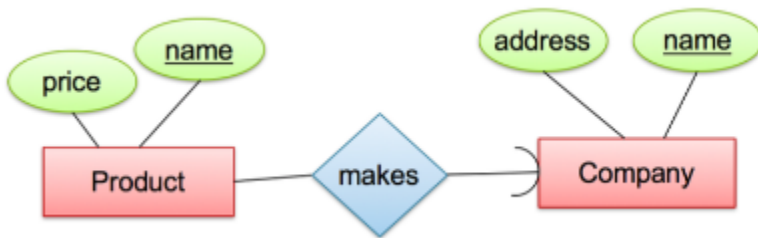**Question 1:** Consider the following schema:

```sql
CREATE TABLE Company(
      name VARCHAR(100) PRIMARY KEY,
      address VARCHAR(200)
);

CREATE TABLE Product(
      name VARCHAR(100) PRIMARY KEY,
      price FLOAT,
      made_by VARCHAR(100) FOREIGN KEY REFERENCES Company(name)
);
```

Draw the E/R Diagrams can produce this schema:

Question 2: You are running a startup company allowing users to post blogs, and to comment on other users' blogs. Design the E/R diagram for your company's data. Your database should store information about users, bloggers, and blogs, and encode the following information:
- Every user has a user ID and a name
- Every blog has a blog ID, a text content and one author, who is a blogger.
- Every blogger is a user.
- Every blogger also has a rating attribute
- Users may comment on blogs.
- Every comment has an optional text content, and/or an optional rating.
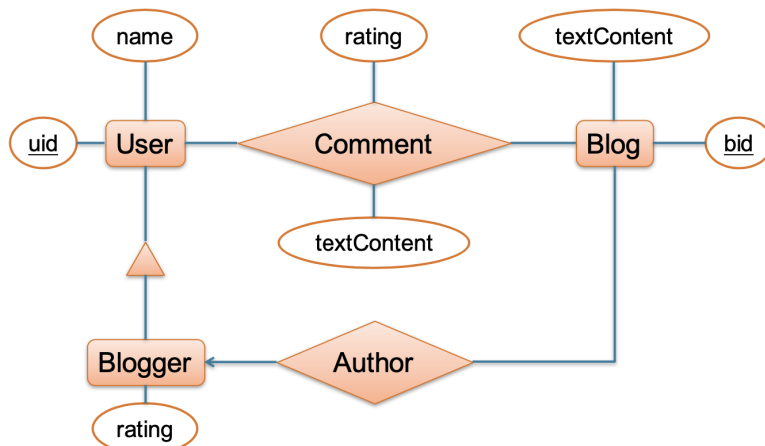
Question 3: We can convert weak entity set to a strong entity set by adding appropriate attributes to the entity set instead of using it from another entity. Why do we have weak entity sets?

- We want to avoid the data duplication and consequent possible inconsistencies caused by duplicating the key of the strong entity.
- Weak entities reflect the logical structure of an entity being **dependent** on the another entity.
- Weak entities can be deleted automatically when their strong entity is deleted.

Question 4: Is an E/R Model (ERM) unique?
- **No,** you can design the same database application domain with different ERMs

Question 5: Consider an E/R diagram in which the same entity set appears several times. Why is allowing this redundancy a bad practice that one should avoid whenever possible?

- By using 1 entity set many times → we are **missing relationships** in the model
- For example: In the E/R diagram in the figure show:
  - the students taking classes are the same students who are athletes, but this model **won't** show that.