**Lab 2: Entity Analysis and Functional Dependencies**

**Objective**

The goal of this lab is to develop an understanding of entities, attributes, functional dependencies, and keys in a database context. Students will practice analyzing entity structures and identifying the relationships that define data integrity.

**Tasks**

Each group is required to complete the following tasks:

1. **Identify entities** relevant to the given scenario or project domain.
2. **List the attributes** for each identified entity.
3. **Determine the functional dependencies** that exist within each entity.
4. **Find the keys** (candidate keys, primary keys, etc.) for each entity.

**Deliverables**

* A written **report** in either **.doc** or **.pdf** format.
* The report must include:
  + A clear description of identified entities and their attributes.
  + A list of functional dependencies for each entity.
  + The keys determined for each entity.
  + A **list of group members**.

**Submission Guidelines**

* Format: Microsoft Word (**.doc**) or PDF (**.pdf**).
* Each group submits **one consolidated report**.
* Ensure clarity, completeness, and proper academic writing style.
* Submit on LMS
* Report structure:
  + Cover page (Lab number, course name, group members, date).
  + Objective.
  + List all entities(table), attributes, FDs in a entities, key
  + Conclusion and reflection.

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**Guideline Lab2:**

For this activity, students are required to:

1. **Data Collection**
   * Gather data from relevant sources such as existing websites, online forms, or internet-based images that have a context similar to the group’s project domain.
2. **Database schema Identification**
   * From the collected data, identify potential **tables** and their corresponding **attributes**.
3. **Functional Dependencies**
   * Determine the **functional dependencies** that exist within the identified tables.
4. **Key Derivation**
   * Based on the functional dependencies, derive the **candidate keys** and specify the **primary key** for each table.