



Assignment - 1

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* ER Modeling and Normalization

* Problem Statement - Design a case study for application and formulate a problem. Propose a conceptual design using ER & features using tools like ERD plus, ERwin etc

* Objectives - to learn & understand

- a) data modeling
- b) connecting ERD table
- c) ERD tools

* Hardware & Software

- MySQL
- Dell i7 11th gen 64 bit Ubuntu OS

* Theory -

Data Model -

- Data model is conceptual representation of data
- It is way to design and describe at physical, logical & view level.

Entity Relational Model -

- It is used to create uniform convention which can be used for relation database
- ER model represents real world entities and relationships among them
- It develops conceptual design
- Simple & easy to view design

ER is good for

- Requirement Analysis
- Conceptual database design

* components of ER diagram -

- 1> Entity - It is a real world object
- 2> Attribute - entities have attributes or properties that identify them.
- 3> Entity set - Set is a group of similar kind entities or entities which are sharing similar value.
- 4> Weak entity - entity that depends upon another entity
- 5> Strong Entity set - It always has a primary key
 - It is represented by rectangle symbol
 - relation between ~~two~~ two strong entities shows a diamond shape

6> Types of Attributes -

- a> Key Attribute - Main Attribute that is underlined
- b> Composite - It is made of more than one simple attributes
- c> Derived - It is derived from another attribute
- d> Multivalued *


7> Keys - uniquely identifies an entity among an entity set.


8> Relationship - It is association among two or more entities


9> Cardinality - Maximum number of times an instance in one entity can associated with instance in related entity


* Components -


 Strong entity

 Weak entity

 Attribute

 Weak attribute

 Relation

 primary key

