1) In a University, there are several departments and each department has a head of department who belongs to Faculty. Department have a name , phone extension , specific mailing address and Students that belong to the department. Students can belong to only one Department at a time and Department can have more than one or no Student. Students and faculty have names and unique identification numbers, with address, age, gender and other information. Student studies in different Courses offered by University. Faculty teaches these Courses. In each semester one student can take more than one course and Faculty can teach more than one courses. Faculty members can teach in multiple Departments. Each course can be taught by many faculty members or no one Faculty members are also working on multiple research projects. These projects are funded by government and university. One project can have more than one faculty member and one faculty member can work on more than one project.

On the basis of the above information draw an ER diagram on the   basis of the given information.

2) A salesperson may manage many other sales people. A salesperson is managed by only one salespeople. A salesperson can be an agent for many customers. A customer is managed by one salespeople. A customer can place many orders. An order can be placed by one customer. An order lists many inventory items. An inventory item may be listed on many orders. An inventory item is assembled from many parts. A part may be assembled into many inventory items. Many employees assemble an inventory item from many parts. A supplier supplies many parts. A part may be supplied by many suppliers.

On the basis of the above information draw an ER diagram on the   basis of the given information.

3) Derik Gallery, a renowned photo and painting exhibitor, would like to hire you to prepare their database. The gallery keeps information about artists such as their names, address, age, and sex. All the artists fall into two categories, painter, and photographer (Yes, photography is an art!).For each piece of artwork, its unique id, the artist, the year it was produced, its name, description, and price is stored. Each artwork can be produced by only one artist. Artworks are subdivided into two categories, paintings, and photos. Photos have information about the camera used to capture the photo, camera's exposure time, focal length, and aperture. The paintings have information about its genre, which can be identified by an integer.

Details of the genres:

1. **History Painting**: Religious, historical or allegorical work, with a moral message.

2. **Portrait Art**: Includes individual, group or self-portraits.

3. **Genre Painting**: Scenes of everyday life.

4. **Landscape Painting**: Paintings whose principal content is a scenic view.

5. **Still Life Painting**: An arrangement of domestic objects or everyday items.

Finally, the gallery keeps information about customers. For each customer, the gallery stores his/her customer id, name, address, and the artists and the artworks the customer is interested in. Customers address has
the following divisions-Street Address, City, State, Zip.

Draw an ER diagram for this database.