21 Lecture - CS403

Important Subjective

1. **What is normalization?**
   Normalization is a process of organizing data in a database to reduce data redundancy and improve data integrity.

   What are the common levels of normalization?
   The common levels of normalization are First Normal Form (1NF), Second Normal Form (2NF), and Third Normal Form (3NF).

   What is a repeating group in a database?
   A repeating group is a group of non-key attributes that are dependent on each other.

   What is a partial dependency?
   A partial dependency is an attribute that is dependent on only part of the primary key.

   What is a transitive dependency?
   A transitive dependency is an attribute that is dependent on another non-key attribute.

   Why is normalization important?
   Normalization is important because it helps to improve data integrity, reduce data redundancy, and make the database more efficient.

   Can a database be over-normalized?
   Yes, a database can be over-normalized, which can result in slower performance and more complex database designs.

   What is the difference between First Normal Form (1NF) and Second Normal Form (2NF)?
   1NF eliminates repeating groups, while 2NF eliminates partial dependencies.

   What is denormalization?
   Denormalization is the process of intentionally introducing redundancy into a database to improve performance.

   What are the benefits of normalization?
   The benefits of normalization include improved data integrity, reduced data redundancy, and a more efficient database design.