Database Fundamentals – LabSheet 1

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1.

a. Data is a collection of facts. Data can come in many different forms such as numbers, words, measurements and observation.

b. Persistent storage is the type of data that can be stored on a row of a database.

c. A database is a tool to store data permanently, .i.e. a persistent data store.

d. A database management system job is to manage all of the data going in and out of the database, e.g. Oracle

e. A database system is a combination of a database, a database management system and a data model. Its jobs include following data manipulation acts, data controlling, data retrieving and data maintenance.

2. Information that would be stored to run an online auction site in persistent storage would include:

* Product information
* Product quantity
* Seller information
* Postage and payment options

3. A database administrator is a person responsible for the installation, configuration, upgrade, administration, monitoring and maintenance of databases in an organization.

The role includes the development and design of database strategies, system monitoring and improving database performance and capacity, and planning for future expansion requirements. They may also plan, co-ordinate and implement security measures to safeguard the database.

4.

1. MySQL is the world’s most popular open source database. It is made and distributed by Oracle Corporations. It is open source meaning that anyone can use and modify the software.The MySQL is very fast, reliable, scalable, and easy to use.
2. MsAccess is made and distributed by Microsoft. It combines the relational Microsoft Jet Database Engine with a graphical user interface and software development tools. Microsoft Access stores data in its own format based on the Access Jet Database Engine. MsAccess is not open source.
3. SQL server is made and distributed by Microsoft. Its primary function is to retrieve data requested by other software applications. There are over a dozen editions of Microsoft SQL Server aimed at different customers and for different workloads. Its primary query languages are T-SQL and ANSI SQL. It is not open source.
4. Oracle 11g is made and distributed by Oracle Corporations. The express edition was released on the 24th of September 2011. It can support 11 GB of user data. It is open source. Oracle 11g is not very popular anymore.