**DB2 Certification Notes**

**sites**

**Tutorials**

<http://www.mainframegurukul.com/tutorials/database/db2_tutorials/sample-db2-cobol-compile-jcl.html>

<http://www.mainframegurukul.com/tutorials/database/db2_tutorials/db2.html>

<http://www.sql-tutorial.net/SQL-JOIN.asp>

http://mainframealldtime.wordpress.com/category/db2/

**DB2 TOOLS**

<http://www.dbforums.com/db2/1622056-how-dclgen-can-used-create-host-variables-cobol-db2-program.html>

<https://sites.google.com/site/cobolmaterial/dclgen-tutorial>

<http://mainframestutor.in/dclgen-in-db2/>

**Buffers**

<http://publib.boulder.ibm.com/infocenter/dzichelp/v2r2/index.jsp?topic=%2Fcom.ibm.db2z10.doc.intro%2Fsrc%2Ftpc%2Fdb2z_bufferpoolsanddatacaching.htm>

**Example Programs**

<http://www.mainframegurukul.com/tutorials/database/db2_tutorials/cobol-db2-sample-program.html>

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**Imp Points**

* **Abbrevations**

**DB2 UDB:** DB2 Universal Database

**AIX:** Advanced Interactive Executive

**AS:** Application Server

**DRDA:** Distributed Relational Database Architecture

**MVS:** Multiple Virtual Storage

**PASE:** Portable Application Solutions Environment

**OLAP:** Online Analytic Processing

**DCS:** Database Connection Service

* **Common DB2 abends are -206, +100, -551, -803, -805, -811, -818**
* <http://www.youtube.com/watch?v=lNkI710RxMc>

DB2 windows details db2admin/sandynami

* **Good Book - DBMS by CJ Date**
* **DB2 Certifications**

Different types of data applications, **data warehousing**, and **OLAP**.

DB2 Certifications for beginners 700 or 730

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**Questions and their Explanation**

**Q. What is AIX servers**

**ANS.**

IBM AIX a series of proprietary Unix operating systems developed and sold by IBM for several of its computer platforms.

AIX is IBM's Unix implementation, which it develops for a number of its products, notably the IBM SP series. Other manufacturers, such as Motorola, also produce hardware that runs AIX. AIX incorporates elements of System V, BSD, and OSF/1, but includes enough unique features to make using, and especially administering, AIX somewhat different from working with other Unix implementations. Nevertheless, recent versions are compliant with most Unix standards.

**AIX is an open operating system from IBM that is based on a version of UNIX. AIX/ESA was designed for IBM's System/390 or large server hardware platform.**

**Q.What is DB2 DRDA?**

**ANS**

**DB2 Connect implements the DRDA(R) architecture to reduce the cost and complexity of accessing data stored in DB2(R) UDB for iSeries, DB2 UDB for OS/390(R) and z/OS, DB2 Server for VSE & VM, and other DRDA-compliant database servers.** By fully exploiting the DRDA architecture, DB2 Connect offers a well-performing, low-cost solution with the system management characteristics that customers demand.

DRDA is a set of protocols, or rules, that enable a user to access distributed data regardless of where it physically resides. It provides an open, robust heterogeneous distributed database environment. DRDA provides methods of coordinating communication among distributed locations. This allows applications to access multiple remote tables at various locations and have them appear to the end-user as if they were a logical whole.

A distinction should be made, however, between the architecture and the implementation. DRDA describes the architecture for distributed data and nothing more. It defines the rules for accessing the distributed data, but it does not provide the actual application programming interfaces (APIs) to perform the access. So DRDA is not an actual program, but is more like the specifications for a program.

When a DBMS is said to be DRDA-compliant, all that is implied is that it follows the DRDA specifications. DB2 is a DRDA-compliant RDBMS product.

**Q. What is OS390 and OS400?**

**ANS**

OS/390 is the IBM operating system most commonly installed on its S/390 line of mainframe server. It is an evolved and newly renamed version of MVS (Multiple Virtual Storage), IBM's long-time, robust mainframe operating system. By whatever name, MVS has been said to be the operating system that keeps the world going. **The payroll, accounts receivable, transaction processing, database management, and other programs critical to the world's largest businesses are usually run on an MVS system.** Although MVS tends to be associated with a monolithic, centrally-controlled information system, IBM has in recent years repositioned it as a "large server" in a n a network-oriented distributed environment that would tend to use a 3-tier application model.

Since MVS represents a certain epoch and culture in the history of computing and since many older MVS systems still operate, the term "MVS" will probably continue to be used for some time. Since OS/390 also comes with UNIX user and programming interfaces built in, it can be used as both an MVS system and a UNIX system at the same time. OS/390 (and earlier MVS) systems run older applications developed using Common Business Oriented Language and, for transaction programs, Customer Information Control System. Older application programs written in PL/I and Formula Translation are still running. Older applications use the Virtual Storage Access Method access method for file management and Virtual Telecommunications Access Method for telecommunication with users. The most common program environment today uses the C and C++ languages. DB2 is IBM's primary . Java applications can be developed and run under OS/390's UNIX environment.

**z/OS** is a 64-bit operating system for mainframe computers, produced by IBM. It derives from and is the successor to OS/390, which in turn followed a string of MVS versions.[NB 1] Like OS/390, z/OS combines a number of formerly separate, related products, some of which are still optional. z/OS offers the attributes of modern operating systems but also retains much of the functionality originating in the 1960s and each subsequent decade that is still found in daily use (backward compatibility is one of z/OS's central design philosophies). z/OS was first introduced in October 2000

OS/400 is IBM's operating system for its AS/400 and AS/400e line of business computers. Because OS/400 is closely attuned to the AS/400 hardware design and generally comes as part of the basic package, there is no alternative operating system to compete with it. OS/400 is built to operate with the AS/400 logical partition (LPAR) architecture, in which multiple instances of the operating system can run concurrently in different partitions. Among other uses, LPAR is useful when migrating to a new release. The old production system can keep operating in one partition while a new system is being tested.

As the AS/400 has evolved to meet the latest trends in business and information technology, OS/400 and its related software has added support for:

1. Applications written in the Java programming language
2. The ability to run Windows 2000/NT applications (when certain other products are installed)
3. The Portable Application Solutions Environment (PASE), which supports a subset of the AIX environment so that UNIX applications can be ported and run on the AS/400
4. Lotus Domino, which provides groupware and e-mail from Lotus Notes applications or a standard Web browser

**Q. What is 3 Tier Application**

**ANS.**

A 3-tier application is an application program that is organized into three major parts, each of which is distributed to a different place or places in a network. The three parts are:

1. The workstation or presentation interface
2. The business logic
3. The database and programming related to managing it

In a typical 3-tier application**, the application user's workstation contains the programming that provides the graphical user interface (GUI) and application-specific entry forms or interactive windows.** (Some data that is local or unique for the workstation user is also kept on the local hard disk.)

**Business logic is located on a local area network (LAN) server or other shared computer**. The business logic acts as the server for client requests from workstations. In turn, it determines what data is needed (and where it is located) and acts as a client in relation to a third tier of programming that might be located on a mainframe computer.

**The third tier includes the database and a program to manage read and write access to it.** While the organization of an application can be more complicated than this, the 3-tier view is a convenient way to think about the parts in a large-scale program.

A 3-tier application uses the client/server computing model.

With three tiers or parts, each part can be developed concurrently by different team of programmers coding in different languages from the other tier developers. Because the programming for a tier can be changed or relocated without affecting the other tiers, the 3-tier model makes it easier for an enterprise or software packager to continually evolve an application as new needs and opportunities arise.

Existing applications or critical parts can be permanently or temporarily retained and encapsulated within the new tier of which it becomes a component.

**Q. DB2 OLAP Server**

**ANS**

**DB2 OLAP** Server is the engine that provides the analytical processing power, scalability, performance, manageability, and security needed for delivering information to a broad class of users. Version 8.2 delivers significant and exciting enhancements including massive dimensional scalability and reduction in aggregation time for sparse databases; the ability to more easily engage in global development; greater flexibility in accessing multidimensional data and metadata; the ability to more easily customize the end-user experience;

**Q. what is DB2 subscription set**

**ANS**

**Subscription sets in SQL replication**

After you register your sources, you create subscription sets , in which you pair your sources with targets. Each source-target pair is referred to as a member of the subscription set in which it is created. You can use subscription sets to schedule the replication of data in one or more source-target pairs from one source server to one target server. The Apply program coordinates this replication so that it applies data to targets in a manner consistent with the original transactions on the source server.

Q. A database administrator has supplied the following information:

• Protocol: TCP/IP

• Port Number: 446

• Host Name: ZEUS

• Database Name: SAMPLE

• Database Server Platform: OS/400

Which are the appropriate commands to set up the ability to connect to the database?

ANS.

**CATALOG TCPIP NODE** zeus **REMOTE** zeus **SERVER** 446 **OSTYPE** os400**;   
CATALOG DCS DB** dcssam **AS** sample**;   
CATALOG DATABASE** dcssam **AS** sample **AT NODE** zeus **AUTHENTICATION** dcs**;**

**Q. Which of the following will give USER6 the ability to give SELECT privilege on table T.T1 to other users?**

**ANS.**

GRANT ALL PRIVILEGES ON TABLE t.t1 TO user6 WITH GRANT OPTION;

OR

GRANT SELECT ON TABLE t.t1 TO user6;

OR

GRANT SELECT ON TABLE t.t1 TO PUBLIC