

Lab - 1

Chapter-1

1.6. Library: reader's information, id number, books, year of releases, authors;

University: student's information, grades, attendance, assignments;

Online tickets for concerts: ticket information, concerts, artist, date;

Airline: reservation's information, schedule, flights.

1.7.

A DBMS reduces the amount of data duplication by ensuring that a physical piece of data is available to all programs authorized to have access to it, whereas data written by one program in a file-processing system may not be readable by another program.

A database management system is designed to allow flexible access to data (i.e., queries), whereas a file-processing system is designed to allow pre-determined access to data (i.e., compiled programs).

1.8

Physical Data Independence is defined as the ability to make changes in the structure of the lowest level of the Database Management System (DBMS) without affecting the higher-level schemas. Hence, modification in the Physical level should not result in any changes in the Logical or View levels.

1.9

Interaction with the File Manager. Integrity Enforcement.

Security Enforcement.

Backup and Recovery. Concurrency Control.

1.11

Answer: Transaction management

A transaction is a collection of operations that performs a single logical function in a database application

Transaction-management component ensures that the database remains in a consistent state despite system failures and transaction failures.