1.(1.6)

Banking: to get information about the account, money transfer, banking operations. Trains and airlines: to book tickets and get information about the schedule. Online-trade: To get product data, availability and pricing information, order tracking tools and see recommendation lists At the University To get information about grades and online assignments, registration for courses.

2.(1.7)

The file processing system is designed to provide predefined access to data (i.e. compiled programs). The database management system is designed to provide flexible access to data (i.e. queries).

Files often contain redundant or duplicate data elements. A DBMS reduces the amount of data duplication.

A file-processing system coordinates only the physical access to the data. A DBMS coordinates both the physical and the logical access to the data

The file processing system is much more restrictive in simultaneous access to data. DMBS is designed to coordinate and provide multiple users with access to data at the same time.

A file system provides much looser guarantees about consistency, isolation and durability. While databases are consistent at any instant in time,provide,isolated transactions and durable writes,

a file system is a more unstructured data store for storing arbitrary, probably unrelated data. A database is generally used for storing related, structured data, with well defined data formats, in an efficient manner for insert, update and/or retrieval.

3.(1.8)

The ability to change the schema definition at one level without affecting the schema definition at the next higher level is called data independence.This is the independence between programs and data.It is important because, in conventional data processing applications, any change in the structure or format of the data would require corresponding changes in the application programs. If serious changes need to be made to the data, it may be necessary to rewrite the application programs.

4.(1.9)

1)  Without backup and recovery data may be permanently lost, instead of at least being available in the consistent state that existed before the failure.

2)Without security enforcement.Because unauthorized users can access the database, or users who are allowed to access parts of the database may have access to parts of the database for which they do not have permissions.

3) Without  interaction with the file manager. Because  no DBM can do without this, if there is no file manager interaction then nothing stored in the files can be retrieved.

4) Without concurrency control.Because Consistency constraints can be violated despite proper integrity assurance in each transaction. For example, incorrect data and balances may be rejected due to simultaneous withdrawals and deposits, and so on.

5) . ensuring integrity. Consistency limits may not be met, account balances may be below the minimum allowable level, employees may earn too much overtime (for example, hours > 80), or airline pilots may fly more hours than allowed by law.

5.(1.11)

It is transaction isolation. suppose that two students are trying to register for a course where there is only one available place.which component of the database system does not allow both students to get this last place.So when a student gets the last place, the next student will not get the same place (or any other place) because the transaction is already completed.

6.(1.15)

1) Permission table, which records which category of friends is allowed to view which content is uploaded by the user. For example, a user can share some photos with family, but not with all friends.

2) A user table containing users with attributes such as account name, real name, age, gender, location, and other profile information

3) A content table containing user-provided content, such as text and images associated with the user who uploaded the content.