

## Chapter-5

# DataBase Concepts

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### Q1. What do you mean by a Database Management System?

**Ans:-** DBMS is a collection of programs and files that allows a user to define structure of database, store data into it, modify the structure and manipulate data. Apart from this it also provide security, transaction management and concurrency control.

### Q2. What are the advantages of using a DBMS?

**Ans:** Advantages of DBMS are:

- 1) Reduce data redundancy (duplication of data)
- 2) Control data inconsistency to a large extent
- 3) Database facilitate sharing of data
- 4) Enforce standards
- 5) Centralized databases can ensure data security.

### Q.3. What do you mean by Relational Data Model?

**Ans** In this model data is organized into tabular structures called relations. A database may contain many relations providing a better classification of data based on its nature and use. Multiple relations are then linked/ associated together on some common key data values (foreign key).

### Q.4. What is a relation in Relational Model?

**Ans** A tabular structure containing data. To be a relation is must satisfy following four conditions:

- Atomicity : At every row-column intersection (Cell) there must be an atomic value i.e. a value that can not be further subdivided.



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- No duplicity: No two rows of relation will be identical i.e. in any two rows value in at least one column must be different.
  - Ordering of rows is immaterial.
  - Ordering of columns is immaterial.

**Q.5. What is the foreign key?**

**Ans:** A column or a combination of columns whose values are derived from primary key of some other table is called the foreign key of the table in which it is contained.

**Q.6. What do you mean by referential integrity? How is it enforced in databases?**

**Ans** The property of a relational database which ensures that no entry in a foreign key column of a table can be made unless it matches a primary key value in the corresponding column of the related table. It is enforced in the database with the help of foreign key constraint.

