CS246: Database Management Systems Lab

Lab # 04 (1 Questions, 36 Points)
Timings: 14:00 to 18:00 Hours   Pages: 3
IIT Guwahati
Submission: <u>18:30 Hrs, 31-Jan-2022</u>
31 Jan 2022 (Mon)

Question 1: (36 points)

Using `MySQL` perform the following tasks:

Task 01 - 1 Mark Create a database named *assignment04*

Task 02 - 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

Choose data type as appropriate. Place the following primary key constraint at the time of table creation.

Task 03 - 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.

Series of queries on the table `hss_electives`

Task 04 - Insertion - 5 Marks perform the series of insertion operations

1. The record having following values

`roll_number`	180101058
`sname`	Pranav Gupta
`cid`	HS 236
`cname`	Sociological Perspectives on Modernity

2. The record having following values

`roll_number`	$\perp$
`sname`	Pranav Gupta
`cid`	HS 236
`cname`	Sociological Perspectives on Modernity

3. The record having values

roll_number	180102158
sname	⊥
cid	HS 236
cname	Economics of Uncertainty and Information

4. The record having values

roll_number	180103158
sname	Pranav Gupta
cid	⊥
cname	Economics of Uncertainty and Information

5. The record having values

roll_number	180104158
sname	Pranav Gupta
cid	HS 424
cname	⊥

Task 05 - Updation - 5 Marks Update statements

1. Update the roll_number to ⊥ for student having roll number 180123047
2. Update the roll_number value to 180123045 for student having roll number 180123046
3. Update the sname value to ⊥.
4. Update the cid having value 'HS 211' to ⊥.
5. Update the cname to ⊥ for the course 'HS 245'

Task 06 - Deletion - 3 Marks Perform the following deletion operations

1. Delete the records having cid value HS 225
2. (2 Marks) Delete record containing sname Ajay. A partial match is a row candidate for delation. Use the pattern matching syntax LIKE to find out students the answer for this question. Pattern matching syntax: `https://dev.mysql.com/doc/refman/8.0/en/pattern-matching.html`

Task 07 - load file - 2 Marks load the files HS225.csv and ajay.csv into the table hss_electives. If the total number of records in hss_electives table are less than original hss_electives.csv file after this statement, 2 marks will not be awarded.

Task 08 - Show warnings - 1 Mark List all the warnings after performing Task 07. Why do you think the warnings are being thrown? Write your observation in comments.

Task 09 - alter table - 4 Marks Drop constraints

1. Drop the primary key
2. Insert a new record with the following values

roll_number	180123001
sname	Aditi Bihade
cid	HS 225
cname	Inventing the Truth: The Art and Craft of Autobiography

3. Add constraint that `roll_number` to be the primary key. Write your observation of adding primary key constraint to the record(s) 180123001.

4. Insert the following record

`roll_number`	180123001
`sname`	Aditi Bihade
`cid`	HS 225
`cname`	Inventing the Truth: The Art and Craft of Autobiography

Task 10 - Load additional entries - 1 Mark load old-hss-electives-allotment.csv file into `hss_electives` table.

Task 11 - Selection - 12 Marks Read queries

1. (1 Mark) Select ALL course numbers from `hss_electives`

2. (6 Marks) Select all the columns of `hss_electives` such that you show students who belong to only CSE department OR M & C irrespective of the year of study. That is all roll numbers:
   - CSE: 170101001 to 170101088
   - CSE: 180101001 to 180101098
   - CSE: 190101001 to 190101111
   - M&C: 170123001 to 170123064
   - M&C: 180123001 to 180123065
   - M&C: 190123001 to 190123071

   NOTE: You must use pattern matching syntax to obtain this information. Anyone who does not use pattern matching syntax will not get any marks.

3. (2 Marks) Select (all columns from `hss_electives`) students of Mathematics and computing department who are allotted to "Sociological Perspectives on Modernity" course.

4. (1 Mark) Select distinct `cid`'s and associated `cnames` that are offered

5. (1 Mark) List all the `cid`'s corresponding course names and sort them in descending order of course name.

6. (1 Mark) List the names of the students who are allotted to "Human Resource Management"; sort the result table using `sname` followed by `roll_number`

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

Sequence of Tasks Tasks 01 to 11 must be performed exactly in the order presented above. Any deviation from the task order will lead to deduction of corresponding task marks.

Independent efforts You should make an honest and independent 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.