CS 557 Chapter 15

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2. The ODBC is a driver that uses open database connectivity by Microsoft that allows applications to access data in database managing systems. The DAO is the data access objects which is an object-oriented application programming interface used to access MS access, FileMaker Pro and other Jet-based databases. The RDO is the remote data objects that are a higher-level, object-oriented application interface used to access remote database servers. RDO uses the lower-level DAO and ODBC for direct access to databases. They are all used to access local and remote relational data sources.

\*3. There are 3 main differences between DAO and RDO. RDO uses DAO to access remote database server data.

4. A ODBC is composed of 3 main components:

- A high-level ODBC API through which application programs access ODBC functionality

- A driver manager that is in charge of managing all database connections

- An ODBC driver that communicates directly to the DBMS

5. You first need to identify the driver to connect to the data source. Then you need the unique name, which the data source will be known to ODBC, and its applications. Lastly, most ODBC drivers require specific parameters to establish a connection to the database. Most of the time you need the username and password. Also, sometimes you need the server name and database name.

6. The object linking and embedding for databases is a database middleware that adds object-oriented functionality for accessing relational and nonrelational data.

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8. The ADO is a high-level interface so that it can interact with the OLE-DB. The interface allows you to access data from any programming language that uses OLE-DB objects.

9. The ADO.NET is a set of computer software components that programmers can use to access data of Microsoft’s .NET application framework.

\*13. The phrase “The web is a stateless system” means that the web server does not know the status of who its communicating with. It doesn’t have memory to maintain a communication.

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21. There are 3 types of cloud computing, the public cloud, private cloud, and community cloud. The public cloud is the most common implementation of the three. It is built by a third-party organization to sell cloud services to the general public. An example is Amazon. The private cloud is often used by large organizations. It adds agility and flexibility to internal IT services. It is built by an organization for the purpose of servicing its own needs. Lastly, the community cloud is built by and for a specific organization like the military or higher education. They all share a common trade.

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23. The main advantages of cloud computing are low initial costs of entry, sustainability, support of multiple types of mobile computing and much more. The main disadvantages are that there are issues with security, privacy and compliance. There are some hidden costs of implementation and operation. Also, data migration is a difficult and lengthy process. In addition, there is complex licensing schemes and loss of ownership and control. There are a couple more disadvantages as well.

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