Semantic objects have attributes that define the characteristics. There are three types of attributes.

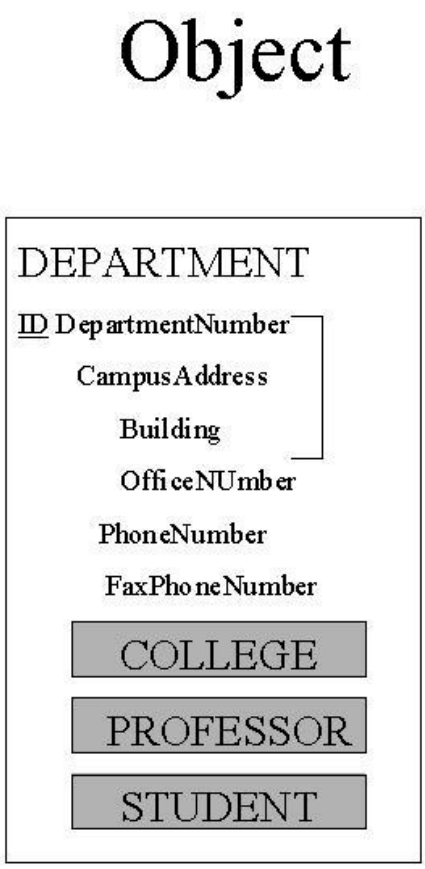
Simple attributes have a single value.

Examples are DateOfHire, InvoiceNumber.

Group attributes are composites of other attributes.

Semantic object attributes are attributes that establish a relationship between one semantic object and an other.

To understand these statements better, look at the following **Figure,** which is an example of a **semantic object diagram**, or **object diagram**. Such diagrams are used by development teams to summarize the structures of objects and represent them visually. Objects are shown portrait oriented rectangles. The name of the objects appears on the top, and attributes are written in order after the object name.



The object attributes, or **object links** as they are sometimes called, mean that when a user thinks about a DEPARTMENT, he or she thinks not only about DepartmentName, CampusAddress, PhoneNumber and FaxPhoneNumber but also the COLLEGE, PROFESSORs, and STUDENTs who are related to that department. Since COLLEGE,

PROFESSOR and STUDENT also are objects, the complete data model contains object diagrams for them, too. The COLLEGE object contains attributes of the college; the PROFESSOR object contains attributes of the faculty; and the STUDENT object contains attributes of the students.