1.6 Teams; Zoom; Instagram; Vk

1.7 FILE.   SYSTEM DBMS

Redundant data is present   -   No presence of redundant data
Query processing is not so efficient   -   Query processing is efficient
Data consistency is low   -   Due to the process of normalisation, the data consistency is high
Less complex, does not support complicated transactions   -   More complexity in managing the data, easier to implement complicated transactions
Less security   -   Supports more security mechanisms
Less expensive in comparison to DBMS   -   Higher cost than the File system
Does not support crash recovery   -   Crash recovery mechanism is highly supported

1.8 Data Independence is defined as a property of DBMS that helps you to change the Database schema at one level of a database system without requiring to change the schema at the next higher level. Data independence helps you to keep data separated from all programs that make use of it. You can use this stored data for computing and presentation. In many systems, data independence is an essential function for components of the system.

1.9 A database management system (DBMS) is defined as a computerized system that enables users to create and maintain a database. It is a general-purpose software system that facilitates the processes of defining, constructing, manipulating.
Five responsibilities include:

1. Defining a database: involves specifying the data types, structures, and constraints of the data to be stored in the database. The database definition or descriptive information is also stored by the DBMS in the form of a database catalog or dictionary; it is called meta-data.

If a DBMS doesn't support defining a database; a user might invariably define non-sense as there will be no pre-defined syntax/rule.

2. Constructing the database is the process of storing the data on some storage medium that is controlled by the DBMS.

There will be lack of organization if the DBMS doesn't hold the responsibility to construct the database.

3. Manipulating a database includes functions such as querying the database to retrieve specific data, updating the data-base to reflect changes in the miniworld, and generating reports from the data.

If the DBMS doesn't hold the responsibility for manipulating the database, there will be problem arising with user trying to manipulate the database which might be querying the database or searching for information.

4. Sharing a database allows multiple users and programs to access the database simultaneously.

If the DBMS doesn't hold the responsibility for sharing a database; it will be hard to user to manipulate database sharing within user.

5. Data manipulation: database allows us to easily extract and manipulate the data

1.11 Consistency constraints does not allow two students take the same seat.

1.15 Answer:

a) A users table containing users, account name, real name, age, gender, location, and other profile information

b. A content table containing user provided content

c. A friends table recording for each user which other users are connected to that user.

d. A permissionstable, recording which category of friends are allowed to view which content uploaded by a user. For example, a user may share some photos with family but not with all friends.