



GI541: Introduction to Information Systems

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Lab Session 2

Objective of the Lab:

1. The first objective is to develop students' ability to analyze and model real-world systems into an **Entity-Relationship (E-R) model**.
2. The second objective is to apply the basic concepts of the **Relational Model** introduced in the lecture (Table, Fields, Primary Key, Foreign Key, etc.).

Project

Entity-Relationship Model for a School

- A student has a first name, last name, level, and attends several courses.
- A teacher has a first name, last name, teaches a subject in a classroom, and may have several students.
- A student cannot take more than five subjects.
- A teacher cannot teach more than 48 hours.
- A course takes place in a classroom, at a specific time, and for a defined number of hours.
- A classroom has a number, a capacity, and a name.

Tasks to Complete:

You are required to:

1. Design an Entity-Relationship model.
2. Derive a Relational Model from the E-R model.
3. Create a new ACCESS database named *Project_School*.
4. Create all tables of the relational model.
5. Define all fields for each table, corresponding to the attributes of entities and relationships.
6. Configure all primary and foreign keys according to the relational schema.
7. Populate each table with five sample rows.
8. Submit the E-R diagram on a separate sheet.
9. Submit the database file at the end of the lab session.