* An Entity-Relationship (ER) diagram is a visual representation of a database'sstructure, showing how entities ( like people, objects, or concepts) are related to eachother.​
* It is used to design and visualize databases, making it easier to understand how data isorganized and how different parts of the data relate to each other. ​
* Its components are: ​
* Rectangles representing entity sets. ​
* Ellipses representing attributes. ​
* Diamonds representing relationship sets.​
* Lines linking attributes to entity sets and entity sets to relationship sets. ​
* **Entity Names:**​
* Use singular nouns (e.g., Student, Course)​
* Use TitleCase (capitalize each word)​
* Should be meaningful and clear​
* Example Customer, Order, Employee​
* **Attribute Names:**​
* Use camelCase (e.g., studentID, birthDate)​
* Should describe the data clearly​
* Avoid using vague or generic names​
* Example: emailAddress, phoneNumber, totalMarks​

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* **Primary Key Attributes:**​
* Prefix with entity name for clarity​
* Should be unique within the entity​
* Example: studentID, orderID, employeeID​  
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* **Relationship Names:**​
* Use verbs or verb phrases​
* Describe the action or connection clearly​
* Example: EnrolledIn, AssignedTo, PlacedBy​

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* **Weak Entities & Identifying Relationships:**​
* Weak entities: use meaningful names with double rectangle​
* Identifying relationships: describe the dependency clearly​
* Example: Weak Entity: Dependent​  
  Identifying Relationship: IsDependentOn​

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* Use of Entity vs. Attribute​
* Use of Entity vs. Relationship​
* Follow proper Naming Conventions​
* Avoid Redundancy​
* Decide the Degree of Relationship​
* Use Generalization and Specialization​  
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