COP4710/5716 **Data Modeling Team Project** **Fall 2014**
(130 points)

Phase 2 - Due on Wednesday 12/03/14 by the beginning of class for all the teams

Following submission of Phase 1, each team needs to work together on any recommended improvements and on completion of the design and implementation required for Phase 2. The teams are encouraged to set up a meeting with the instructor/manager/stakeholder to discuss their Phase 1 documentation and design as needed.

The completed Phase 1 could be considered as the starting point of Phase 2. As the initial part of Phase 2, apply any corrections, enhancements or higher normalization to the developing data model from Phase 1 and then continue the project work on the database tables, software implementation, and user documentation. The enhanced and modified Phase 2 data model design from Phase 1, as reflected in Part 1, Part 2, Part 3-1 and Part 3-2 below, needs to be applied to the team's software development.

The Oracle teams accounts on Olympia have been named as TEAMA1DM1F14, TEAMA2DM1F14, TEAMA3DM1F14 and TEAMA4DM1F14 for the early Data Modeling class and TEAMA1DM2F14, TEAMA2DM2F14, TEAMA3DM2F14, TEAMA4DM2F14, TEAMA5DM2F14, and TEAMA6DM2F14 for the late Data Modeling class. The passwords will be emailed to the teams on Tuesday 11/18. Logon to your team account and let the instructor know as soon as possible if there are any problems with the logon.

The teams need to manage the project time and arrange their schedules for the Thanksgiving break. During the break, the university will be closed and the labs will not be accessible for meetings or for using some of the software, such as ERwin and Windows SQLPlus. The remote access to Oracle and the Osprey system should be available for use.

The create tables for Phase 2 need to include necessary records, such as courses, initial faculty, and students, for testing the software.

Phase 2 should have the following parts.

Part 1
Description of assigned tasks or activity logs for each team member (using a table with Date, Name, Description, ...)

Part 2
Project Scope and Requirement Documentation that discuss the team's decisions about the following areas.
a. List of the courses (CS, IS or IT) that the team plans to include in the design
b. Student information or menu option
c. Faculty information or menu option
d. Reporting information and menu options
e. Any administrator or administrative information or menu option
If needed, Part 2 may include a separate area with a title for enhancements made after the Phase 1 submission.

Part 3 - 1
Original design for the logical and physical data models using ERwin from Phase 1
a. List of logical assumptions
b. List of physical assumptions
c. ERwin logical and physical diagrams

Part 3 - 2
Any changes from Phase 1, such as modifications, enhancements, or higher normalization, applied to the logical and physical data models using ERwin for Phase 2
a. List of logical assumptions (new)
b. List of physical assumptions (new)
c. ERwin logical and physical diagrams (complete new diagram)

Part 4: Implementation of the Design

a. List of all the CREATE commands for Part 3-2. The CREATE commands may contain primary key(s) at DDL.

b. List of all the INSERT commands to the tables in Part 3-2 with the table names.

c. List of all the contents of the tables in the course scheduling database system (courses, faculty, etc.).

d. Show the FD diagrams with the primary keys underlined for all the tables or relations.

e. Name the highest normal form for each table in your database using the FD diagrams in part 4.d with written reasoning to support your decision(s). Underline primary (or any other) keys in the diagrams.

Part 5: Queries

In Part 5, using the designed database tables, list the DML queries that you use in the Java program for each of the following areas (if applicable) with a proper title.

a. Student information or menu option
b. Faculty information or menu option
c. Reporting information and menu options
d. Any administrator or administrative information or menu option

Part 6: Java Program and Documentation
The team's Java program should support sequential and selective menu (similar to the example displayed in class) for each area of a, b, c, and d in Part 5.

The software documentation should be organized as follows.
a. How to prepare (step by step) and unshar your software and run. Use the following turnin command to submit the program.

turnin <filename> abbassi.cop4710dm2projectfall14

Documentation on how to use the following options.
b. Student information or menu option
c. Faculty information or menu option
d. Reporting information and menu options
e. Any administrator or administrative information or menu option

Part 7: Presentation Requirements
The projects will be presented on Wednesday, December 3 and Monday, December 8. Each team will have 20 minutes for a PowerPoint presentation and questions/answers. Allow 15 minutes for presentation and 5 minutes

for questions/answers. Each team should determine the member participation to best professionally present the team's database ideas. The stakeholder/manager (your instructor) and your classmates will evaluate each team's design and implementation of the sample database to help determine which team should be considered for the best design and software work.

A computer and projector will be available for the presentation. Each team needs to make sure the classroom computer will work correctly during the presentation. The classroom machine should be checked on Monday, December 1.

Part 8: Required Materials to be Submitted to Blackboard and in a Flat Folder

The final project submission should include printouts in flat folder (not binder) and files on Blackboard and/or CD. Please note a copy of the working java program files should be submitted using turnin on osprey.unf.edu. The team's folder containing the following materials should be submitted to the instructor before or at the beginning of class on Wednesday, December 3. This project should be typewritten with well-defined reasoning for your design and implementation in Phase 2. The order of the materials in the folder should follow the sequence shown below.

I. Printouts in the Flat Folder

1. Name of the team, course, class time, and team members
2. Part 1: Description of each team member's responsibilities in Phase 1 of the database development, including requirement analysis, design for logical as well as physical.

   As provided in a draft copy and discussed in class, a separate **confidential evaluation** of group member participation should be submitted to your personal group account before midnight (11:59 pm) on Monday, December 8. The confidential evaluation form will be provided to the class on Blackboard prior to the project due date. The confidential evaluation will be used to determine each team member's level of participation in the group and his/her final project grade.
3. Part 2 (a - e): Description of your project scope with requirements and assumptions including any reasoning for design of the database and software.
4. Part 3-1 (a - c): List of logical and physical assumptions with logical and physical design diagrams

Note: The printouts for item numbers 1 to 4 is the same as the Word document or pdf file Phase1doc that was submitted for Phase 1.

Phase 2

5. Description of each team member's responsibilities in Phase 2 (or all phases) of the database and software development, including requirement analysis, design, implementation, queries, documentation, presentation, etc.
6. Presentation outline for the project (PowerPoint)
7. Part 3-2: Any changes from Phase 1, such as modifications, enhancements, or higher normalization, applied to the logical and physical data models using ERwin for Phase 2.

a. List of logical assumptions (new)
b. List of physical assumptions (new)
c. ERwin logical and physical diagrams (complete new diagram)

8. Part 4 (a - e): List of implementation and design components in the following order.

a. List of all the CREATE commands for Part 3-2. The CREATE commands may contain primary key(s) at DDL.
b. List of all the INSERT commands to the tables in Part 3-2 with the table names.
c. List of all the contents of the tables in the course scheduling database system (courses, faculty, etc.).
d. List of the FD diagrams with the primary keys underlined for all the tables or relations.
e. List of the name of the highest normal form for each table in your database using the FD diagrams in Part 4.d with written reasoning to support your decision(s). Underline primary (or any other) keys in the diagrams.

9. Part 5 (a - d): List of the DML queries that are used in the Java program for each of the following areas (if applicable) with a proper title.
a. Student information or menu option
b. Faculty information or menu option
c. Reporting information and menu options
d. Any administrator or administrative information or menu option
10. Part 6 (a - e): Java program documentation using a list of routines from the program with a brief description.
a. How to prepare (step by step) and unshar your submitted software on osprey.unf.edu and run.
List of documentation on how to use the following options.
b. Student information or menu option
c. Faculty information or menu option
d. Reporting information and menu options
e. Any administrator or administrative information or menu option
11. Any other supporting material for the project and/or team work
12. List of applicable user names and password(s) for student menu, faculty menu, administrator or reporting menu.

II. Blackboard and/or CD Submission

Submit the following files to the Team Documentation group account on Blackboard or prepare a CD as described below.

Blackboard

For Phase 2, submit four files to the Team Documentation group account on Blackboard.

- The first file should include Part 1 for Phase 2 (team log file), Parts 3-2, 4, 5, and 6 with appropriate headings as one word or pdf file document named as **Phase2doc**.

- The second file should include Part 3-2.c as ERwin .er1 (3 or 3.5) for the enhanced logical and physical design of your database with the name **Phase2design.er1.**

- The third is a zipped file for Java programs as documentation for the program with the name **Phase2Program**. Note that a working file on osprey.unf.edu should be submitted using provided turnin command in Part 6 before the deadline.

- The last file should be the team's PowerPoint presentation file with the name **presentation**.

CD Containing the Following Files from the Folder

If you are submitting your documentation files as a CD, please label the CD properly and check the CD for virus on third floor lab. The CD should contain directories for each Part 1, 2, 3, 4 ,5, 6, java program files (program) and PowerPoint presentation file.

III. Please make a copy of the submitted folder for your records.

The project folder with its contents will not be returned.