Assignment

Ans1

Database is a collection of two word Data and Base

Data means Storage and base means Computation of Data

It’s example can be seen in as data To be stored such that to fetch data and maintain and update data very fast . For an organization to work effectively We have to maintain a data base

Ans2

A file based system is the previously used technology it is to be used such that to

1. Easy to use
2. No complications Involved
3. Easily Copied and store at Multiple location

Challenges involved in this

1. Redundancy
2. Security concerns
3. Difficulty in concurrent use
4. To fetch data

Ans3.

Data base Management System is consists of Data base and management System

Where management system consists of management layer.

As in database we are not able to write directly in the database so management layer which help us to avoid redundancy.

We Data Bae mangment system

Because it help us to save us from

1. Redundancy
2. Security concerns
3. Difficulty in concurrent use
4. To fetch data

Ans4.

1. Redundancy
2. Security concerns
3. Difficulty in concurrent use
4. To fetch data
5. We can tackle anomaly like
6. Insertion
7. Deletion
8. Updation

Ans5.

Relational Database

A relational database management system (RDBMS) is a system where data is organized in two-dimensional tables using rows and columns.

Every table in a database has a key field which uniquely identifies each record.

Object Oriented Database

It is a system where information or data is represented in the form of objects which is used in object-oriented programming.

* It is a combination of relational database concepts and object-oriented principles.
* Relational database concepts are concurrency control, transactions, etc.
* OOPs principles are data encapsulation, inheritance, and polymorphism.
* It requires less code and is easy to maintain.

Hierarichal Datbase

It is a system where the data elements have a one to many relationship (1: N). Here data is organized like a tree which is similar to a folder structure in your computer system.

* The hierarchy starts from the root node, connecting all the child nodes to the parent node.
* It is used in industry on mainframe platforms.

Network Database

A Network database management system is a system where the data elements maintain one to one relationship (1: 1) or many to many relationship (N: N).

It also has a hierarchical structure, but the data is organized like a graph and it is allowed to have more than one parent for one child record

Ans6.

Data modelling is the process of diagramming data flows. When creating a new or alternate database structure, the designer starts with a diagram of how data will flow into and out of the database. This flow diagram is used to define the characteristics of the data formats, structures, and database handling functions to efficiently support the data flow requirements

Ans 7.

The three schema architecture is consists of physical layer , Internal Layer , Conceptual Layer and external Layer

Physical Layer

It is the physical storage of data

Internal Schema

How data is stored and retrived in Hard disk

Conceptual Schema

Entire data base we can arrange in table

External Schema

Custimize the data whom we want to do research

Advantages of three tier architecture

1. Customize data
2. Logical data Independence
3. Physical Data independence