LECTURE NO.1　　　　　　　　　　　　　　　　　　**TIME: 30 MIN.**

PREVIEW OF TODAY'S TOPICS

A. (Overview) Table, Degree of a Relation, Cardinality of a Relation, Basic terminology

Name: _____

Roll No: _____

Date: _____

(OVERVIEW) TABLE, DEGREE OF A RELATION,

CARDINALITY OF A RELATION, BASIC TERMINOLOYG
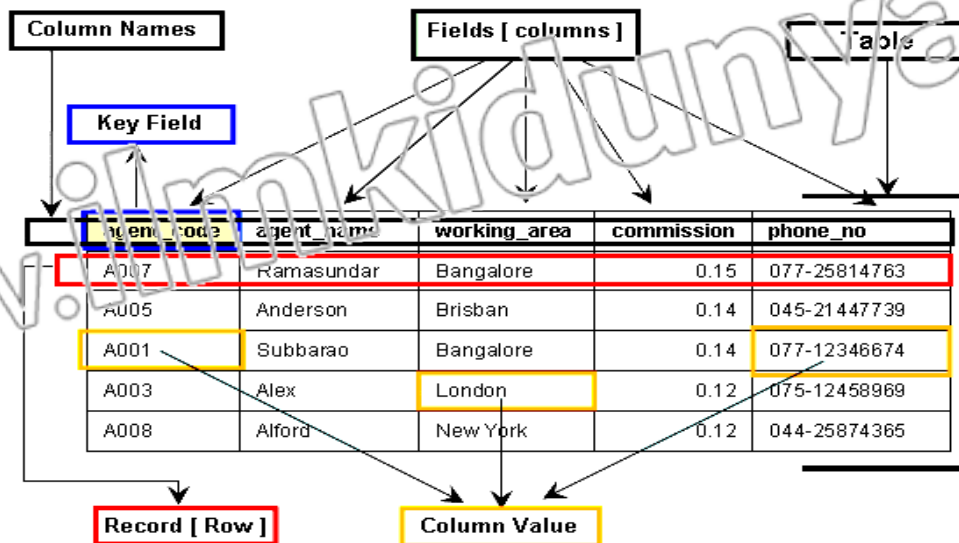
ATTRIBUTES, ROWS AND COLUMNS

EXTENSIVE QUESTION

Q.1 **How would you define a table? Also write characteristics of tables.** **(LHR 2022) (MTN 2022)**
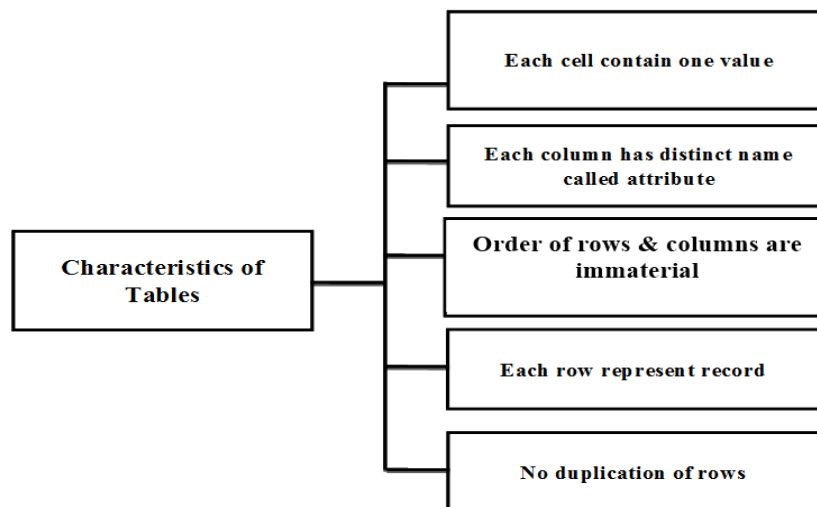
(BWP 2022)

SHORT QUESTIONS

(i) **What is meant by degree of relation?** **(LHR 2021) (SWL 2019)(U.B)**

(ii) **What is meant by cardinality of relation?** **(FSD 2021) (U.B)**

(iii) **How many views in access?** **(BWP 2018) (U.B)**

(iv) **Define field.** **(K.B)**

(v) **Write down two characteristics of table.** **(U.B)**

OVERVIEW OF TABLE & QUERY

(i) In a relational database, the data is stored in tables.

(ii) The table is the fundamental concept of relational databases.

(iii) It is also called relation.

(iv) It is the foundation of every Relational Database Management System, which is a database object called table.

(v) Tables are grids store information in a database similar to the way an Excel worksheet stores information in a workbook.

(vi) Access provides three ways to create a table for which there are icons in a Database Window.

(vii) Every data base consists of one or more tables which store data.

Column Names | Fields [columns] | Table

Key Field

agent_code	agent_name	working_area	commission	phone_no
A007	Ramasundar	Bangalore	0.15	077-25814763
A005	Anderson	Brisban	0.14	045-21447739
A001	Subbarao	Bangalore	0.14	077-12346674
A003	Alex	London	0.12	075-12458969
A008	Alford	New York	0.12	044-25874365

Record [Row]   Column Value

CHARACTERISTICS OF TABLE

Characteristics of Tables
- Each cell contain one value
- Each column has distinct name called attribute
- Order of rows & columns are immaterial
- Each row represent record
- No duplication of rows

DEGREE OF RELATION

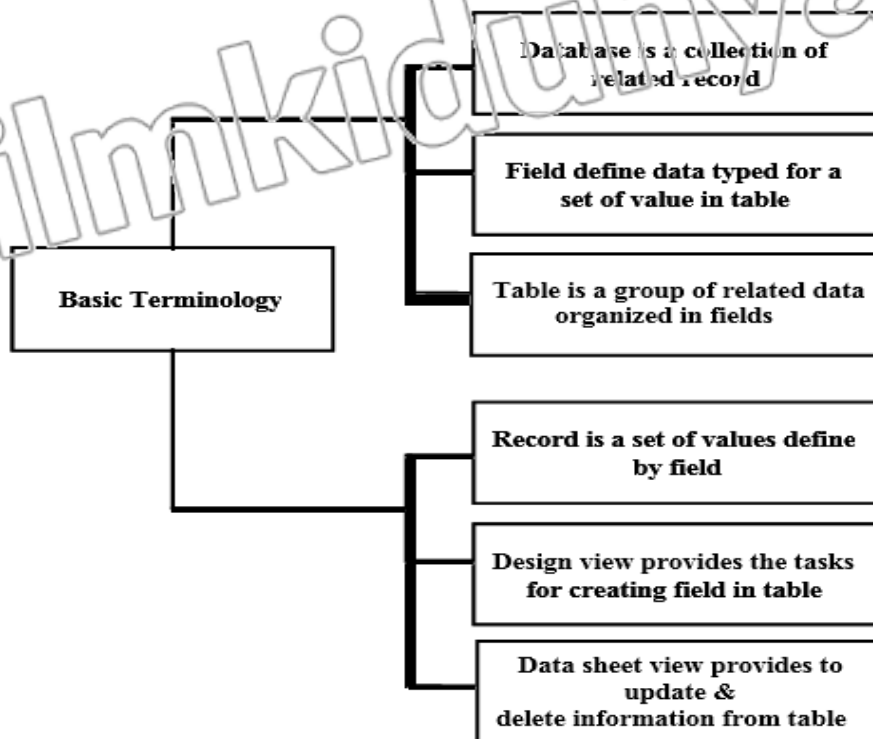The number of fields in a relation is called the degree of a table

(i) Once the table has been created, its degree usually does not change, e.g. a table with five fields has a degree of 5.

CARDINALITY OF A RELATION

The number of record in a relation is called the cardinality of the relation.

(ii) The cardinality of a relation changes as new records are added or existing records are deleted, e.g. a table with 50 records has a cardinality of 50.

THE BASIC TERMINOLOGY

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                                    ┌──────────────────────────┐
                                    │ Database is a collection of │
                                    │     related record        │
                                    └──────────────────────────┘
                                    ┌──────────────────────────┐
                                    │ Field define data typed for a │
                                    │    set of value in table   │
                                    └──────────────────────────┘
        ┌──────────────────┐        ┌──────────────────────────┐
        │ Basic Terminology │       │ Table is a group of related data │
        └──────────────────┘        │   organized in fields      │
                                    └──────────────────────────┘

                                    ┌──────────────────────────┐
                                    │ Record is a set of values define │
                                    │        by field           │
                                    └──────────────────────────┘
                                    ┌──────────────────────────┐
                                    │ Design view provides the tasks │
                                    │   for creating field in table │
                                    └──────────────────────────┘
                                    ┌──────────────────────────┐
                                    │ Data sheet view provides to │
                                    │        update &           │
                                    │ delete information from table │
                                    └──────────────────────────┘
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- These words are used often in Access so you will want to become familiar with them before using the program and this book.

  (i) A **data base** is a collection of related data (or records)

  (ii) An **object** is a component in the database such as a table, query, form, or macro.

  (iii) A **table** is a group of related data organized in fields (columns) and records (rows). By using a common field in two tables, the data can be linked. Many tables can be stored in a single database.

  (iv) A **field** is a column in a table and defines a data types for a set of values in the table. For example, a mailing list table might include fields for first name, last name, address, city state, zip code, and telephone number.

  (v) A **record** is a row in a table and is a set of values defined by fields. In a mailing list table, each record would contain the data for one person as specified by the intersecting fields.

  (vi) **Design** view provides the tools for creating field in a table.

  (vii) **Datasheet** view allows you to update, edit, and delete information from a table.

MULTIPLE CHOICE QUESTIONS

1) **Which of the following is a collection of related data sets?**
   (a) Group data   (b) DBMS
   (c) Database   (d) None of these

2) **Which of the following is a component in the database?**
   (a) Table   (b) Query
   (c) Form   **(d) All of these**

3) **The number of fields in a relation is called?**
   (a) Degree of the relation   (b) Cardinality of the relation
   (c) Binary of the relation   (d) Fields of the relation

4) **The number of records in a relation is called?**
   (a) Degree of the relation   **(b) Cardinality of the relation**
   (c) Binary of the relation   (d) Fields of the relation

5) **Which of the following allows you to update, edit and delete information from a table?**
   (a) Design view   **(b) Datasheet view**
   (c) Switch view   (d) All of above

SHORT QUESTIONS

Q1: **What is meant by degree of relation?**   **(LHR 2021) (SWL 2019)(U.B)**

Ans: The number of fields in a relation or table is called degree of relation. For example, a table with 10 fields has a degree of 10. Once a table is created, its degree usually does not change. However, the degree of relation remains constant.

Q2: **What is meant by cardinality of relation?**   **(FSD 2021)(U.B)**

Ans: The number of record in a relation is called the cardinality of the relation. The cardinality of a relation changes as new records are added or existing records are deleted, e.g. a table with 50 records has a cardinality of 50.

Q3: **How many views in access?**   **(BWP 2018)(U.B)**

Ans: There are two views in MS Access.
   - Design view provides the tools for creating field in a table.
   - Datasheet view allows you to update, edit, and delete information from a table.

Q4: **Define Field.**

Ans: A field is a column in a table and defines a data types for a set of values in the table. For example a mailing list table might include fields for first name, last name, address, city state, zip code, and telephone number.

Q5: **Write down two characteristics of table.**

Ans: Following are the two characteristics of table.
   - The order of the columns is immaterial.
   - Each row represents a record.