Assignment #3 –
ER to Relational Schema & PHPMyAdmin
Due: Monday, 07/16/12, 11:59pm

1. (15 pts) Map the AIRLINE ER diagram from Assignment #2 into a relational schema. Specify data types for the attributes and all integrity constraints, including primary keys, secondary keys, and foreign keys.

2. (10 pts.) You will be graded on being able to use the PHPMyAdmin web database. You will import .sql files/scripts, create/populate your database with tables, and save .sql files/scripts.

   First, log into ONID: http://onid.oregonstate.edu/. Then click on the Web Database link on the left side of the page. Navigate to your database by clicking on the link and entering your database username and password provided by ONID. Once logged in, click your database link on the left side.

   First, you will practice importing sql scripts into a database. The scripts you will be importing are located at:
   http://web.engr.oregonstate.edu/~ahmed/assignments/create_s_p_sp.sql

   http://web.engr.oregonstate.edu/~ahmed/assignments/insert_suppliers.sql

   http://web.engr.oregonstate.edu/~ahmed/assignments/insert_parts.sql

   http://web.engr.oregonstate.edu/~ahmed/assignments/insert_shipments.sql

   You will verify the structure of each table created and populated using these scripts, perform screen captures, and turn in the captured images to receive full credit.

3. (25 pts.) Using the COMPANY database we've been discussing in class, take the ER diagram and conceptual schema and write/generate a .sql script that creates the tables capturing all the information from the design. **NOTE: Make sure you use the InnoDB storage engine, instead of the default MyISAM. In addition, write/generate a .sql script (or set of scripts) that populates the tables with the relational state below.

   You can manually write the .sql scripts or generate the scripts using PHPMyAdmin (or a different SQL interface). You will be graded on having a .sql script for creating tables and populating the tables.

EMPLOYEE

Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno
John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000	888665555	5
Alicia	J	Zelaya	999887777	1968-01-19	3321 Castle, Spring, TX	F	25000	987654321	4
Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555	4
Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555	5
Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4
James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	NULL	1

DEPARTMENT

Dname	Dnumber	Mgr_ssn	Mgr_start_date
Research	5	333445555	1988-05-22
Administration	4	987654321	1995-01-01
Headquarters	1	888665555	1981-06-19

DEPT_LOCATIONS

Dnumber	Dlocation
1	Houston
4	Stafford
5	Bellaire
5	Sugarland
5	Houston

WORKS_ON

Essn	Pno	Hours
123456789	1	32.5
123456789	2	7.5
666884444	3	40.0
453453453	1	20.0
453453453	2	20.0
333445555	2	10.0
333445555	3	10.0
333445555	10	10.0
333445555	20	10.0
999887777	30	30.0
999887777	10	10.0
987987987	10	35.0
987987987	30	5.0
987654321	30	20.0
987654321	20	15.0
888665555	20	NULL

PROJECT

Pname	Pnumber	Plocation	Dnum
ProductX	1	Bellaire	5
ProductY	2	Sugarland	5
ProductZ	3	Houston	5
Computerization	10	Stafford	4
Reorganization	20	Houston	1
Newbenefits	30	Stafford	4

DEPENDENT

Essn	Dependent_name	Sex	Bdate	Relationship
333445555	Alice	F	1986-04-05	Daughter
333445555	Theodore	M	1983-10-25	Son
333445555	Joy	F	1958-05-03	Spouse
987654321	Abner	M	1942-02-28	Spouse
123456789	Michael	M	1988-01-04	Son
123456789	Alice	F	1988-12-30	Daughter
123456789	Elizabeth	F	1967-05-05	Spouse

4. (50 pts) Propose a real-world database application for your term project, which involves at least 3-4 different relation schema/table with each table having at least four properties. **You may work in teams of two or individually.** Please specify which of these options you are choosing in your proposal, and if you choose to work as a team, then please submit your both team member's name.

Please provide a list of requirements for the operation/functionality of the database, the ER diagram modeling you're your proposed database project, and the corresponding relational schema.

For instance, if your application is to keep track of the classes that you have taken, you could use the following schemas/tables: classes, instructors, departments, and buildings. A class table can have the course number, instructor's name, location, and your grade from the class. You also need to describe basic functionalities in the application such as adding or removing a class, changing the location of a building, or selecting all the courses that you have taken since Fall 2010.

Your score for this problem will be based on the requirements specifications, relation schemas, and ER diagram, as well as the validity and potential uses of the application. If the scope of the application is determined to be rather narrow, then you will be asked to broaden the scope, and if the scope is too broad, then you might be asked to narrow the scope:)