1. What is a database? Explain briefly

Structured data, meaningful and related relationship among collection of data

1. Give example situations in which databases are used.

Student information database

Library database

Airline database

1. What is a database management system (DBMS)?

DBSM is a general purpose software system that facilitates the process of defining, constructing, manipulate and sharing database among various users and application.

1. Give example DBMS available

MySQL, PostgreSQL, Microsoft Access, SQL Server, Filemaker, Oracle, RDBMS, dBASE, Clipper, and FoxPro.

1. Compare and contrast different Data storage mechanisms

Manual , computer file base, database approach, backup , concurage data

6. a) What is known as the ANSI/SPARC model? Give another name for the ANSI/SPARC model.

an abstract design standard for a database management system (DBMS)

b) Draw the Three Schema Architecture. Name the three schemas.

External schema

Conceptual Schema

Internal schema

c) Briefly explain the 3 schemas.

External schemas: at the external level to describe the various use views, usually uses the same data model as the conceptual level.

Conceptual schema: at the conceptual level to describe the structure and constraints for the whole database for a community of users. Uses a conceptual or an implementation data model .

Internal schema at the internal level to describe physical storage structures and access paths. Typically uses a physical data model.

d) What is the advantage of having the three schema architecture?

Program data independence

e) What do you mean by logical data independence and physical data independence?

Physical data independence helps you to separate conceptual levels from the internal/physical levels. Logical Data Independence is the ability to change the conceptual scheme without changing. When compared to Physical Data independence, it is challenging to achieve logical data independence.

7. ‘Sri Lankan Airline is the national carrier’.

a) What are possible data required by an airline system?

Fight information, plan information, pilot data, passengers data , seat reservation details

b) Is it necessary for them to use a DBMS?

Yes. Because Customers can online reservation, concurage access necessarily , number of trance traction daily, many reservation happening

8. Think of a DB of a bank.

1. What type of data would they store in their database?

Customer details, accounts details, staff details, branch details

1. In the three schema architecture where would you put details about above data?

Conceptual / logical level

1. In the three schema architecture which schema describes details about the type of file organization used to store the above data?

Physical level/ internal level

1. What is the advantage of using a DBMS for a bank?

Large volumes data , number of trancesaction happened per day , security

\*\*End of the Tutorial\*\*