***ACID Property***

Let's summarise what you have learnt in this segment. ACID properties of a transaction in a relational model are as follows:

1. **Atomicity**: This property ensures that either the transaction happens completely or doesn't happen at all. Every transaction causes some data values in a table to either delete or update. It may also add a new row to the table. It is necessary that when a transaction happens, either all data values or rows are updated or none of the values is changed.
2. **Consistency** - This property ensures that the data is consistent in every table. Data before and after a transaction is made must be consistent.
3. **Isolation** - If two transactions are happening at the same place, either they should be independent of each other or one of these transactions must happen first.
4. **Durability** - Every transaction must be durable. This means that if a transaction occurs, then the changes made by this transaction to the database remain even in the event of a system failure.

Additional Reading

<https://www.essentialsql.com/sql-acid-database-properties-explained/>

Q&A

# Session Summary

In this session, you learnt about relational models used to design a database. You also understood that the relational model can be mapped from an E-R Model. Let us summarize what we have learnt in this session:

* An E-R model is a logical schema that identifies various important entities, the relations between those entities and the attributes of each entity for a business database.
* A super key consists of all the attributes that can uniquely identify each row.
* A candidate key contains only those attributes that uniquely identify each row.
* A relational model is built using an E-R model. An E-R model can be easily mapped to a relational model.
* A primary key is one of the candidate keys that uniquely identify each row.
* In a relational model, all the entities and relations are tables, and all the attributes are columns.
* A composite key is a combination of attributes that uniquely identify each row.
* A table in a relational database must have only one value in a field, and no two rows can have the same data in every field.
* A foreign key is used to implement the relation between entities.
* Keys are used to uniquely identify each row of a table.