CS 313: Databases and Information Systems Laboratory
Autumn 2022-23, IIT Dharwad
Assignment 2

Date: 30th August 2022 *Total: 60 Points*

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1. Use the link below : https://www.db-book.com/university-lab-dir/sqljs.html and go through all the table definitions in the university schema. Write down all integrity constraints (Primary key, Domain of Primary key, Foriegn key and Not Null). ***15 Points***

Example: Consider the Student table

Table	*Primary key*	*Domain of PK*	*Foreign key(Referencing table)*	*Not Null*
Student	*ID*	*Character*	*(dept_name) references department*	`name`

Tabulate your observation as shown above. Write all Primary keys with its domain and foriegn keys(with name of the referring table) and Not Null keys, of each table.

2. Take one student and get all his data from various tables. Select a student who has some courses, grades, etc. Don't take someone who has no data in other tables. Make a full profile of the student using the tables *student, department, takes, advisor and instructor*.

In your answer please write down the respective SQL queries used to find the details of the student along with the corresponding output-table. ***20 Points***

```
 id   | name  | dept_name  | tot_cred | dept_name  | building |  budget   |  id   | course_id | sec_id | semester | year | grade | s_id  | i_id  |  id   | name | dept_name  |  salary
-------+-------+------------+----------+------------+----------+-----------+-------+-----------+--------+----------+------+-------+-------+-------+-------+------+------------+----------
00128 | Zhang | Comp. Sci. |      102 | Comp. Sci. | Taylor   | 100000.00 | 00128 | CS-101    | 1      | Fall     | 2009 | A     | 00128 | 45565 | 45565 | Katz | Comp. Sci. | 75000.00
00128 | Zhang | Comp. Sci. |      102 | Comp. Sci. | Taylor   | 100000.00 | 00128 | CS-347    | 1      | Fall     | 2009 | A-    | 00128 | 45565 | 45565 | Katz | Comp. Sci. | 75000.00
(2 rows)

university=#
```

3. Try out the various queries(Such as ***select and insert*** statements) we studied in the class. Explore **all the tables** in the given schema. ***10 Points***

4. Try out the following additional queries : ***15 Points***

a) Get students (ID and names) from xxx department who have done courses from a room in building yyy, where xxx and yyy represents the department building of your choice and it should be present in the database.

b) Get students who have A grade as well as a C grade

c) Get all buildings and rooms which have classes on Wednesday

Note : choose values in queries (like xxx, yyy, Wednesday, etc.) such that your queries give some results. Modify queries if required to get more data as output. For example, choose Monday if Wednesday gives an empty answer.

NOTE:

1. Due date for Assignment is ***30th August 2022(11:59PM).***
2. Answers / query and output(screenshot) of all the questions must be put in a document(.pdf).
3. Submit the .pdf file named with your ***<roll_number>***.pdf
4. Mode of submission is moodle.
5. ***Evaluation: Answers and execution of working query of all questions should be shown to the TAs during Lab hours on Monday (5th September 2022)***
6. We will run a plagiarism check for all the submissions.
7. Penalty for late submission is 15% of secured marks.
8. Penalty for plagiarism is 100% of the secured marks.