

Figure 5-17 Student Data Model Entities

Before we continue, consider that last sentence. Is the salesperson's name unique among the sales staff? Both now and in the future? Who decides the answer to such a question? Only the users know whether this is true; the database developers cannot know. This example underlines why it is important for you to be able to interpret data models, because only users like you will know for sure.

Figure 5-17 shows examples of entities for the Student database. Each entity is shown in a rectangle. The name of the entity is just above the rectangle, and the identifier is shown in a section at the top of the entity. Entity attributes are shown in the remainder of the rectangle. In Figure 5-17, the *Adviser* entity has an identifier called *AdviserName* and the attributes *Phone*, *CampusAddress*, and *EmailAddress*.

Observe that the entities *Email* and *Office_Visit* do not have an identifier. Unlike *Student* or *Adviser*, the users do not have an attribute that identifies a particular email. We could make one up. For example, we could say that the identifier of *Email* is *EmailNumber*, but if we do so we are not modeling how the users view their world. Instead, we are forcing something onto the users. Be aware of this possibility when you review data models about your business. Do not allow the database developers to create something in the data model that is not part of your business world.

Relationships

Entities have **relationships** to each other. An *Order*, for example, has a relationship to a *Customer* entity and also to a *Salesperson* entity. In the Student database, a *Student* has a relationship to an *Adviser*, and an *Adviser* has a relationship to a *Department*.

Figure 5-18 shows sample *Department*, *Adviser*, and *Student* entities and their relationships. For simplicity, this figure shows just the identifier of the entities and not

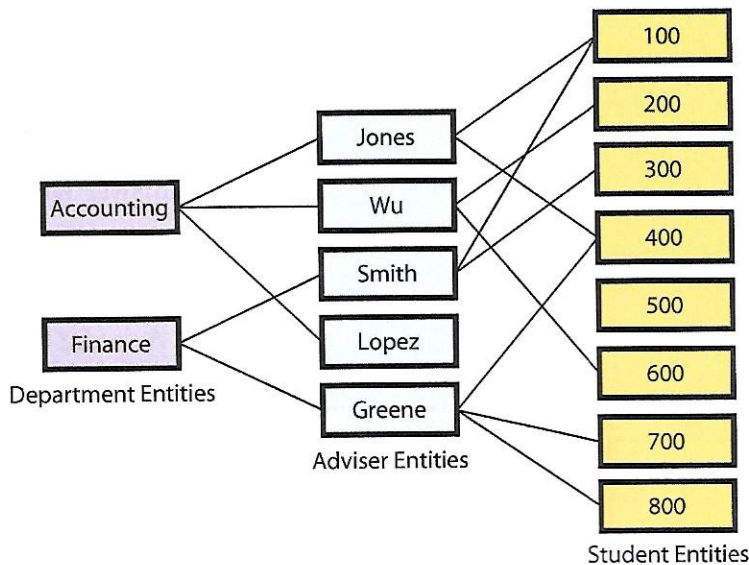


Figure 5-18 Example of Department, Adviser, and Student Entities and Relationships