
CS246: Database Management Systems Lab

Lab # 04 (1 Questions, 66 Points)

Held on 30-Jan-2023

Lab Timings: 14:00 to 18:00 Hours Pages: 3

Submission: 18:00 Hrs, 30-Jan-2023

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- This lab assignment is based on the **data definition language** concepts discussed in the previous week CS245 theory class.
- Some of the tasks are so designed to result in error by the MySQL database. Please read each task thoroughly, and perform the SQL statements accordingly.
- You can refer to the text book for SQL syntax.

Question 1: (66 points)

Using MySQL perform the following tasks:

Task 01 - 3 Marks Create a database named *week04*

Task 02 Create and insert

- (3 marks) Create a table `hss_table01` containing the following

1 st column	<code>sno</code>	integer
2 nd column	<code>roll_number</code>	integer
3 rd column	<code>sname</code>	string of characters of fixed size 50
4 th column	<code>cid</code>	string of characters of fixed size 10
5 th column	<code>cname</code>	string of characters of fixed size 60

- (3 marks) Insert the data containing in the file `hss_electives.csv` into the table `hss_table01`. You may write a C program to generate `insert` SQL statements for every line of the file `hss_electives.csv`. Save the SQL statements into a file with extension `.sql` say `task2b.sql`. Perform `source task2b.sql` in MySQL client

Task 03 Create and insert

- (3 marks) Create a new table `hss_table02` with the columns as described in task 2a. Place primary key on column `cname`
- (3 marks) Insert the data containing in the file `hss_electives.csv` into the table `hss_table02`. (Adopt similar steps as explained task 02b) What are your observations on this task?

Task 04 Create and insert

- (3 marks) Create a new table `hss_table03` with the columns as described in task 2a. Place primary key on **both** columns given below
 - `roll_number`

ii. `cid`

That is `roll_number` and `cid` together forms a primary key.

- b. (3 marks) Insert the data containing in the file `hss_electives.csv` into the table `hss_table03`. Also insert the data containing in the file `additional_hss_course.csv`. What are your observations on this task?

Task 05 Only create: Create a new table `hss_table04` with the columns as described in task 2a. Individually place primary key on the columns given below:

- a. (3 marks) `sno`
b. (3 marks) `roll_number`

What do you observe on this task?

Task 06 Create two tables and insert

- a. (3 + 3 marks) Create a table `hss_course01` as described below:

1 st column	<code>cid</code>	string of characters of fixed size 10
2 nd column	<code>cname</code>	string of characters of fixed size 60

and place primary key on `cid` in `hss_course01`

- b. Create another table `hss_table05` with columns as described in task 2a. Place the following
- (3 marks) Primary key on `roll_number` in `hss_table05`
 - (3 marks) The column `cid` in `hss_table05` to be foreign key that points to table `hss_course01`
- c. (3 marks) Insert `hss_courses.csv` into table `hss_course01`. Insert `hss_electives.csv` file into table `hss_table05`.
- d. (3 marks) Insert `violate_fk.csv` file into table `hss_table05`. What is your observation on this insert?

Task 07 Create two tables

- a. (3 + 3 marks) Create a table `hss_course02` as described in task 06a and place primary key on `cname` in `hss_course02`. Note there is no constraint on `cid` in `hss_course02`.
- b. Create another table `hss_table06` with columns as described in task 02a. Place the following
- (3 marks) Primary key on `roll_number` in `hss_table06`
 - (3 marks) Foreign key on `cid` in `hss_table06` that points to table `hss_course02`
 - What are your observations on this task?

Task 08 Create two tables

- a. (3 marks) Create a table `hss_course03` as described in task 06a. Note there are no constraints on `cid` and `cname` in `hss_course03`.
- b. Create another table `hss_table07` with columns as described in task 02a.
- (3 marks) Primary key on `roll_number` in `hss_table07`
 - (3 marks) Foreign key on `cid` in `hss_table07` that points to table `hss_course03`

iii. What are your observations on this task?

Instructions Adhere to the following

SQL statements Write the SQL statements corresponding to each task in a text.

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

Sequence of Tasks Perform the tasks 01 to 08 sequentially.

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

Submission Procedure You should upload all the SQL files and C program files in MS assignments site.

Marking Scheme Each task carries 3 marks