

CP 224: DATABASE MANAGEMENT SYSTEMS

WORKED EXAMPLE ON DATA MODELING WITH EER MODEL

ArtyDesign is an art gallery in the Cork City. The gallery promotes local young artists. Thus Mr. Black, the manager, would like to setup a database to store the data about his business.

- The name, address, contact number and date of birth of each younger artist are recorded. For simplicity each artist is given an ID number.
- Each artwork is designed by one and only one artist but each artist will have many works in the gallery.
- Each artwork has unique code, a title, a creation date and a price.
- The artwork is only painting or a sculpture.
- The paint media, i.e watercolours, Oils, and Charcoal is recorded for each painting as well as the background type i.e paper, canvas or silk.
- A sculpture will record only the weight and the material of construction e.g granite, stone or plaster.
- Twice a year the gallery holds a special gala night where it showcases some of the artworks. Only paintings are displayed here.
- Each gala has an ID, a theme, date and opening time.
- Each gala would be sponsored by at least one sponsor but may have more than one sponsor. Each sponsor will sponsor many galas.
- The ID, name, address, contact person and contact number of each sponsor is recorded.

- The minimum number of artworks displayed by the gala is eight and the maximum is would be fourteen. Note each artwork would be displayed in one gala only. This is because artworks are usually sold during this event.

Questions

- a. Based on the information given design an Enhanced Entity-Relationship Diagram (EERD) that captures the above requirements stated.
- b. Based on the EERD in (a), derive relations for the corresponding logical data model (logical schema), list tables with their attributes. For each table indicate the attribute(s) that makes a primary key also indicates foreign key whenever possible. Make sure you apply all guidelines for mapping ERD and EERD into logical schema.