University of Belize

Education Empowers a Nation

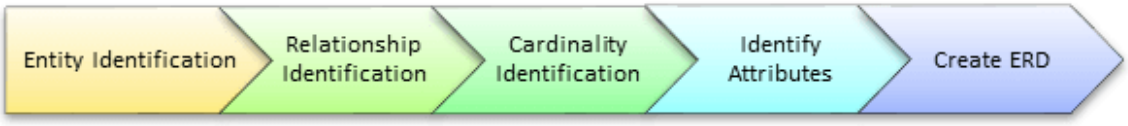
Faculty of Science and Technology

CMPS1171 INTRODUCTION TO DATABASES
PROJECT II
Name:

Instructions:

1. Make a Google Folder named Your Name Database Project II. Share the folder with me.
2. Make a copy of this file and place it in the folder. Rename the File to Your Name Project II.
3. Show each of the five steps in creating your ER diagram.
4. Write the SQL code to create the database. Upload the text file with the SQL code to the folder.
5. Create the .csv files with the data that you need for your database.
6. On your local virtual machine run your SQL code to build and populate the database.
7. Recording of your database running on your virtual machine with interesting queries.

Below is an example of how it should look but it has to show the database ER diagram for your database.



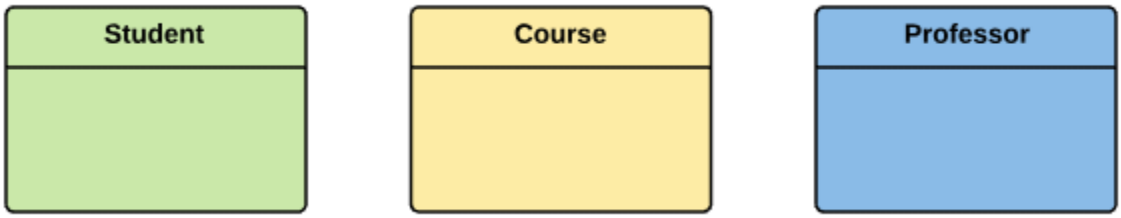
Steps to Create an ER Diagram

In a university, a Student enrolls in Courses. A student must be assigned to at least one or more Courses. Each student is advised by a single Professor. A Semester …

Step 1) Entity Identification

We have three entities

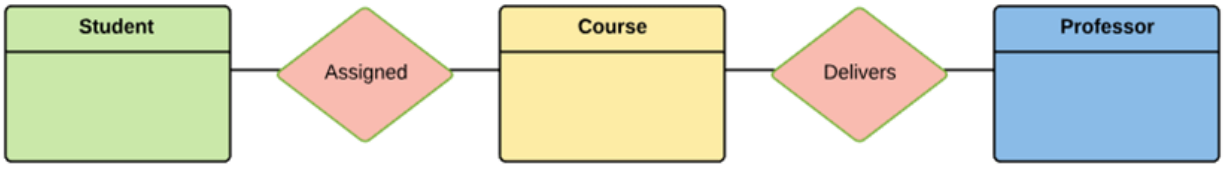
- Student
- Course
- Adviser



Step 2) Relationship Identification

We have the following two relationships

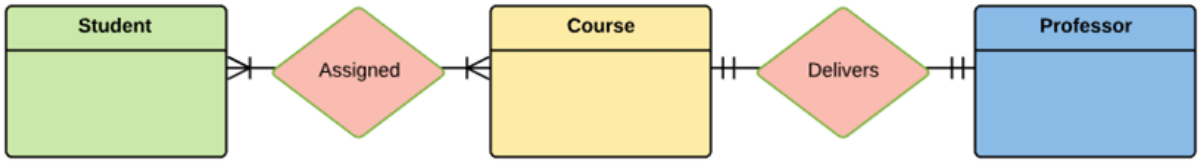
- The student is **assigned** a course
- Professor **delivers** a course



Step 3) Cardinality Identification

For them problem statement we know that,

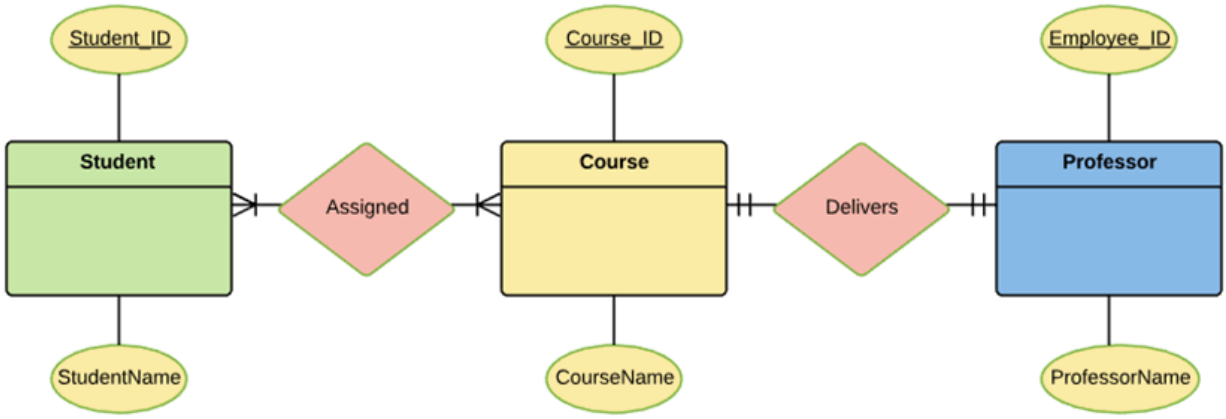
- A student can be assigned **multiple** courses
- A Professor can deliver only **one** course



Step 4) Identify Attributes

You need to study the files, forms, reports, data currently maintained by the organization to identify attributes. You can also conduct interviews with various stakeholders to identify entities. Initially, it's important to identify the attributes without mapping them to a particular entity.
Once, you have a list of Attributes, you need to map them to the identified entities. Ensure an attribute is to be paired with exactly one entity. If you think an attribute should belong to more than one entity, use a modifier to make it unique.
Once the mapping is done, identify the primary Keys. If a unique key is not readily available, create one.

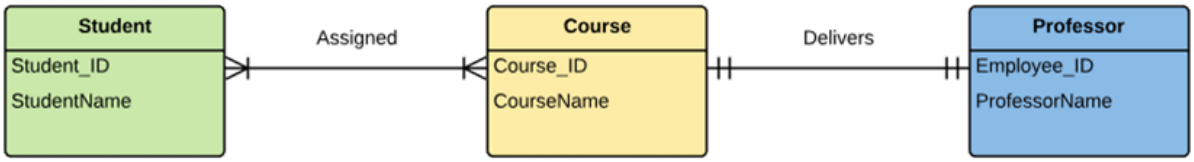
Entity	Primary Key	Attribute
Student	Student_ID	StudentName
Professor	Employee_ID	ProfessorName
Course	Course_ID	CourseName

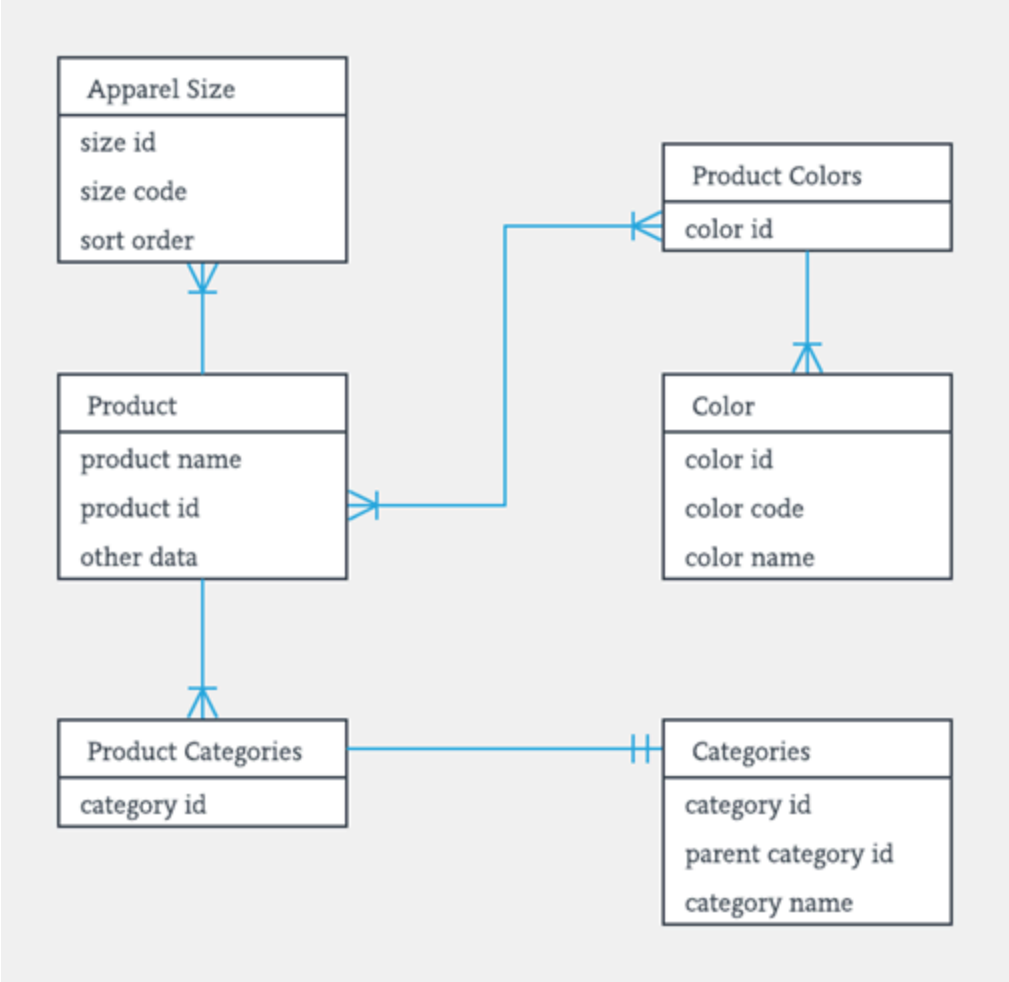


For Course Entity, attributes could be Duration, Credits, Assignments, etc. For the sake of ease we have considered just one attribute.

Step 5) Create the ERD Diagram

A more modern representation of Entity Relationship Diagram Example




Apparel Size
size id
size code
sort order
Product Colors
color id
Product
product name
product id
other data
Color
color id
color code
color name
Product Categories
category id
Categories
category id
parent category id
category name