

## Week 2 Class Example

United Broke Artists (UBA) is a broker for not-so-famous painters. UBA maintains a small network database to track painters, paintings, and galleries. A painting is painted by a particular artist, and that painting is exhibited in a particular gallery. A gallery can exhibit many paintings, but each painting can be exhibited in only one gallery. Similarly, a painting is painted by a single painter, but each painter can paint many paintings. Using PAINTER, PAINTING, and GALLERY, in terms of a relational database:

a. What tables would you create, and what would the table components be?

We could create the following tables:- you are fine if you list the table structure with table name and entities.

**Table name: PAINTER      Database name: Ch02\_UBA**

PAINTER_NUM	PAINTER_LNAME	PAINTER_FNAME	PAINTER_INITIAL
10014	Artiste	Josephine	P
10015	Itoro	Julio	G
10016	McDonald	Theresa	

**Table name: GALLERY**

GALRY_NUMBER	GALRY_NAME	GALRY_WEB
18	Painter Place	www.painterplace.com
23	Art 's Us	www.artsus.com
24	Art Wonders	www.artwonders.com

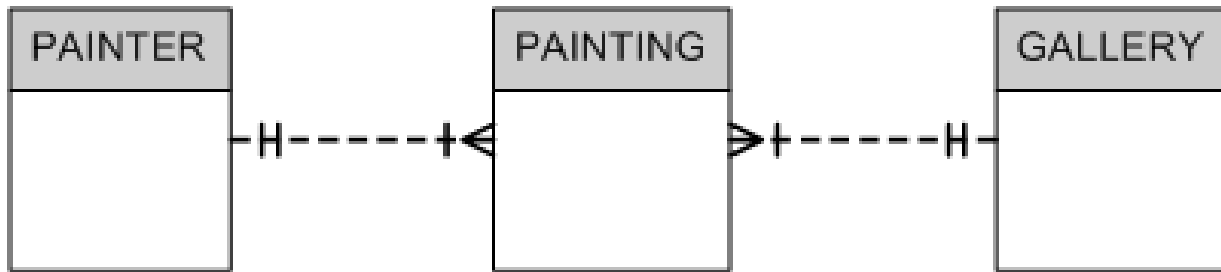
**Table name: PAINTING**

PAINTING_NUM	PAINTING_TITLE	PAINTER_NUM	GALRY_NUMBER
20018	Dawn Thunder	10016	18
20023	Vanilla Roses To Nowhere	10015	18
20041	Tired Flounders	10016	23
20042	Hasty Exit	10015	24
20045	Plastic Paradise	10015	18
21003	Database Sunshine	10014	24
21987	Hierarchical Paths	10014	24
25108	File Systems Folly	10014	23

Following business rules are reflected in the tables and their contents:

- A painter can paint many paintings.
- Each painting is painted by only one painter.
- A gallery can exhibit many paintings.
- A painter can exhibit paintings at more than one gallery at a time. (For example, if a painter has painted six paintings, two may be exhibited in one gallery, one at another, and three at the third gallery.)
- Each painting is exhibited in only one gallery.

b. How might the (independent) tables be related to one another?



c. Create the relational schema. (Create an appropriate collection of attributes for each of the entities. Make sure you use the appropriate naming conventions to name the attributes.)



d. Convert the ERD into the corresponding UML class diagram.

