

DBMS

File

Lec-1 DBMS for College / University Students

→ Basic Introduction

→ E-R Model

→ Basics of keys

→ Normalisation

→ Transaction control & concurrency

→ SQL & Relational Algebra

→ Indexing

Basic Introduction



2-tier, 3-tier

3-Schema / 3 level of ~~abst~~ abstraction

Data independence

Data models

Network Hierarchical (Relational ER) Object oriented

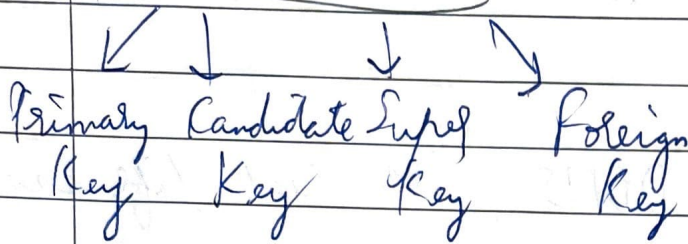
ER model

→ Attributes

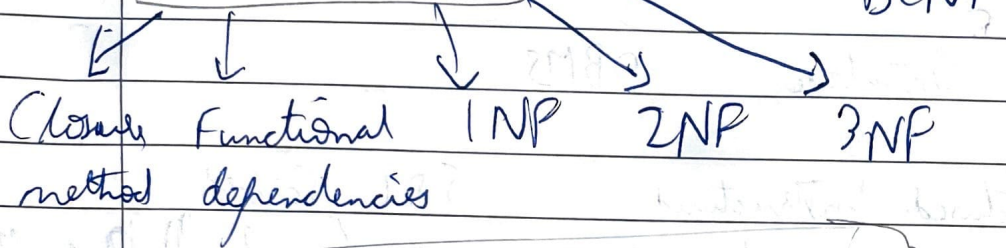
→ Relationship

→ Types of Relationship

Basics of keys



Normalisation



Transaction Control & Concurrency

Isolation

- ACID → Atomicity Consistency ~~Integrity~~ Durability
- R-W
- W-R
- W-W
- Conflict Serialisability
- Recoverability
- 2-Phase Lock
- Timestamp

SQL and Relational Algebra

- DDL → Data Definition Language
- DML → Data Manipulation Language
- DCL
- Constraint
- Aggregate function
- Joins
- Nested Query → in, not in, any, all

Indexing

→ Primary, cluster, secondary, B-tree,
B+ trees