Lab 6 : DB_Project_Assignment_3- Noun Analysis, ERD

Lab – 6 17-Sept-2024	DB_Project_Assignment_3- Noun Analysis, ERD
IT615 Database Management System, Autumn'2024; Instructor: minal_bhise@daiict	

Pre-requisite: **Work to be done before Lab-6. Finalize the problem description and bring in the "*TeamNo_Final_Problem_Desc.pdf*" (4-10Pages). Your ER Diagram will be better if Problem Description is better in terms of details. You will use this file for Noun Analysis in Lab6.**

Objectives: Lab-6 I) Perform noun analysis on Description *GroupNo_Final_Problem_Desc.pdf.*

II) Develop an ER Diagram based on Noun Analysis.

Submission: Each student group needs to upload a **single.pdf** file, which will contain the following things for the specific case study assigned to your team.

1) Final Problem Description (4-10 pages)
2) Noun Analysis Tables
3) ER Diagram V-1 based on Noun Analysis

Lab-6. Perform Noun Analysis and build the ER Diagram for your project.

1. **Noun** (& Verb) **Analysis.**
    i. Find the nouns (entities) or verbs (relationships) in sentences of the problem description using Noun Analysis Method.
        1. List all the extracted Nouns & Verbs in the below-given table format.

Nouns	Verbs

Table.1. All Extracted Nouns & Verbs from Problem Description

    ii. Criteria for Truncating Initial Noun List
        1. Reduce the list added in Table.1. using the below-given criteria.
            a. **Duplicates**: if two or more nouns are simply names for the same thing, then only one of these should be used as the basis for an entity
            b. **Irrelevant**: entities which exist in the problem domain but which are not part of the intended system should also be discarded

c. **Vague**: When considering words carefully, it sometimes becomes clear that they do not have a precise meaning and cannot be a basis for a useful entity in the system
d. **General**: Some words are too general
e. **Attributes**: Some words we want to keep as a part of some entity as attributes and not an entity itself
f. **Associations**: some words actually represent a relationship between entities

2. Create **Table.2., Table.3. & Table.4.** as per the below-given format for accepted nouns list.

Candidate Entity set	**Candidate Attribute set**	**Candidate Relationship set**

Table.2. Accepted Noun & Verbs list

*Note: Do not add attributes & Entities on your own. It must come from Table.1.

3. Create **Table.3.** as per the below-given format for rejected nouns list.

Noun	**Reject Reason**

Table.3. Rejected Noun & Verbs list

4. Create **Table.4.** as per the below-given format for final noun & verb list.

Candidate Entity set	**Candidate Attribute set**	**Candidate Relationship set**

Table.4. Final Noun & Verbs list

2. **Develop the ER Diagram & Schema (ERD)**.
    i. Develop **Version 1 of ER Diagram & Schema** based on the Accepted Nouns listed in Table.2.
        1. Take the Entity Noun one by one from the Accepted Noun listed in Table.2.
        2. Find the relevant sentence & get the Relationship verb to establish the relationship between two entities.
        3. Identify the distribution of attributes over entity sets.
        4. Identify details like **PK**, **Cardinalities**, and **Participation constraints**.
        5. Make sure to underline the PK attributes. I.e., **Student_ID**.

*Note: For more details on Noun Analysis & ERD. Refer to Lecture Videos & Presentations added by Prof. Bhise.