Let’s talk about why we need to introduce enterprise view. At 1970s, the database design process was focusing on the user view of the data. There are problems with user schema:

1. The database designer is restricted by the limited capabilities of the database management system.
2. User schema might contain some features related to data storage representation
3. User schema is usually designed to be efficient for a certain type of data processing operations.

Since user schema includes a lot of other things, it is not a pure representation of the world. It makes it difficult to understand and change. Therefore, enterprise view was introduced as an intermediate design process. It has two main advantages:

1. Easier to understand: The enterprise schema does not have the restrictions of the underlying database management/system;
2. More stable than the user schema: since some types of changes in the user schema may not require any change in the enterprise schema. If the enterprise schema needs to be changed to reflect the changes in the enterprise environment, the changes can be performed easily since efficiency and storage issues are not considered.

We will use E-R model as the metal framework and we will draw E-R diagram to represent the enterprise view of the data.

Let’s talk about how to use the E-R diagram to design a database. First, we need to identify some entities. They are things that can be identified distinctly. For example, student and course are distinctly different things. And entity sets are in the upper conceptual domain.