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# CS246: Database Management Systems Lab

Lab # 07 (1 Questions, 64 Points)

Timings: 14:00 to 17:00 Hours    Pages: 2

IIT Guwahati

Submission: 20:00 Hrs, 07-Mar-2022

07-Mar-2022 (Mon)

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## Question 1: (64 points)

Using MySQL perform the following tasks:

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

**Task 02** (23 Marks) Create the following tables and load the data from the corresponding csv files

1. (1 Mark) **ett** (exam time table) having the columns

**cid** course id (or course number) (primary key)

**exam\_date** examination date

**start\_time** exam start time

**end\_time** exam end time

You are given a **exam-time-table.csv** file where the corresponding data is present

2. (1 Mark) **cc** (course credits). Column names of this table are:

**cid** course id (or course number) (primary key)

**credits** number of course credits

You are given a **course-credits.csv** file where the corresponding data is present

3. (21 = (11 + 10) Marks) **cswl** (course wise student list). The column names of the table **cswl** are:

**serial\_number** Serial number as given in the file

**cid** course id (or course number) primary key. **cid** is NOT present in this file.

Instead, **cid** is available in the file name. You should be careful in loading the data.

**roll\_number** student's roll number

**name** student's full name

**email** student's email

You are given a directory containing 11 sub-directories namely **bt**, **ce**, **ch**, **cl**, **cse**, **dd**, **eee**, **hs**, **ma**, **me** and **ph**. Each directory contains several data files. You should load these files into the table **cswl**.

You may use any external programming methods (C/ C++/ Java/ Python/ ...) to include **cid** column within each file of every sub-directory and use the modified csv files to load the **cswl** table. If this were to be the case, you are also directed to upload the corresponding program.

- (a) 11 marks for loading data corresponding to 11 directories.
- (b) 10 marks for correctly incorporating the `cid` values from each file name (in the respective sub-directories) into these data files which will allow you to load the same into the table `cws1`.
- (c) You may use data transformation program/script (which is outside the SQL) to achieve this task.
- (d) You must submit the data transformation program/script file in the submission zip file.

Note Write **Task 01** and **Task 02** in a file named `[your roll number]-load-data.sql` which should contain all SQL statements corresponding to database creation, creation of tables and loading of data into the tables.

**Task 03** Implement the following queries in MySQL

- Q1** (20 Marks) A registered student should not have exam time table clash with his/her set of registered courses. Write a stored procedure `tt_violation` which takes no parameters and lists student roll number, student name and the two courses id's having exam time table clash if there are any clashes. Write this stored procedure in a file named `[your roll number]-tt-violation.sql`.
- Q2** (20 Marks) Total number of credits registered by a student should not exceed 40. Write a stored procedure `count_credits` which takes no parameter list and list the student roll number, student name and total number of credits registered who have violated this constraint. Write this stored procedure in a file named `[your roll number]-count-credits.sql`.

**Instructions** Adhere to the following

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

**File naming** Adhere to the above stated file name convention.

**Independent efforts** You should make an honest and independent effort in obtaining the solution to the above problem.

**Deadline** Please honor the submission deadline.

**MS Assignments** Submission only through MS assignments. No other mode is accepted. Onus of submitting a correct file is on the student; a re-submission through email/request is not entertained.

**No excuses** No excuses for not able to meet the submission deadline.

**Submission Procedure** Place the three SQL files in a zip file with your roll number and upload the zip file.