**M14 Review Questions(RQ) Web Server Environment Kroenke Book Chap 11**

**Name: \_\_Liliana Varela\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Download the attached document and answer the Review Questions (RQ).

The Review Questions (RQ) listed below can also be found in the Kroenke textbook, starting on page 526. This is NOT the entire list of Review Questions, but is a sample of 20 questions to identify the main topics in the chapter.

The M14 Quiz is NOT restricted to these questions only, so all Review Questions should be studied in preparation for the Quiz and Exam 3.

Please type your answer to the questions, in the space provided below. The questions selected provide information on the basic concepts for this chapter.

Once you have completed the assignment, enter your name at the top, and attach it to the assignment link for grading.

This assignment is worth 20 points.

**M14 LAB Web Server Environment REVIEW QUESTIONS**

11.1 Describe why the data environment is complicated.

The data environment is complicated because data is written in many forms using many different databases to store it in. Web pages are created with many different sources with different programming interfaces The database they are stored in may or may not be SQL and they may or may not be relational databases.

11.2 Explain how ODBC, OLE DB, and ADO are related.

Because there is so much variety when it comes database program interface (API) Open Database Connectivity (ODBC) was developed in order to provide a DBMS means for processing relational database data. Microsoft developed both OLE BD, which is an object-oriented interface with data-server functions; they also developed ADO, which is a set of object for using OLE DB in any programming language (including VB which OLE DB could not read). ADO in turn is used to build Web pages for Active Server Pages (ASP).

11.3 Explain the author’s justification for describing Microsoft standards. Do you agree?

While there are many different companies which used different languages and standards to create applications, database, web servers, and browsers Microsoft was the one that was developed the most early on and has had a major hand in the development of what we now know as the Internet. I think it is still very much relevant to learn about Microsoft’s standards since we still widely use most of their applications today despite major competition from other companies like Apple/MacIntosh.

11.4 Name the components of the ODBC standard.

The components of the ODBC standard are application programs, driver manager, and DBMS drivers. They all reside in the application server computer.

11.5 What role does the driver manager serve? Who supplies it?

The driver manager sends a request to data sources in the database server. This data source is the database, the associated DBMS, OS, and the network platform; this is known as the ODBC data source. It then loads the that driver into the memory and processes certain initialization requests and validates the format and order of ODBC request that receives from the application.

11.6 What role does the DBMS driver serve? Who supplies it?

DBMS processes ODBC requests and submit specific SQL statements to a given data source. DBMS vendors supply the drivers by independent companies.

11.8 What is a multiple-tier driver?

A multi-tier driver can process OBDC calls but passes SQL requests directly to the database server. It can reformat the SQL request to fit the dialect of a data source, but it doesn’t process the SQL request.

11.10 Why are conformance levels important?

Conformance levels were created because even though a low standard would have been easy to comply for many vendors, if a high standard had been set, they would have conformed the complete power and expressiveness of ODBC and SQL. Very few vendors would be able to comply with this standard, making it something easily overlooked.

11.16 What is the Microsoft.NET Framework? What basic elements does it include?

.Net Framework is Microsoft’s platform for developing applications. It is a set of building blocks that help you add functions on top of the functions that you have already developed in previous steps. The basic elements of .Net Framework include Language Integrated Query (LINQ) which allows SQL queries to be programmed directly into application programs, ADO.NET Entity Framework which supports the Entity Data Model (EDM) technology, ADO. NET Data Services which allows the creation and consumption of data services, and ADO.NET AJAX which allows the creation of client side Web applications using a number of languages (like HTML, Javascript,CSS) .

11.18 Why is OLE DB important?

OLE DB breaks down DBMS features and functions into Component Object Model objects and supports all interfaces for those objects. It allows ODBC to overcome a lot of major disadvantages as well. It can object interface over any type of data and developers can hide the implementation from the user while changing it any way they wish.

11.19 What disadvantage of ODBC does OLE DB overcome?

With ODBC a vendor must create an ODBC driver for almost all DBMS features and functions to participate in ODBC. With OLE DB a DBMS vendor can implement portions of a product hence letting the product become accessible to customers.

11.31 What is ADO.NET?

Ado.NET was created to incorporate the functionality of ADO (the ability to use any language to access OLE DB functions) and OLE DB but also expands on these. It also facilitates the process of turning XML documents to and from relational database constructs while also providing the ability to create and process in-memory databases (datasets).

11.33 What is a data reader?

A data reader provides read only, forward only data transfers from a data source and can be used only through an Execute of a Command.

11.34 How can ADO.NET be used to process a database without using DataReaders or DataSets?

One can us Command object as an SQL statement or stored procedure to run data in the DataSet. By using SelectCommand object, InsertCommand object, UpdateCommand object, DeleteCommand object we can get data from the DBMS and place it in a DataSet or send changes in the DataSet to the DBMS data. We can also use optimistic locking to save all the DataSet data into a regular database.

11.52 What does JDBC stand for?

It originally did not stand for anything, but in this point in time it has come to stand for Java Database Connectivity (it is found on Oracle’s Web site).

11.65 What is Hypertext Markup Language (HTML), and what function does it serve?

HTML is a standard set of syntax rules and document tags that can be interpreted by Web browsers to create specific displays.Web pages. Hypertext refers to the fact that you can include links to other objects (other Web pages, maps, audio or video files) in a Web page and when clicking on the link you are immediately taken to that object and it is displayed for you.

11.69 What is PHP, and what function does it serve?

PHP is abbreviated for Personal Hypertext Processor and is a scripting and object oriented open source language that can be embedded in Web pages. With PHP you are more able to easily access a DBMS, in the book we were able to update a table, recreate a page, and invoke stored procedures.

11.85 Why do database processing and document processing need each other?

Database processing needs document processing for the representation (of the Web pages for a specific device) of database views. Document processing needs database processing for the permanent storage of the data.

11.86 How are HTML, SGML, and XML related?

They are all Markup Languages but SGML is the parent language and from there we derived HTML and later on XML.

XML (Extensible Markup Language) is a subset of SGML (Standard Generalized Markup Language) but now with more added standards and capabilities. XML is a better Markup Language to use than HTML as it gets rid of the inconsistent tags that come with it.

11.87 Explain the phrase “standardized but customizable.”

XML is a Markup Language has the standardized capability of to describe the contents of a document and also can automatically be generated from database data. Using XML to define document components that are mapped into a database schema in a standardized way. XML sets the standards while adapting to what a developer needs to accomplish.