

Module 9

Data Modeling Problems and Design Errors

Lesson 1: Data Modeling Problems I



Lesson Objectives

- Practice analyzing simple narrative problem statements and applying design transformations
- Focus on consistency with narrative problem statements
- Learn from mistakes

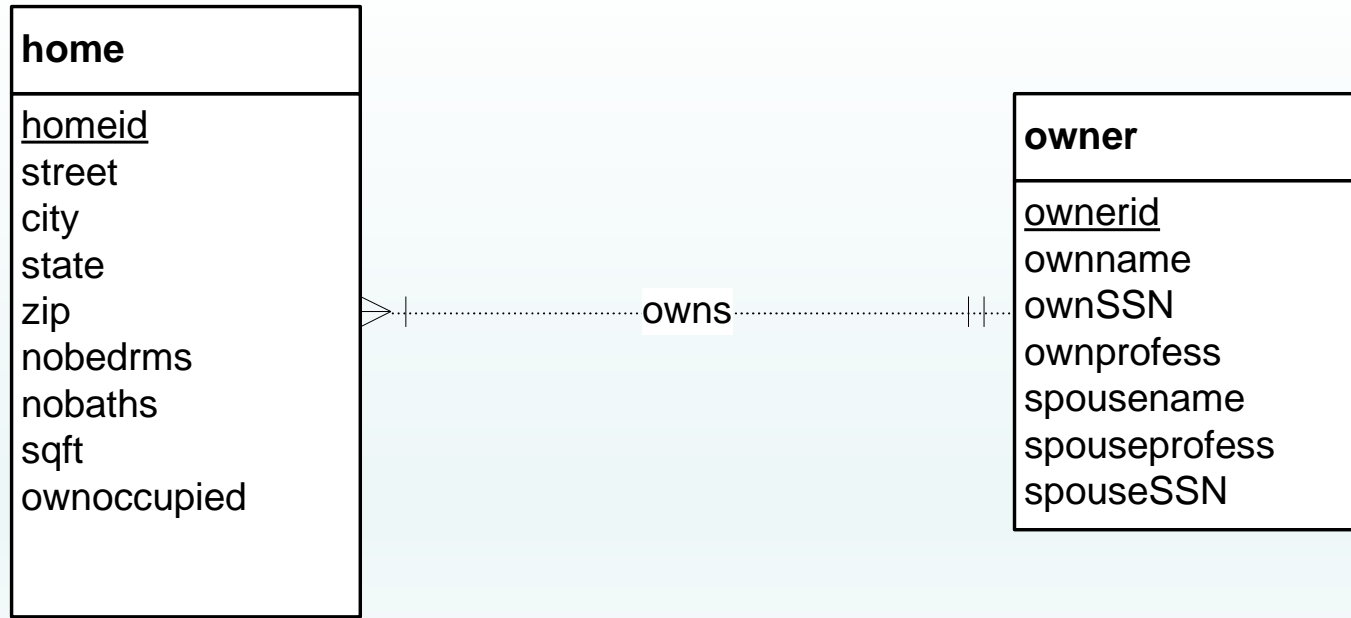


Problem 1

- Track homes and owners
- Home has only 1 owner. Owner can possess 1 or more homes.
- Home has unique home identifier, address, characteristics (number of bedrooms, bathrooms, ...), and occupied by owner, tenant, or vacant.
- Owner has unique owner number, government identifier, name, and spouse details.



Problem 1 Solution

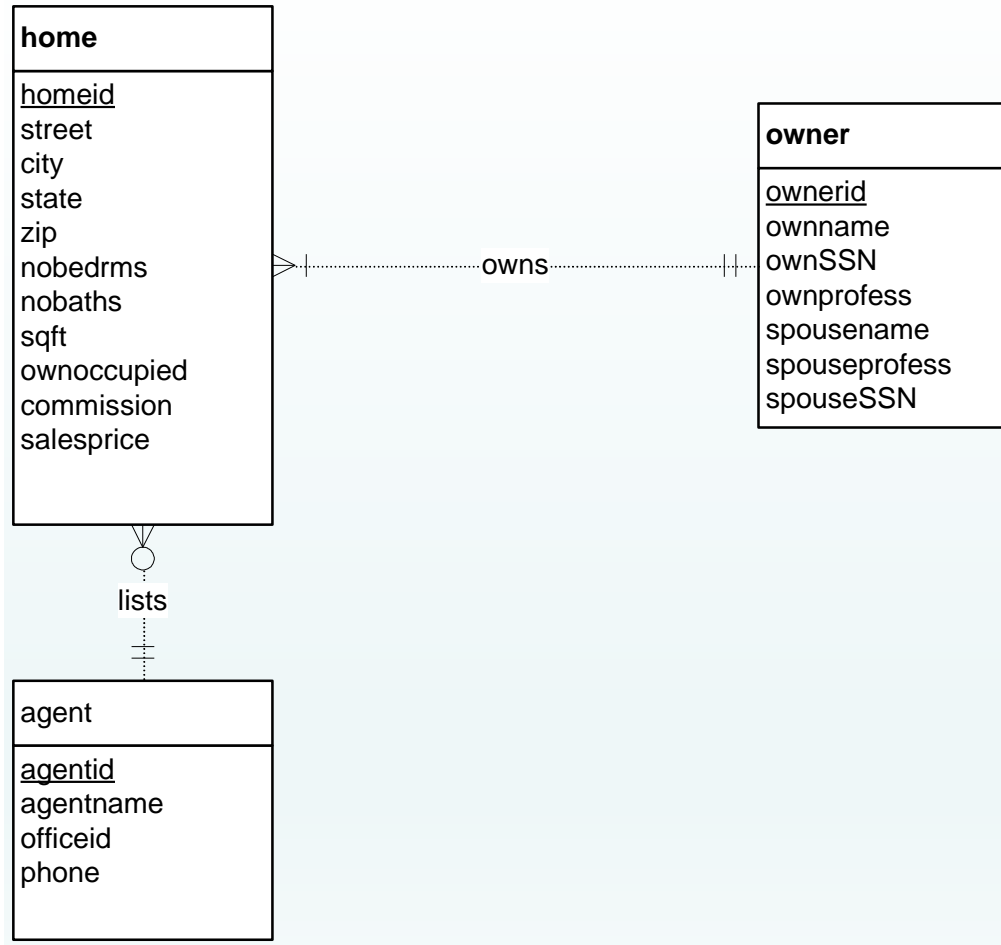


Problem 2

- Track agents
- Agents represent owners in home sales. An agent can list many homes, but a home is listed by a maximum of one agent.
- Agent has a unique agent identifier, name, office identifier, and phone number.
- Commission and listing price are determined when a home is listed.



Problem 2 Solution

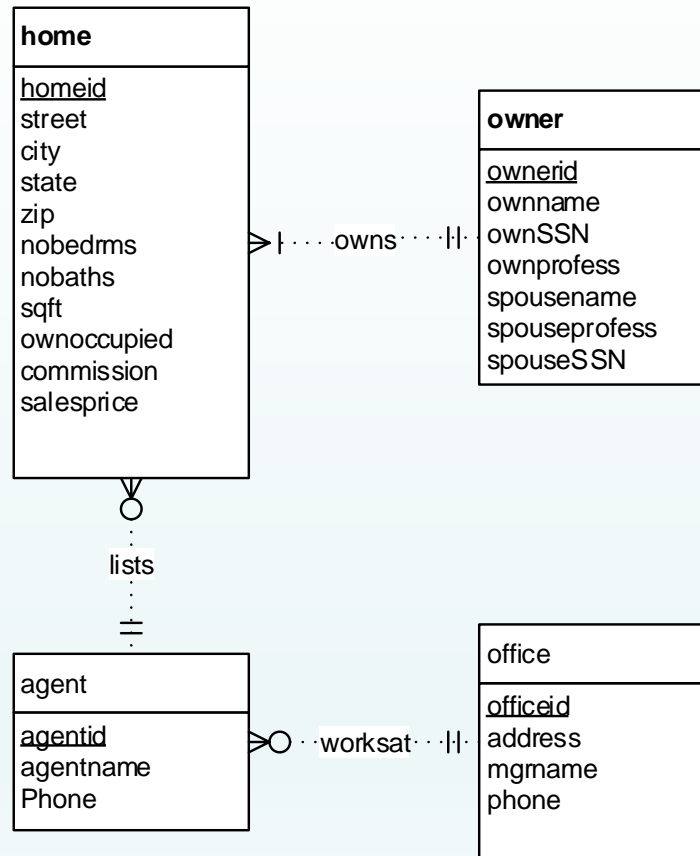


Problem 3

- Transform office identifier into an entity type
- Office has a phone number, manager name, and address.



Problem 3 Solution



Summary

- Work problems to gain confidence analyzing requirements
- Focus on goals of narrative problem analysis
- Use the ER Assistant or another tool for drawing ERDs
- Use notation precisely in business data modeling problems

