**CS331- Project Assignment**

**(Part B)**

Due: Monday Dec 2nd 2019 @ 11:59 PM

Before you start to work on this assignment requirement for the project, ***first:*** modifying the EER conceptual model that you submitted in Part A based on the feedback and update your relational schema accordingly.

Now you are ready to start

For part B of the project, you are as a team requested to implement a Java application for the chosen project idea. You will need to connect your database with Java and create a Java application. For this Assignment, you need to address all the items listed below.

*Please note*: Java GUI is not required, Console is sufficient.

1. ***Item 1: Data Preparation***
2. Load some initial data (dummy data) into the database tables that you created in Part A of the assignment, I suggest 10 rows in each table at lease. The data needs to maintain a valid state for the DB.
3. Write a loading script, use MYSQL to load your data into the table. Your data should be stored in files so that it can easily be reloaded during debugging. The data format should be designed by you.
4. ***Item 2: Java Implementation Tasks***

Please check details in the next pages

1. ***Item 3:***

* Record a video and upload it to YouTube to demonstrate your project implementation tasks as a team. The video recording has to be completed by all the team members. Please, make sure everyone is presenting his tasks.
* Fill up the progress report template.

**What to submit**

1. Updated documentation that includes your final EER model after all the changes and modifications, final relational schema and The SQL DDL statements (.sql file) for the final relational model in the right order to execute.
2. The row data loading script (.sql file)
3. The data files you used for your application testing
4. The Java source code for your application.
5. URL for the YouTube video that demonstrates your project. Please record the video as a team and make sure everyone is presenting.
6. The filled progress report template that indicates the complete list of what has been completed by each team member.

***Please Note:*** *For the application UI, I will not include complete screen shots here as I want each group to think on how they want to present their application. Main screen UI Sample is provided as well as some others*

Figure 1: Main Menu interface option

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Welcome to the

International Student Information System

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1. Current Students

2. Graduated Students

3. International Rules & Laws

4. Updates

5. Quit

Type in your option: 4

Enter User ID: raj

Enter password: raj

Your team will be responsible to complete the implementation and demonstrate the application behavior for the following tasks/functionalities in the application

**Task 1:**

Option 4 is used for database administrative functions. When the user choose ***option 4 (Updates)*** from the Main Menu interface “Figure 1’: The user should be prompt to enter the admin login information user name and password. The application verifies the information and if correct that means this person is an admin and he/she is authorized to do updates on the database. If user name or password is incorrect the user will be prompt to try again with valid admin login info or quit to the main screen.

Once the user successfully login it will show a new UI with the options below

1. **Option A:** **Insert new information** which includes 4 new sub options

* Add new student information
* Add new course information
* Add new department information
* Register a student in a course

1. **Option B:** **Delete some information** which includes 4 new sub options

* Delete specific student information
* Delete specific course information
* Delete department information
* Withdraw a student from a course

1. **Option C**: **Update current information** which includes 4 new sub options

* Update specific student information
* Update specific course information
* Update department information
* Update a student Course registration

For this task the team is responsible to implement and demonstrate the functionality for **only Option A (Insert new information**) and all **the 4 sub options**. The video recording should show how the application can be used to insert one example of each sub option under option A.

Also, In the case of register student in a course, after completing the registration a confirmation message will show and it should include how many credits the student has been registered in so far. In case that this number is fewer than 12 credit hours for an undergraduate student, display a message notifying the user that the student is enrolled for fewer than the required number of credits.

**Task 2:**

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Welcome to the

International Student Information System

**1.** **Current Students**

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1. Academic information

2. Contact information

3. visa status

4. Quit

Type in your option:

Figure 2: Current Students option interface

When the user choose ***option 1 (Current Students)*** from the Main Menu interface “Figure 1’. It will show a new UI similar to Figure 2.

Implement and demonstrate the application behavior for the following options in **Figure 2**

1. When the user chooses ***option 1(Academic information)***: It should take you to new UI interface that gives the option to retrieve the following
2. Option A (**Educational history for a student**): This option should prompt for the social security number or student ID of a student and returns that student’s educational history (the name of the schools attended, degree earned, GPA, etc.).
3. Option B (**Collage Students information**): This option should prompt for the name of a college and returns a list with the social security numbers and names of the undergraduate students enrolled in this college. If your system is designed for only one college then show the information for a department.
4. When the user choose ***option 2 (Contact information)*** from the main interface it should take you to a new UI interface that gives the option to retrieve the following
5. Option A (**All student contact details**): It should return the list of the social security number, name, address, major department, and college for all the undergraduate students.
6. Option B (**Student from a Country**): It should prompt for the name of a country and returns a list consisting of the social security numbers, names and addresses of the undergraduate students from this country
7. Option C (**Working students contact information**): It list the social security numbers, names, and addresses of undergraduate students who are currently working, and for each student, report the number of working hours per week
8. When the user chooses ***option 3 (Visa Status)*** from the main interface it should take you to new UI interface that gives the option to retrieve the following
9. Option A (**Visa Status Report**): It should Report the following information about the visa status of each international student: visa type and staring date and expiration date of the visa. Group this information by student social security number and name.
10. Option B (**F-1 visa**): List the social security numbers, names, and nationalities of the undergraduate students holding a F-1 visa.
11. When the user choose ***option 4*** (***Quit****)*: It should return the application to the main interface in figure 1

**Task 3:**

When the user choose ***option 3 (International Rules & Laws)*** from the Main Menu interface “Figure 1’. It should allow the user to list through the regulations and laws related to international students with a brief description of the regulation/law