COP 4710-RVC
Spring 2018
Project Specification

Due Date: Feb. 13th (Tuesday), 2018 at 2:00 PM.

Project Description:

You will need to log in the PostgreSQL server by using pgAdmin and create a simple university database. PgAdmin is already installed on all the PCs in the under-graduate lab (ECS 241). However, you can download PgAdmin at (http://www.pgadmin.org/).

The PostgreSQL server is hosted on **class-db.cs.fiu.edu.** The database and username would be **spr18_<username> (Please replace <username> with your fiu account, for instance spr18_htian005).** The password is your **panther ID.** Please keep the default **port** number as **5432**.

If you want to connect to the database server off-campus, you may need to set up the **SSH Tunnels(3rd tab)** when you creating a new connection.

Tunnel host: **ocelot.aul.fiu.edu**

Username: **[your fiu account]**

Password: <**your first name initial**>+<**your panther id**>+<**your last name initial**> (for example h1234567t)(initial password)

If you cannot log in with the initial password, you can try your fiu account password.

You can refer to the SSH setting information at CIS website as follows:

http://www.cis.fiu.edu/support/

Task 1. Create a database using PostgreSQL

Consider a small university database with the following data.

Students:

student_id (PK)	*name (Not Null)*	*date_of_birth*	*address*	*email (Unique)*	*level (Not Null)*
1	Alice Wood	06/15/1993	5637 NW 41 ST	awood001@cis.fiu.edu	ugrad
2	Henrie Cage	04/24/1994	1443 NW 7 ST	hcage001@cis.fiu.edu	ugrad
3	John Smith	01/09/1995	731 NW 87 AVE	jsmit005@cis.fiu.edu	ugrad
4	Franklin Wong	12/08/1995	638 NW 104 AV	fwong001@cis.fiu.edu	ugrad
5	Jennifer King	11/08/1998	3500 W Flagler ST	jking001@cis.fiu.edu	ugrad
6	Richard Young	12/05/1995	778 SW 87 AVE	ryoun001@cis.fiu.edu	grad

7	Robert Poore	08/22/1996	101 SW 8 ST	rpoor001@cis.fiu.edu	grad
8	Joyce English	07/31/1999	8421 SW 109 AV	jengl001@cis.fiu.edu	grad

Faculties:

faculty_id (PK)	*name (Not Null)*	*date_of_birth*	*address*	*email (Unique)*	*level (Not Null)*
1	George Blunt	08/13/1979	11345 SW 56 ST	bluns@cis.fiu.edu	Instructor
2	Thomas Taylor	05/24/1988	4467 NW 8 ST	taylt@cis.fiu.edu	Instructor
3	Daniel Evans	10/07/1979	8754 SW 134 TER	evand@cis.fiu.edu	Professor
4	Ramesh Nara	09/15/1982	5631 SW 72 ST	narar@cis.fiu.edu	Professor
5	Steven Garden	09/18/1975	1277 SW 87 AVE	gards@cis.fiu.edu	Associate Professor
6	William Parre	11/22/1976	1570 NE 127 AVE	parrw@cis.fiu.edu	Associate Professor

Courses:

course_id (PK)	*description (Not Null)*	*level (Not Null)*	*instructor (FK)*
1	Fundamentals of Computer Sys.	ugrad	1
2	Software Engineering I	ugrad	2
3	Computer Programming I	ugrad	2
4	Introduction to Algorithms	grad	4
5	Operating Systems	grad	5
6	Software Design	grad	6
7	Advanced Database	grad	5

Enroll:

student_id (FK/PK)	*course_id (FK/PK)*	*grade*
1	1	A
1	2	B
1	3	A
3	1	F
3	3	C

4	3	NA
5	1	B
6	6	C
6	7	B
7	7	B

Requirements:

Query1. Create the above-mentioned four tables with proper constraints and make sure both primary keys and foreign keys are specified.

Note:

(1) If the constraints might be modified in the future, then you should set it as table constraints while creating the tables

(2) You will need to set up the foreign keys by using column constraints if the referred column is not a primary key.

Query2. Insert the data for each table.

Task 2. Manage a database using PostgreSQL

Query1. Insert four more records to the table **Enroll** by using one query.

student_id (FK/PK)	***course_id (FK/PK)***	***grade***
2	1	D
2	2	NA
2	3	F
8	5	A
8	7	A

Query2. Delete the records from the table ***Enroll*** where grade is NA.

Query3. Add one column called "semester" to the table ***Courses***.

Query4. Update the ***Enroll*** table and set the grade to "C" for "Henrie Cage" in class "Computer Programming I".

Query5. Add "ON DELETE RESTRICT" references constraint to ***instructor*** column in the ***Courses*** table.

Query6. Add "NOT NULL" constraint to ***grade*** column in the ***Enroll*** table.

Query7. Export the ***Enroll*** table as Enroll.csv by using SQL command "COPY". (You need to be a root user to actually perform this action, so just provide the syntax of this query.)

Submission

For all the students, you need to put all the queries into a word document and upload it to Moodle system.