Lab – 6-7	DB_Project_Assignment_3
IT214 Database Management System, Autumn'2020; Instructor: minal_bhise@daiict, TA: mayank@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 *TeamNo_Final_Problem_Desc.pdf.*

II) Develop an ER Diagram based on Noun Analysis.

Submission: Each student team 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.

I. Noun (& Verb) **Analysis.**

1) Find the are nouns (entities) or verbs (relationships) in sentences of the problem description using Noun Analysis Method.

- List all the extracted Nouns & Verbs in the below-given table format.

Nouns	Verbs

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

2) Criteria for Truncating Initial Noun List

- 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

- Create **Table.2.** & **Table.3.** 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.

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

Noun	**Reject Reason**

Table.3. Rejected Noun & Verbs list

II. Develop the ER Diagram (ERD).

1) Develop **Version 1 of ER Diagram** based on the Accepted Nouns listed in Table.2.

- Take the Entity Noun one by one from the Accepted Noun listed in Table.2.
- Find the relevant sentence & get the Relationship verb to establish the relationship between two entities.
- Identify the distribution of attributes over entity sets.
- Identify details like **PK**, **Cardinalities**, and **Participation constraints**.
- 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 in Topic-5 on Moodle.

Submission File naming: Lab6 submission must contain a "*Final_Problem_Desc*", Noun Analysis Tables1,23 & ERD V1.

File must be submitted during Lab between 11:30AM-12:30PM:

TeamNo_Lab6_ER_10-Oct-2020.pdf

example => "S2_T3_Lab6_ER_10-Oct-2020.pdf" for **Team 3 of section 2

Note: Teams who complete Lab-6 within lab timing can start working on Lab7 after submitting Lab6's .pdf file submission. **Append the Lab7 ERD V-2 below Lab6 in a single file.**

Lab – 7	DB_Project_Assignment_4
IT214 Database Management System, Autumn'2020; Instructor: minal_bhise@daiict, TA: mayank@daiict	

Objectives: Lab-7 I) Improve ER Diagram.

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

1) Final Problem Description (4-10 pages).
2) ER Diagram V-2.

Lab-7. Develop V-2 of ER Diagram for your project.

I. Improve the ER Diagram.

For each below-given step, add details in **Version 2** of **ER Diagram (ERD)**.

2) Identify Entity types.

- Add information like weak entity set/s, the identifier for weak entity set/s to **ERD.**
- Identify the type of relationships using natural associations appearing in problem description (Hierarchy, Aggregation, Recursive, Simple Association Link).

3) Identify Relationship types.

- Analyze diagram using various design choices, namely: Entity vs. Attribute, Entity vs. Relationships, Binary vs. Ternary Relationships, Aggregation vs. Ternary Relationship.
- Identify total participation & improve **ERD Version 2**.

4) Analyze ERD for any other missing information.

- Add missing Entities, Attributes & Relations.
- Iterate the diagram, make corresponding **changes** to the ***SRS*** so that in the end, all the documents (SRS, ERD) look consistent (*you may keep the intermediate versions of SRS & ERD while iterating in a separate file for your own reference-Do not submit).
- Produce the final draft of ERD (**Version 2**).

Submission File naming: Lab7 submission must contain a modified description, Noun Analysis Tables1,23 & ERD V1,2.

File must be submitted during Lab between 11:30AM-12:30PM:

TeamNo_Lab7_ER_17-Oct-2020.pdf

example => "S2_T3_Lab7_ER_17-Oct-2020.pdf" for **Team 3 of section 2.