1.6

Excel, Dropbox, Cloud storages, Google Disc

1.7

FPS is used to just store data when DBMS is used to manage the data; You can’t backup the data in FPS when DBMS provides backup and recovery of data even if it’s lost; FPS don’t have query processing when DBMS have efficient query processing; Also, data in DBMS have better security and consistency and have the independence. The primary goal of a DBMS is to provide an environment that is both convenient and efficient for people to use in retrieving and storing information.

1.8

The physical schema is hidden beneath the logical schema and can usually be changed easily without affecting application programs. Physical data independence helps you to separate conceptual levels from the internal/physical levels. It allows you to provide a logical description of the database without the need to specify physical structures. With Physical independence, you can easily change the physical storage structures or devices with an effect on the conceptual schema. Any change done would be absorbed by the mapping between the conceptual and internal levels.

1.9

Interaction with the File Manager:

No DBM can do without this, if there is no file manager interaction then nothing stored in the files can be retrieved.

Integrity Enforcement:

Consistency constraints may not be satisfied, account balances could go below the minimum allowed, employees could earn too much overtime or airline pilots may fly more hours than allowed by law.

Security Enforcement:

Unauthorized users may access the database, or users authorized to access part of the database may be able to access parts of the database for which they lack authority. For example, a high school student could get access to national defense secret codes, or employees could find out what their supervisors earn.

Backup and Recovery:

Data could be lost permanently, rather than at least being available in a consistent state that existed prior to a failure.

Concurrency(synchrony) Control:

Consistency constraints may be violated despite proper integrity enforcement in each transaction. For example, incorrect bank balances might be reflected due to simultaneous withdrawals and deposits, and so on.

1.11

The Transaction Isolation component of the database prevents both students from being given the last seat of the course. So, there is only two probabilities: first student will register on the last seat or second. There is no chance to register both students on one seat. Because DBMS ensures that only one student's registration request is fulfilled and database maintains accuracy and consistency.

1.15

My Info table;

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| username | First name | surname | Phone number | id | subscribers | subscriptions |

Friends table;

|  |  |  |  |
| --- | --- | --- | --- |
| username | id | posts | subscriptions |

Content table;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| posts | images | videos | reels | stories |