

Oracle Database Installation Guide

Welcome to the second module of this course. For this lesson, we will discuss the task of Database Administrator, System requirement and Installation procedure.

Before a student may proceed on the next chapter installing this software Oracle Database 11g is a prerequisite. Student need to create an account to www.oracle.com in order to download the 11g database software, moreover without installing the software may hinder the student to complete the course due to activity file for manual grading are included in this course.

Oracle Database 11g



This course used the Oracle Database 11g Express Edition (Oracle Database XE) is an entry-level, small-footprint database based on the Oracle Database 11g Release 2 code base. It's free to develop, deploy, and distribute; fast to download; and simple to administer. At the end of the lesson the student should be able to:

- Describe his/her role as a database administrator (DBA) and explain typical tasks and tools.
- Plan an Oracle software installation.
- Install the Oracle database software.

The task of a database administrator

The approach for designing, implementing, and maintaining an Oracle database involves the following tasks:

1. Evaluating the database server hardware
2. Installing the Oracle software
3. Planning the database and security strategy
4. Creating, migrating, and opening the database
5. Backing up the database
6. Enrolling system users and planning for their Oracle Network access.
7. Implementing the database design
8. Recovering from database failure

9. Monitoring database performance

Tools for Administering

1. Oracle Universal Installer
2. Database Configuration Assistant
3. Database Upgrade Assistant
4. Oracle Net Manager
5. Oracle Net Configuration Assistant
6. Oracle Enterprise Manager
7. Server Control Utility
8. Recovery Manager
9. SQL*Loader

Consideration guideline when planning to install Oracle Database 11g

- What Oracle software are you installing?
- Does the hardware involved meet the minimum required specifications?
- Is there a recommended order of installation when multiple products are involved?
- Are there prerequisite steps that must be performed by someone other than the DBA?

System Requirements

1. Memory requirements:

- 1 GB for the database instance with Oracle Enterprise Manager Database Control
- 1.5 GB for the ASM instance and Oracle Restart

2. Disk space requirements

- 3 GB of swap space (based on 2 GB RAM)
- 1 GB of disk space in the /tmp directory
- 3.8 GB for the Oracle Database software
- 4.5 GB for the Grid Infrastructure software
- 1.7 GB for the preconfigured database (optional)
- 3.4 GB for the fast recovery area (optional)

3. Operating system

Preparing the Operating System

Create the required operating system users and groups:

- Groups:
- oinstall
- dba

Optional groups (if doing separation of duty across multiple users):

- oper
- asmdba
- asmoper
- asmadmin
- Software owner, usually **oracle**
- Can create multiple users for multiple product installations

Setting environment Variables:

Oracle environment variables:

1. **ORACLE_BASE:** Base of the Oracle directory structure.
 - Recommended to set this before installation.
2. **ORACLE_HOME:** The environment in which Oracle products run. Not required before installation if ORACLE_BASE is set.
3. **ORACLE_SID:** Not required before installation, but useful afterwards for ease of interaction with a particular instance
4. **NLS_LANG:** Optional environment variable that controls language, territory, and client character set settings

Requirements:

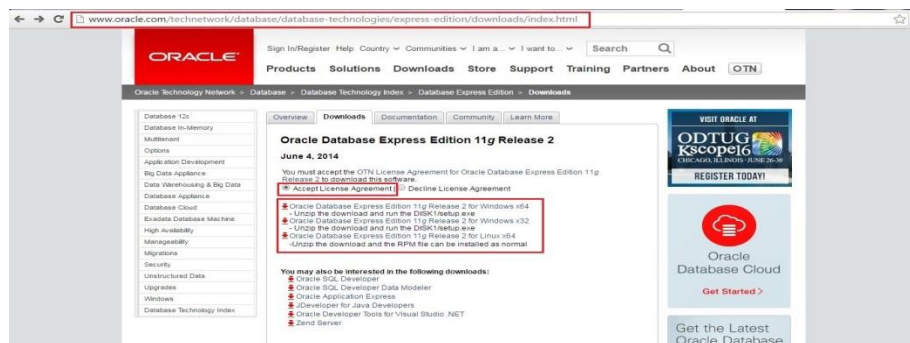
- Adequate temporary space
- 64-bit versus 32-bit issues
- Correct operating system (OS)
- OS patch level

- System packages
- System and kernel parameters
- X Server permissions
- Sufficient swapping
- ORACLE_HOME status

Installation Guide:

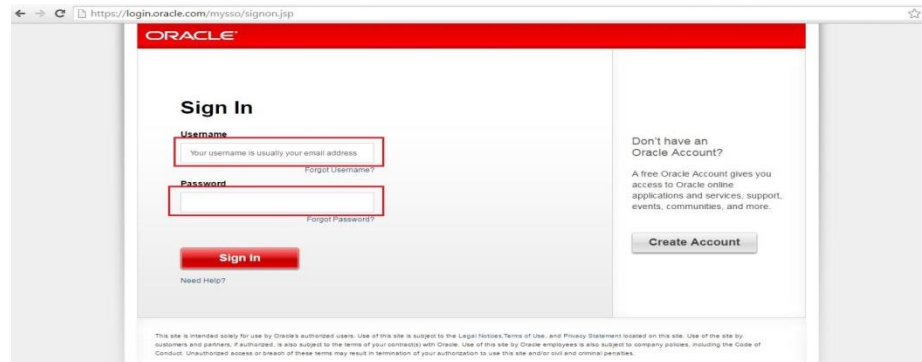
Step 1:

- Download Oracle Database thru www.oracle.com
- Click on License Agreement
- Choose the type of Operating system used.



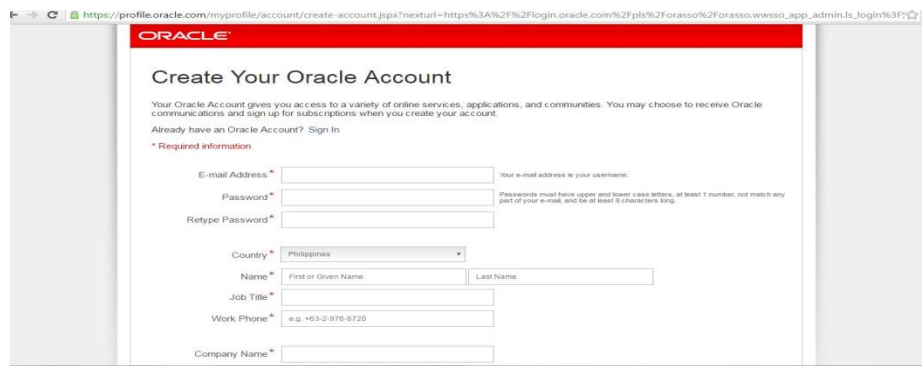
Step 2:

- If with existing oracle account provide information on the left side then click sign in
- If a new user click the CREATE ACCOUNT



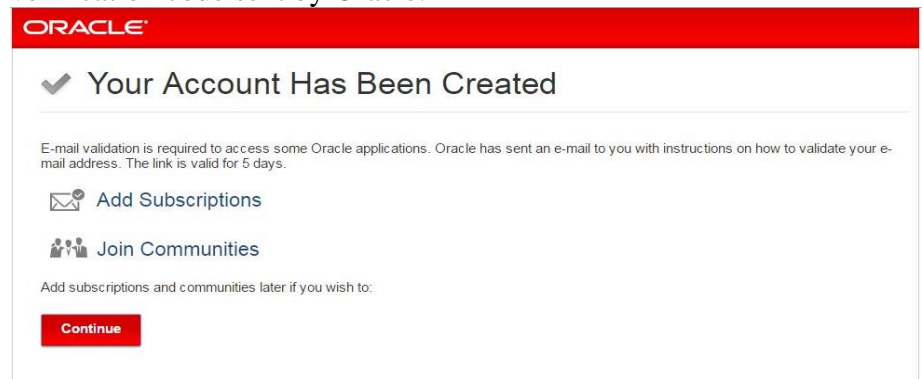
Step 3:

- Fill up the form with necessary information mark in * are required field.
- Click Submit



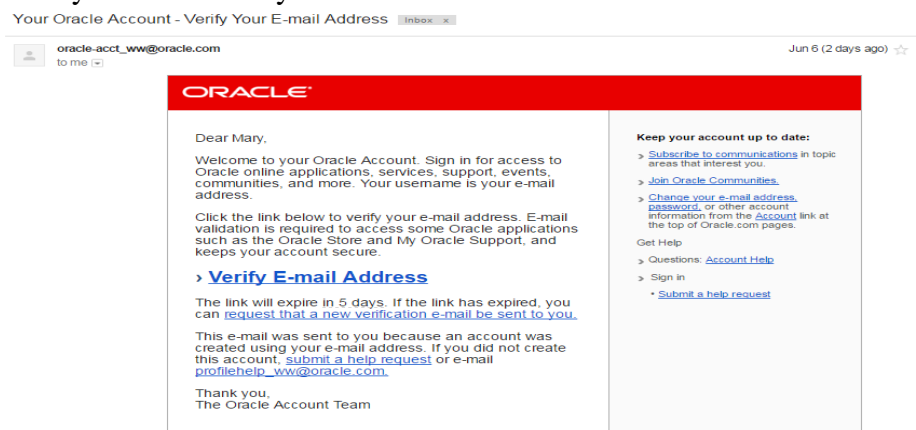
Step 3:

- Once the account is created open your email to confirm the verification code sent by Oracle.



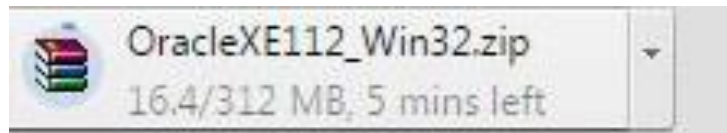
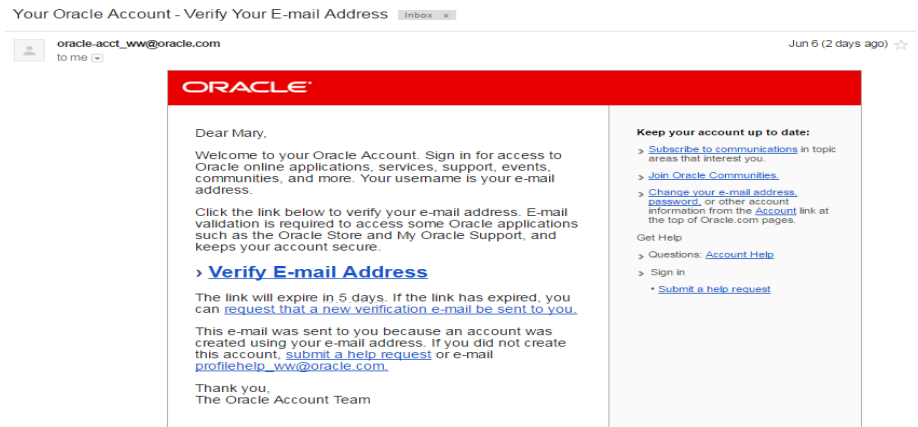
Step 4:

- Verify the link sent by oracle



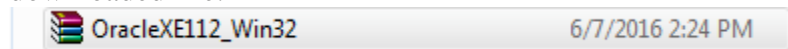
Step 5:

- Once verified the downloading the Oracle will start

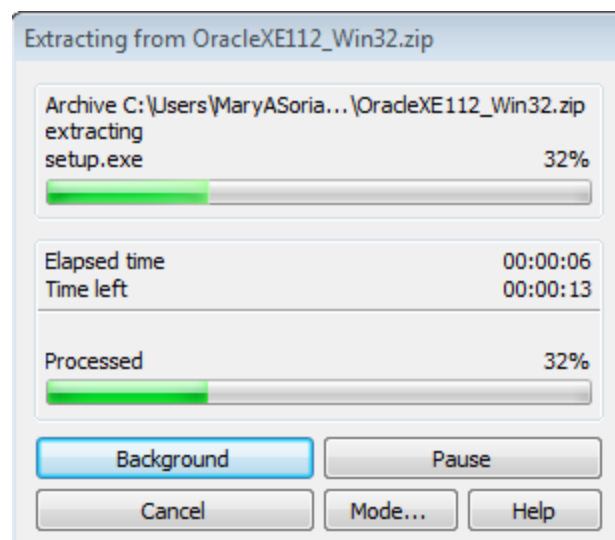


Step 6:

- When download is completed double click the rar file > Click on **DISK1**>followed by **setup.exe**
- Clicking the setup.exe will automatically extract the file downloaded file.

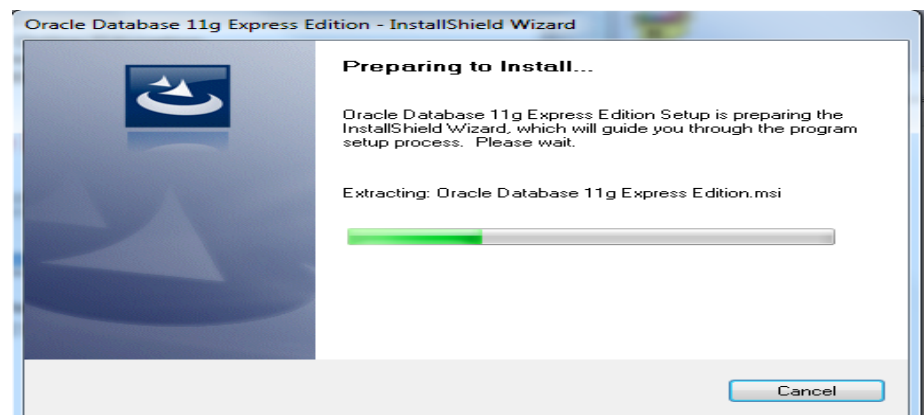


..	File folder			
DISK1	File folder			8/29/2011 1:08 ...
response	File folder			8/29/2011 1:08 ...
upgrade	File folder			8/29/2011 1:08 ...
setup.exe	Application	327,837,243	327,333,721	8/27/2011 11:2... A40B1A8D

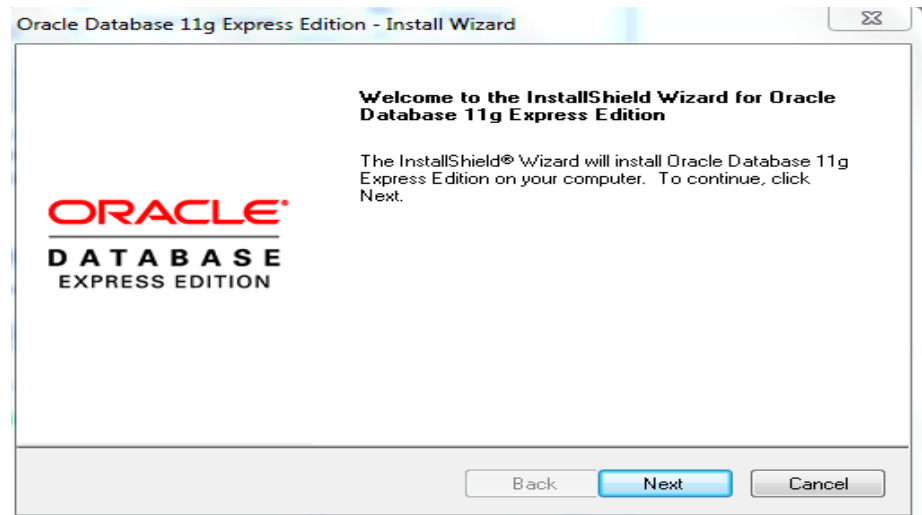


Step 7:

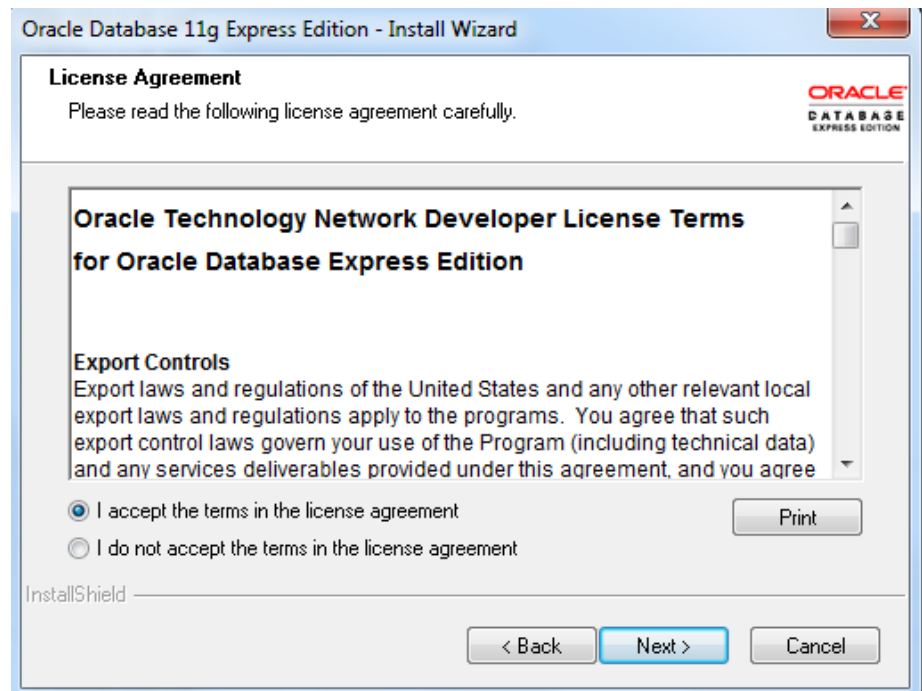
- Wait the installation wizard to finish extracting the Oracle Database 11g Express Edition



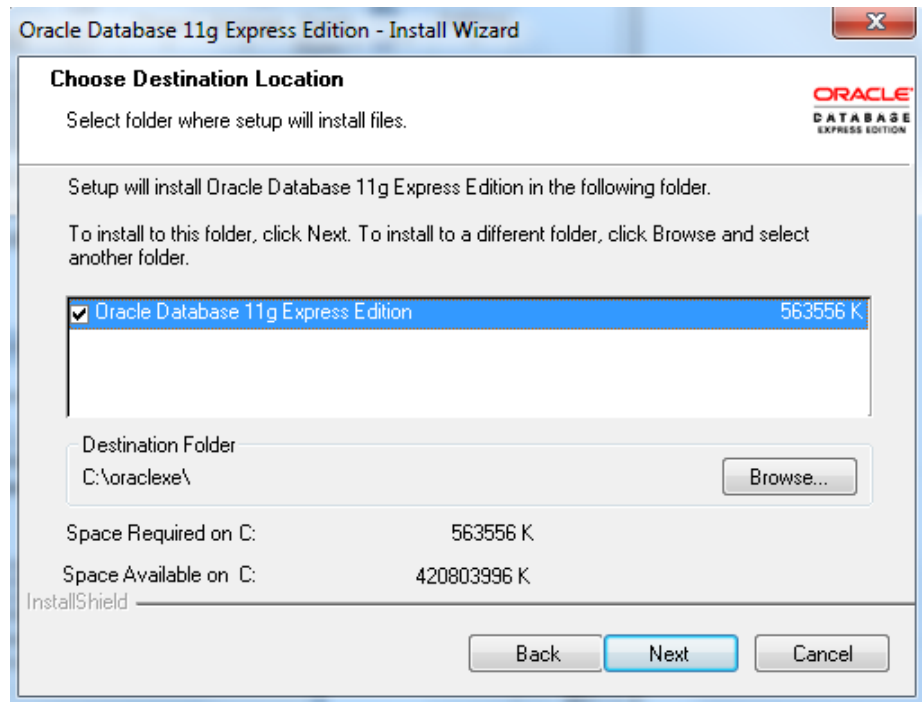
- Once done click Next



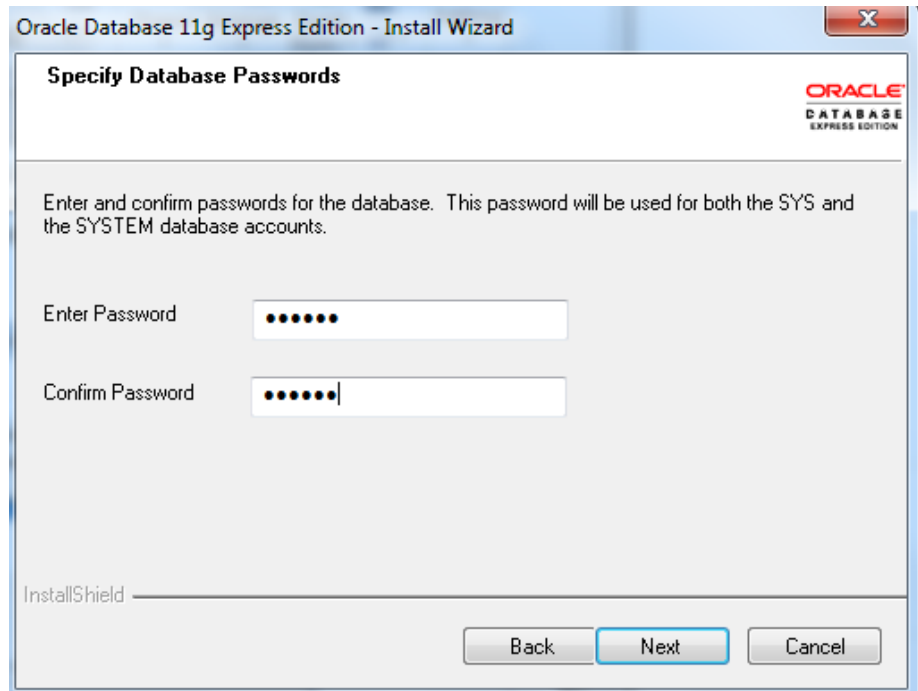
- Accept the license agreement



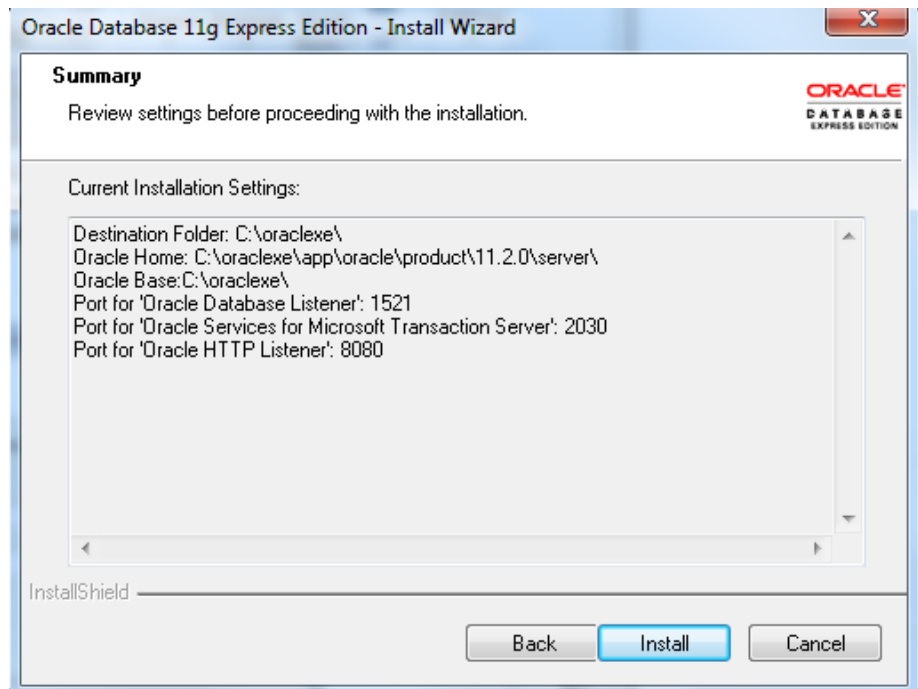
- Choose location where to install the software, or you may use the default drive.



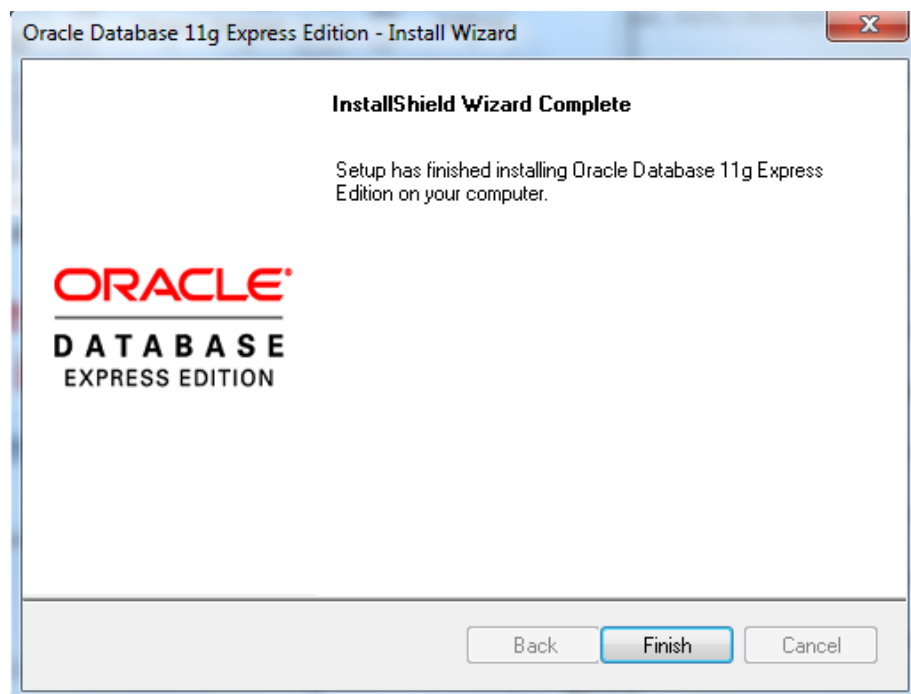
- Set your global password: suggested is **oracle**
Note: for uniformity students are required to follow the suggested username and password in order to follow on the succeeding examples.



- Wait the setting to check all the required setting environment



- Click Finish



Note:

1. After clicking the finish button, locate the Oracle 11g Express edition Folder found on the start menu of your Operating system.
2. Then click the folder, click the PL/SQL Command Line.
3. When the CMD is open try to log-in using the username and password set during installation.
4. Type in Connect then click enter
5. Then type the password: oracle (note typing the password is hidden on the screen)

You must have the CONNECTED message. This means you successfully log-in in Oracle using the PL/SQL command line.

Lesson Summary:

Before preceding with the next Chapters the student should finished the following:

- Create Oracle Account – www.oracle.com
- Successfully Install Oracle Database 11g Express Edition
- Able to establish as user Connection at isqlplus using:

CONNECT

USERNAME: **SYSTEM** (Global Connection to Oracle)

PASSWORD: **oracle** (password inputted by the student during installation)

Glossary



- **NLS_LANG:** Optional environment variable that controls language, territory, and client character set settings
- **ORACLE_BASE:** Base of the Oracle directory structure. Recommended to set this before installation.
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- **ORACLE_SID:** Not required before installation, but useful afterwards for ease of interaction with a particular instance

References



Textbook:

- Oracle Database 11g 2nd Edition K Gopalakrishnan (2012)

References:

- Carlos, Peter (2009). Database Systems
- Connolly, Thomas & Begg, Carolyn (2010). Database Systems : A practical approach to design, implementation and management
- Sciore, Edward (2009). Database Design and Implementation
- Bulusu, Lakshman (2008). Oracle PL/SQL : Expert Techniques for Developers and Database Administrators
- Loshin, David (2008). Master Data Management

Other Suggested Readings (e.g. periodicals, articles, websites, IT applications/software, etc.):

- www.oracle.com
- www.apex.oracle.com
- SQL Tutorial. In ws3schools, Retrieved from <http://www.w3schools.com/sql/default.asp>

- SQL. In Encyclopedia Britannica, Retrieved from <http://www.britannica.com/EBchecked/topic/569684/SQL>
- Database Administration. In Encyclopedia.com, Retrieved from http://www.encyclopedia.com/topic/Database_administration.aspx
- SQL. In Encyclopedia.com, Retrieved from <http://www.encyclopedia.com/topic/SQL.aspx> Learning Icons