

You have just been hired as a consultant for a big airplane manufacturer. They want you to completely redesign their database system. Talking with the people in the company, you get the following information.

- The database contains information about employees, factories and parts.
- Each employee has a social security number (SSN), name and salary. An employee is uniquely identified by his/her SSN.
- Each factory has an id, a name and a budget. The id uniquely identifies a factory.
- Each part has an id and a name. The id uniquely identifies a part.
- Each employee reports to at most one other employee.
- Each employee works in at least one factory.
- Each part is manufactured in exactly one factory.

Draw the Entity-Relationship (ER) diagram for the above application.