**Project Title:** Designing a Comprehensive Database System – Modeling Requirements using ER and E-ER Modeling Techniques.

**Objective:** The primary aim of this assignment is to finish gathering data requirements from end users and subsequently model them using ER (Entity-Relationship) and E-ER (Extended Entity Relationship) Modeling Techniques covered in class. This involves identifying entities, attributes, relationships, and functional requirements through interviews, and then translating these findings into an ER diagram or E-ER diagram. The ER or E-ER diagram should incorporate structural constraints, including cardinality and participation constraints, for relationships between entities and/or sub class / super class relationships. Any assumptions made during the creation of the diagram should be clearly documented.

**Project Scope:** Students will apply ER (Entity-Relationship) and/or E-ER Modeling Techniques covered in class to represent the data requirements in a structured and visually intuitive manner. This scope emphasizes both the data and functional aspects of the database system, ensuring a thorough understanding of user needs and effective implementation of the system.

**Requirements:**

1. **Identifying Data Requirements:**
   * Gather data requirements from end users through interviews.
   * Identify entities, attributes, relationships, and functional requirements necessary for the database system.
2. **ER Modeling Techniques:**
   * Utilize ER (Entity-Relationship) E-ER Modeling Techniques covered in class to model the gathered data requirements.
   * Translate the identified entities, attributes, relationships, and functional requirements into an ER diagram.
3. **Incorporating Structural Constraints:**
   * Ensure that the ER diagram incorporates structural constraints, including cardinality and participation constraints, for relationships between entities and/or sub class / super class relationships.
4. **Documenting Assumptions:**
   * Clearly document any assumptions made during the creation of the ER or E-ER diagram.
5. **Comprehensive Representation:**
   * Ensure that the ER or E-ER diagram provides a comprehensive representation of the data requirements gathered from end users.
6. **Alignment with Objective:**
   * Ensure that the entire process of gathering data requirements, modeling them using ER or E-ER techniques, and incorporating structural constraints aligns with the primary objective of the assignment.

**Deliverables:**

1. **ER Diagram:**
   * Provide an ER or E-ER diagram that models the gathered data requirements using ER (Entity-Relationship) or E-ER Modeling Techniques covered in class.
   * Ensure that the ER diagram includes entities, attributes, relationships.
   * Incorporate structural constraints, including cardinality and participation constraints, for relationships between entities and/or sub class /super class relationships into the ER or E-ER diagram.
   * Clearly document any assumptions made during the creation of the ER or E-ER diagram.
2. **Documentation of Data Requirements:**
   * Prepare documentation outlining the data requirements gathered from end users through interviews.
   * Ensure that the documentation comprehensively captures entities, attributes, relationships, and functional requirements necessary for the database system.
   * Align the documentation with the ER diagram to provide a complete understanding of the data requirements and their representation in the ER model.
3. **Alignment with Objective:**
   * Ensure that both the ER or E-ER diagram and the documentation of data requirements align with the primary objective of the assignment, which is to gather data requirements from end users and model them using ER or E-ER modeling techniques.

**Evaluation Criteria:**

1. **Accuracy and Completeness of ER or E-ER Diagram:**
   * Evaluate the ER or E-ER diagram based on its accuracy in representing the gathered data requirements.
   * Assess the completeness of the ER or E-ER diagram in capturing all relevant entities, attributes, relationships, and functional requirements identified through interviews.
   * Consider the incorporation of structural constraints, including cardinality and participation constraints, for relationships between entities and/or sub class / super class relationships.
2. **Clarity and Documentation of Assumptions:**
   * Assess the clarity of the ER or E-ER diagram in presenting the modeled data requirements.
   * Evaluate the documentation of any assumptions made during the creation of the ER or E-ER diagram for transparency and understanding.
3. **Comprehensiveness of Data Requirements Documentation:**
   * Evaluate the documentation of data requirements for its comprehensiveness in capturing entities, attributes, relationships, and functional requirements.
   * Ensure that the documentation aligns with the ER or E-ER diagram to provide a cohesive understanding of the data requirements and their representation.
4. **Alignment with Objective:**
   * Evaluate both the ER or E-ER diagram and the data requirements documentation based on their alignment with the primary objective of the assignment, which is to gather data requirements from end users and model them using ER or E-ER techniques.

**Submission Guidelines:**

* All deliverables should be submitted electronically by the specified deadline on Moodle.
* Late submissions may incur penalties unless prior arrangements have been made with the instructor.

**Note:**

* Evaluate the accuracy and completeness of the ER or E-ER diagram in representing gathered data requirements, including entities, attributes, relationships, and functional requirements.
* Consider the clarity of the ER or E-ER diagram and the documentation of assumptions, along with the comprehensiveness of the data requirements documentation, ensuring alignment with the assignment's primary objective.