This week we will cover Chapter 1 that gives an overview of database concepts. You should already have your textbook, install the required software. Also you need to get used to Blackboard Learn and how to use it for submitting your assignments. All the assignments will be due 6 pm before the next class.

SLO’s addressed:
- Retrieve data from more than one table using various join operations; perform self joins, set operations, nested queries, and subqueries.
- Use Data Definition Language (DDL) commands to manage tables, views, sequences, synonyms, and indexes.
- Use Data Manipulation Language (DML) commands to manipulate rows or columns.

Notes:
- Before you complete each of the following exercises, print this page out and use it to keep notes about your progress.
- Hands-On Assignments must be submitted before you leave the class on the day the chapter is covered. The file name should be in the following format: LastnameFirstname_Ch01_InClass. File extension should be .doc (for Office 2003) or .docx (For office 2007 or 2010). Replace LastnameFirstname with your own last and first name respectively.
- Project assignments are due before the next class. The file name should be in the following format: LastnameFirstname_Ch01_Proj. File extension should be .doc or .docx.
- Please precede each of the answers with the text of the question, in a different color.
- You can use the SQL command line or the Web browser version depending on the requirement of the questions and on your preference.
- For all parts, you need to submit the SQL statements & screen shots showing the result of execution, and contents of tables after executing the statements.
- You can use “ALT/Print Screen” key combination to take screen shots of the result of executing the SQL statements.

This week, you are expected to do the following:

Part I: Housekeeping
- Most of the assignment will be submitted as Word document format or text format. You need to have both Microsoft Office 2010 (or 2007) and notepad installed on your computer or any computer that you are using.
- Although the book is about Oracle 11g, iSQL* Plus, that you access through the server, is only available for Oracle 10g. For SQL there are no differences between the two versions.
- You will use Oracle SQL starting the second week. Make sure that you either have access to the server, by getting a user-name and password from me. It would be better though that you install at least Oracle 10g Express Edition on the computer you are using.
- If you would like to install Oracle Enterprise edition, be very careful when you install it. It is very difficult to uninstall it and it might mess up your settings in the registry. Before you install Oracle,
**keep a copy of all your important documents.** Follow the Video presentation instructions that in the links given below:

- [Oracle10g Express](#)
- [Oracle10g Enterprise Edition](#)

- Make sure that you write your **Blackboard user ID and password** in some safe place so that you don’t lose it. You will need it, especially when you come to take the midterm and final exam. I will not be able to help you then, since I do not have access to your passwords. Click on the link here to check the instructions on how to determine your Blackboard ID.

- Go to the [Online Class Tutorials](#) webpage and read all the steps to taking online courses.

- To login to the class, go to the OCC Online Central at [https://www.orangecoastcollege.edu/myocc](https://www.orangecoastcollege.edu/myocc) and click on the icon at the upper-left with the text “Login To MyOCC”.

- From the Mail link in your blackboard class environment, send me a message during the first week of class using the **Blackboard mail system** (not your regular external email). In that message, please let me know your external *e-mail address and phone number* for emergency contact. If you don’t have an external email address, then get one with Google, Hotmail, Netscape, or Yahoo.

- From the Discussions link in your blackboard class environment, post a message in the **Introductions section**. Items posted in Discussions are visible to everyone in the class. Please tell us a little about yourself by giving at least the following information:
  - Your **name** (including a nickname if you prefer).
  - What **year** you began at OCC and your **major** or educational interest.
  - Where do you **work** and what you do (if you are employed)?
  - Why did you choose to take this class?
  - Do you like the online version of the class or do you prefer to have it on-campus?
  - How did you learn about this class?
  - What are your hobbies, if any?

**Part II: Chapter 1 In-Class Assignment**

- Submit the answers for the In-Class, Hands-On, Assignment as an **attachment** through the Assignment link in Blackboard (in Word document format). The file name should be in the following format: 
  
  `LastnameFirstName_Ch01_InClass.docx`

**For questions 1 through 5, refer to table structures in Fig. 1-5 that is reproduced here, and the table listings in Appendix A**

1. Which tables and fields would you access to determine which books titles have been purchased by a customer and when the order was shipped?
2. How would you determine which orders have not yet been shipped to the customer?
3. If management needed to determine which book category generated the most sales in April 2009, which tables and fields would they consult to derive this information?
4. Explain how would you determine how much profit was generated from orders received in April 2009?
5. If a customer inquired about a book written in 2003 by an author named Thompson, which access path (tables and fields) would you need to follow to find the list of books meeting the customer’s request?

**Notes:**

- In assignment 6-10, create a simple E-R Model depicting entities & relationship lines for each of the data scenarios.

  **Note:** You can use Word’s drawing capabilities, or any other software. The final drawing should be embedded in a Word document.
6. A college needs to track placement test scores for all incoming students. Each student may take a variety of tests, including English and Math. Some students will not be required to take the placement tests due to previous course work.

7. Every employee in a company is assigned to one department. Every department can contain many employees.

8. A movie megaplex needs to collect and analyze movie attendance data. The company maintains 16 theaters in a single location. Each movie offered may be shown in one or more of the available theaters and is typically scheduled three to six showings in a day. The movies are rotated through the theaters to ensure that each is shown in one of the stadium-seating theaters at least once.

9. An online retailer of coffee beans maintains a long list of unique coffee flavors. The company purchases beans from a number of suppliers; each specific flavor of coffee is purchased from only a single supplier. Many of the customers are repeat purchasers and typically order at least five flavors of beans on each order.

10. Data for an information technology conference needs to be collected. The conference has a variety of sessions scheduled over a two day period. All attendees must register for the sessions they plan to attend. Some speakers are only presenting only one session, whereas others are handling multiple sessions. Each session has only one speaker.

Remember that the deadline for all the assignments will be on Tuesdays at 5:55 pm before the class starts. No late assignments will be accepted. Please do not wait until the last minute to submit your assignments, in case anything might go wrong.
Part III: Accumulative Term Project Assignment:

Notes:
- This part of the assignment will be graded & collected weekly.
- The file name should be in the format: LastnameFirstname_Ch01_Proj.docx

The memo in the following page is received by your company.

1. Based on the memo, create an initial database design (ER model) for the City Jail that indicates entities, attributes, primary keys, and relationships. In developing your design, consider the columns needed to build relationships between entities. Use only the entities identified in the memo to develop the E-R model.
2. Create a list of additional entities or attributes not identified in the memo that might be applicable to a crime-tracking database.

Keep in mind that the memo is written from an end user perspective—not by a DB developer!

See you next week!

Martha
Memo

To: Database Consultant  
From: City Jail Information Director  
Subject: Establishing a Crime-Tracking database System

It was a pleasure meeting with you last week. I look forward to working with your company to create a much-needed crime-tracking system. As you requested, our project group has outlined the crime-tracking data needs that we anticipate. Our goal is to simplify the process of tracking criminal activity and provide a more efficient mechanism for data analysis and reporting. Please review the data needs outlined below and contact me with any questions.

- **Criminals:** name, address, phone #, violent offender status (yes/no), probation status (yes/no), and aliases.
- **Crimes:** classification (felony, misdemeanor, other), date charged, appeal status (closed, can appeal, in appeal), hearing date, appeal cutoff date (always 60 days after the hearing date), arresting officers (can be more than one officer), crime code (such as burglary, forgery, assault, hundreds of codes exist), amount of fine, court fee, amount paid, payment due date, and charge status (pending, guilty, not guilty)
- **Sentencing:** start date, end date, number of violations (such as not reporting to probation officer), and type of sentence (jail period, house arrest, probation)
- **Appeals:** appeal filing date, appeal hearing date, status (pending, approved, and disapproved)  
  Note: Each crime case can be appealed up to 3 times
- **Police officers:** name, precinct, badge number, phone contact, status (active/inactive)

Additional Notes:

- A single crime can involve multiple crime charges, such as burglary and assault.
- Criminals can be assigned multiple sentences. For example, a criminal might be required to serve a jail sentence followed by a period of probation.