

BCA Part II

Paper XI: DBMS using Access

Topic: Drawing an E-R diagram

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Creating an E-R diagram.

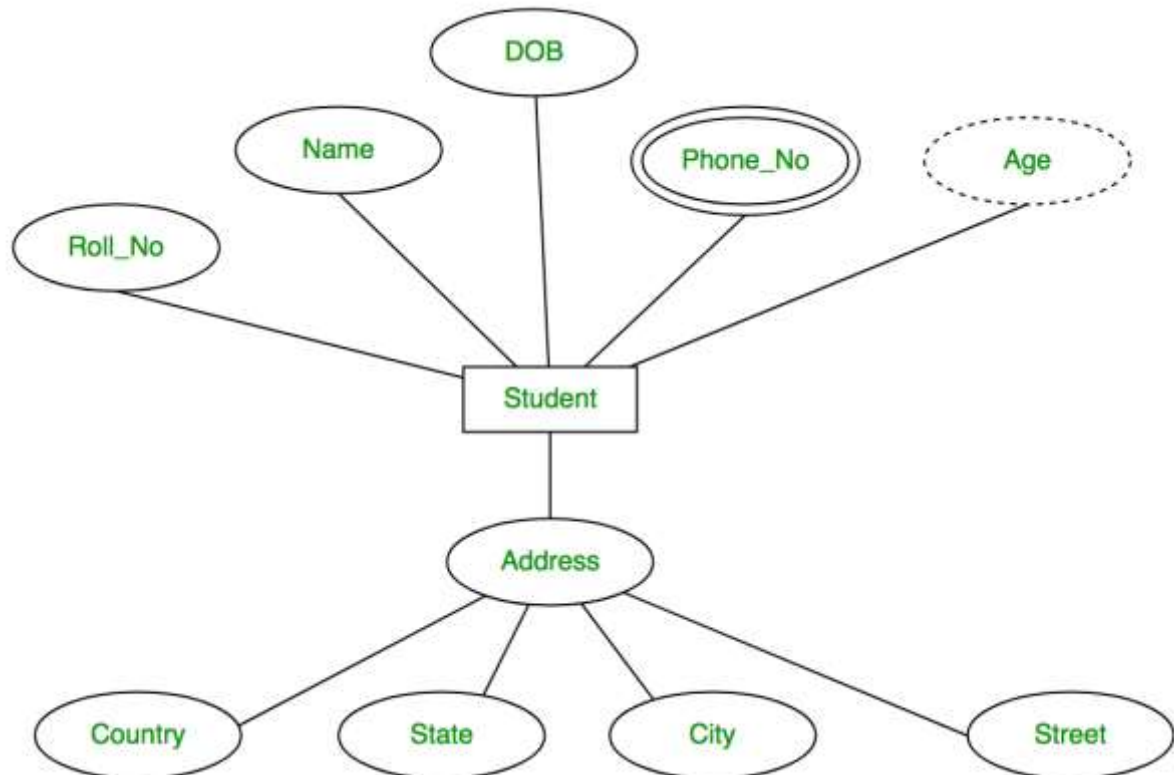
1. **Identify all the entities** in the system. An entity should appear only once in a particular diagram. Create rectangles for all entities and name them properly.
2. **Identify relationships** between entities. Connect them using a line and add a diamond in the middle describing the relationship.
3. **Add attributes** for entities. Give meaningful attribute names so they can be understood easily.

Some important points to remember

1. Provide a precise and appropriate name for each entity, attribute, and relationship in the diagram. Terms that are simple and familiar always beats vague, technical-sounding words. In naming entities, remember to use singular nouns. However, adjectives may be used to distinguish entities belonging to the same class (part-time employee and full-time employee, for example). Meanwhile attribute names must be meaningful, unique, system-independent, and easily understandable.
2. Remove vague, redundant or unnecessary relationships between entities.
3. Never connect a relationship to another relationship.
4. Make effective use of colors. You can use colors to classify similar entities or to highlight key areas in your diagrams.

Drawing ER Diagrams

You can draw entity relationship diagrams manually, especially when you are just informally showing simple systems.



Benefits of ER diagrams

- (i) ER diagrams constitute a very useful framework for creating and manipulating databases.
- (ii) ER diagrams are easy to understand and do not require a person to undergo extensive training to be able to work with it efficiently and accurately.
- (iii) The designers can use ER diagrams to easily communicate with developers, customers, and end users, regardless of their IT proficiency.
- (iv) ER diagrams are readily translatable into relational tables which can be used to quickly build databases.
- (v) ER diagrams can directly be used by database developers as the blueprint for implementing data in specific software applications.
- (vi) ER diagrams may be applied in other contexts such as describing the different relationships and operations within an organization.