Example of scenario for creating a database system
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Suppose that you have been asked to build a database for a talent agency. The agency books bands into nightclubs. The agent needs a database to keep track of the agency's transactions and to answer day-to-day questions. Many questions arise in running the business. For example, a club manager might want to know which bands are available on a certain date at a certain time or what fee the agent would charge for a certain band. Similarly, the agent might want to see a list of all band members and the instrument each plays, or a list of all the bands having three members.

Suppose that you have talked to the agent and have observed the agency's business operation. You conclude that your database would need to reflect the following facts:

1. A "booking" is an event in which a certain band plays in a particular club on a particular date, starting at a certain time, ending at a certain time, and for a specific fee. A band can play more than once a day. The Heartbreakers, for example, could play at the East End Cafe in the afternoon and then at the West End Cafe that night. For each booking, the club pays the talent agent, who keeps a five percent fee and then gives the rest to the band.

2. Each band has at least two members and an unlimited maximum number of members. The agent notes a telephone number of just one band member, which is used as the band's contact number. No two bands have the same name or telephone number.

3. No band members in any of the bands have the same name. For example, if there is a "Sally Smith" in one band, there is no Sally Smith in any other band.

4. The agent keeps track of just one instrument that each band member plays. "Vocals" is an instrument for this record-keeping purpose.

5. Each band has a desired fee. For example, the Light metal band might want $700 per booking and would expect the agent to try to get at least that amount for the band.

6. Each nightclub has a name, an address, and a contact person. That person has a telephone number that the agent uses to contact the club. No two clubs have the same name, contact person name, or telephone number. Each club has a target maximum fee. The contact person will try to get the agent to accept that amount for a band's appearance.

7. Some clubs will feed the band members for free, and others will not.