CSE2004 – Database Management System EPJ

Fall 2020 – 21

Database Design Phases

- **Phase 1** – Requirement analysis and logical design (ER model)
- **Phase 2** – Logical design (normalization) and submission of complete database in sql file
- **Phase 3** – Physical design (development of full fledged working application with the database as back-end)

Project – Phase 1 – Instructions

DUE DATE: On or before 10-Aug-2020

- **Data collection/Requirement analysis** – Collect data related to your application
  - For example, to model a database for Airport we need to collect the data regarding the user requirements including what are the real world entities that can be modeled under this database, what relationship exist between them etc.
- **Identification of entity sets, attributes and relationship sets from collected data** – this includes the following;
  - Entity sets – list of entity sets, each entity sets' attributes, type of entity set
  - Relationship sets – list of relationship sets, its attributes, and type of relationship set
  - Attributes – type of attributes
- **ER Diagram** – you need to draw the complete ER diagram.
- **Reduction of ER diagram to conceptual schemas** – reduce the ERD into relation schemas by applying appropriate rules.
- ***Important note****: Your database must have atleast 10 entity sets out of which 2 must be weak entity sets. It should consist of appropriate relationship sets. Also, all type of attributes should be there in your design and ERD.*

One copy of phase 1 report per team. Your PHASE 1 submission should consist of the following;

- Data collection stage – you must show the user requirements clearly.
- From the data collected, you should identify appropriate ER component and show each with proper description.
- ER Diagram
- Set of rules for reducing ERD into schema and how have you reduced your ERD.

Mark distribution (temporary)

Component	Weightage (%)
Data collection	10
Identification of ER components	10
ERD	15
Conceptual schema	15
Timely submission	5
Review	45

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