CS246: Database Management Systems Lab

Lab # 07 (1 Questions, 57 Points)
Timings: 14:00 to 18:00 Hours   Pages: 2
IIT Guwahati
Submission: 18:30 Hrs, 21-Feb-2022
21 Feb 2022 (Mon)

Question 1:   (57 points)

Using `MySQL` perform the following tasks:

Task 01 (1 Mark) Create a database named *assignment07*

Task 02 (15 Marks) Write the following stored procedure or functions as appropriate (now on referred as stored program):

  1. (5 Marks) First stored program takes roll number as a parameter and should obtain the year of joining. Year should be in four digits. You must obtain the complete program logic to achieve this task.
  2. (5 Marks) Second stored program takes roll number as a parameter and should obtain program code (01: B. Tech/02: B. Des).
  3. (5 Marks) Third stored program takes roll number as a parameter and should obtain department code as given the in tables below.

The department name is embedded in the roll number as follows:

roll_number	year	program code	department code	roll number
200101001	20	01(B. Tech)	01	001
digit numbers	1, 2	3, 4	5, 6	7, 8 and 9

department code	department name	department code	department name
01	CSE	02	ECE
03	ME	04	CE
05	DD	06	BSBE
07	CL	08	EEE
21	EPH	22	CST
23	M & C		

Task 03 (1 Mark) Create a table `hss_electives` having following columns and associated constraints:

1st column	`roll_number`	Primary key
2nd column	`sname`	Cannot take NULL values
3rd column	`cid`	Cannot take NULL values
4th column	`cname`	Cannot take NULL values

Task 04 (1 Mark) Create a table `student_details` having the following columns and associated constraints:

1st column	`roll_number`	Primary key
2nd column	`sname`	Cannot take NULL values
3rd column	`joined_year`	Cannot take NULL values
4th column	`joined_program`	Cannot take NULL values
5th column	`joined_dept`	Cannot take NULL values

Task 05 (10 Marks) Create a trigger on the table `hss_electives` and after inserting each row into `hss_electives` table, performs the following:

1. Insert student `roll_number, sname, joined_year, joined_program, joined_dept` into the table `student_details`.

2. You must invoke associated stored programs for obtaining `joined_year, joined_program, joined_dept`.

Task 06 (1 Mark) You are given the file `HSS_ELECTIVE_ALLOCATION_2018_BATCH.csv`. Populate the data from this file into the table `hss_electives`. Note there should not be any WARNINGS from SQL. If warnings are observed in your output, 1 mark will not be awarded.

Task 07 (8 Marks) You are asked to create 8 separate rows of data corresponding to `hss_electives` table on your own that are ensured to result in following errors upon insertion: (write eight insert statements)

1. (2 Marks) Cannot parse the roll number to provide `joined_year` (obtain two instances of data)

2. (2 Marks) Cannot parse the roll number to provide `joined_program` (obtain two instances of data)

3. (2 Marks) Cannot parse the roll number to provide `joined_dept` (obtain two instances of data)

4. (2 Marks) Insertion into `hss_electives` table result in an error (obtain two instances of data)

Task 08 (10 Marks) Create a trigger on the table `hss_electives` and after updating each row of the `hss_electives` table, update the `student_details` to reflect the updates.

Task 09 (10 Marks) Create a trigger on the table `hss_electives` and after deleting each row of the `hss_electives` table, delete the corresponding row from the `student_details` table.

Instructions Adhere to the following

.sql file Write all the SQL statements in a text file.

File naming text file name should be [Your roll number].sql

Independent efforts You should make an <u>honest and independent</u> effort in obtaining the solution to the above problem.

Submission Procedure You should write all SQL statements in a text file named [Your roll number].sql. Upload the file in the MS assignments site.