INST327 - Database Design and Modeling

Assignment 6 Questions

Be sure to complete all the 3 questions.

Note: You will use the ***ischool*** database for this assignment. See the Q2_Partial_Code.sql & Q3_Partial_Code.sql files on Canvas for partially completed codes that you need for Questions 2 & 3. Download these files before you begin working on the questions.

Note: You will submit 3 .sql files for this assignment.

Question 1. (33 points) – Views

Create a view student_enrollment_details to see enrollment details of students for the Fall 2021 Term. Don't forget to write and test your SELECT query before using it to create the view. Filter the data to see details of classes which are not Online. (***Hint****: Use meeting_days column to filter out the courses which are not Online)*

Note: Once you've created the view you can easily run it with the following code:

```
SELECT * FROM student_enrollment_details;
```

Your result set should look like this, including results, sort, column headers, and all formatting aspects:

name	term	no_of_courses_enrolled	credits_taken	courses_with_prerequisites
Abby Garcia	Fall 2021	2	6	0
Aiko Ito	Fall 2021	4	10	3
Albrecht Ambrogetti	Fall 2021	2	6	0
Antonie Avramovsky	Fall 2021	2	6	0
Ariella Basindale	Fall 2021	2	6	0
Carley Argue	Fall 2021	4	10	3
Carolynn Matityahu	Fall 2021	4	10	3
Derrick Bell	Fall 2021	4	10	3
Dix Harse	Fall 2021	2	6	0
Don Lee	Fall 2021	2	6	0
Dustin Nguyen	Fall 2021	4	10	3
Edward Brooke	Fall 2021	3	9	3
Ellene Van Baaren	Fall 2021	3	9	3
Fernando Gaviria	Fall 2021	2	6	0
Francis Slaughter	Fall 2021	3	9	3

(24 rows returned)

This is a partial view of the results. The final row in the results should be:

Zoe Martin Fall 2021 4 10 3

(See question 2 on the following page.)

Question 2. (33 points) – Function

You may work inside the Q2_Partial_Code.sql script for this question and use it for submission on Canvas. Please remove the comments and rename the file when you have completed your work.

Create a function called **get_person_address**. This function expects two arguments that represents the first name and last name of a person that is present in the **people** table. The function will return the address of the person (type VARCHAR(100)) – Example: '4590 Dorton Plaza, Washington, DC, 20018, United States', '68 Westend Circle, Annapolis, MD, 21401, United States'

The Q2_Partial_Code.sql script includes a partially commented function called **get_person_address**. Review the code, including the comments, to understand the requirements of the function. You will complete the function using the comments as a guide.

Test your function with the code provided at the bottom of the script. If you call the get_person_address function for students - **Kamala Khan** & **Jessica Jones**, this is what the result tables should look like:

get_person_address('Kamala','Khan')
087 North Crossing, Lekas, [Not Available], 5001, Albania

get_person_address('Jessica','Jones')
262 Knutson Crossing, Hyattsville, MD, 20781, United States

(***Hint:*** *When you concatenate any string with a NULL value, it will result in NULL. Therefore, use the* ***COALESCE*** *function on each column first to replace it with '[Not Available]' if it is NULL & then concatenate the columns.)*

(See question 3 on the following page.)

Question 3. (34 points) – Trigger

You may work inside the Q3_Partial_Code.sql script for this question and use it for submission on Canvas. Please remove the comments and rename the file when you have completed your work.

To prepare for this question, first create 2 new tables **enrollment_records (**Insert all the data from **student_enrollment_details view** created in Question 1, with the *Name* column as the Primary Key**)** & **new_student_enrollment_records**. The code for creating both the tables is provided in Q3_Partial_Code.sql script.

Develop a trigger that will execute when a new record is added into the **enrollment_records** table and will add a new row to the **new_student_enrollment_records** with the following values in each column:

1. The new student name inserted into the ***new_student_Name*** column;
2. A text message - 'You have added a new student, <Name>, who registered for <No of courses enrolled> courses this < Term> and will be taking <Credits Taken> credits.' into the ***new_student_enrollment_record_text*** column;
3. The time stamp of when the record has been inserted into the ***new_student_enrollment_record_timestamp*** column;

The Q3_Partial_Code.sql script includes a partially commented trigger called **new_student_enrollments**. Review the code, including the comments, to understand the requirements of the trigger. You will complete the trigger using the comments as a guide.

To test the trigger you have developed, use the test code provided at the bottom of the script. After inserting enrollments details of "**Alex Smith**" into the **enrollment_records** table, the **new_student_enrollment_records** table should look like the image below. NOTE: the timestamp will be different from the value shown in this image.

new_student_Name	new_student_enrollment_record_text	new_student_enrollment_record_timestamp
Alex Smith	You have added a new student, Alex Smith, who registered for 4 courses this Fall 2022 and will be taking 12 credits.	2023-04-12 01:57:59
NULL	NULL	NULL

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