University of Rajshahi
Department of Computer Science and Engineering
CSE3122: DBMS Lab Exam-2024
SET-A

1. Create tables for the following schema listed below by properly specifying the primary keys and foreign keys.Enter at least five tuples for each relation.

   Employee (**SSN**, Name, Address, Sex, Salary, DNo)
   Department (**DNo**, DName, MgrSSN, MgrStartDate)
   Dlocation (DNo,DLoc)
   Project(**PNo**, PName, PLocation, DNo)
   Works_On (SSN, PNo, Hours)

Employee

SSN	name	address	sex	salary	dno
01AB123	Indra	Indranagar	Male	400000	1
01AB124	Varuna	Banshankari	Male	500000	1
01AB125	Agni	Hebbal	Male	600000	2
01AB126	Vaayu	Vijaynagar	Male	700000	3
01AB127	Scott	Kuvempunaga	Male	800000	4

Dlocation

dno	dloc
1	Bengaluru
2	Pune
3	Chennai
4	Bengaluru
5	Mysuru

Department

dno	dname	mgrSSN	mgr_startdate
1	Accounts	01AB123	2021-01-01
2	Water Resources	01AB124	2021-02-02
3	Production	01AB125	2021-03-03
4	Quality Assessment	01AB126	2022-01-01
5	Human Resources	01AB127	2022-02-02

Works_On

SSN	pno	hours
01AB123	501	6
01AB124	502	7
01AB125	503	8
01AB126	503	8
01AB127	504	6

Project

pno	pname	plocation	dno
501	Market Evaluation	Dodballapura	1
502	IOT	Andheri	2
503	Product Optimization	Chennai	2
504	Yeild Increase	Yelahanka	4
505	Product Refinement	Kuvempunagar, Mysuru	5

(a) Make a list of all project numbers for projects that involve an employee whose name is 'Scott', either as a worker or as a manager of the department that controls the project.
(b) Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise.
(c) Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department
(d) Retrieve the name of each employee who works on all the projects controlled by department number 5.
(e) For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than 600000.

2. Create a trigger employee_trigg so that after any update or delete from employee table, old data (SSN, name, address, operation_date and operation_type) are stored in the employee_bak table.

University of Rajshahi

Dept. Of Computer Science and Engineering

B. Sc. Engineering. Part-3 (Odd Semester) Examination 2024

Course: CSE 3232 (Web Engineering Lab)

Group-1

Create a **Task Tracker System** using the Laravel web framework. You can find the initial project in the following GitHub repository.

https://github.com/m-r-kushal/webe-tasks.git

Objective 1:

Using git, clone the repository to your computer. Take necessary steps to make the initial application up and running. (E.g., create a MySQL database for the application, create ***.env*** file and update configuration info in it, install project dependencies, generate **app_key** etc.).

Finally, run the Laravel application and show the application home page.

Objective 2:

Create **migration** to generate a table for task information following the table naming convention for Laravel and use **Model factory** and **seeder** classes to insert 20 test records in the table.

Table attributes:

- id [primary key]
- title [string:255]
- description [text]
- priority [int] (should be 1,2 or 3)
- due_date [date]
- is_completed [boolean]
- assigned_to [string:100]
- category ["work" or "personal"]

Objective 3:

Write necessary model, views, and controller to perform the following actions

1. Show all employee with pagination
2. Search employee based on name or designation
3. Create forms and write related code to add new task, edit existing task and delete a task

During the insert operation, you should perform server-side validation on user inputs, and your application should show proper warning messages in case validation fails.

NB: i) A sample file named **create.blade.php** is given in the "resources/views/tasks/" folder. You may use this file as the starting point for building new employee insert form.

ii) The use of AI assistance for coding is strictly prohibited and **will result in suspension.**

CSE3142: Compiler Design Lab
Set-1

1. Write a program to build a lexical analyzer implementing the following regular expressions. It takes a text as input from a file (*e.g.,* input.txt) and display output in console mode:

Keyword = 1|12|123…|123456789
Constant Integer= (1)*|(2)*…|(9)*
Integer variable = (i-n|I-N)(a-z|A-Z|_|0-9)*
ShortInt Number = (1-9)|(1-9)(0-9)|(1-9)(0-9)(0-9)|(1-9)(0-9)(0-9)(0-9)
LongInt Number = (1-9)(0-9)(0-9)(0-9)(0-9)+
Invalid Input or Undefined = Otherwise

2. Write a program which takes any LL(1) grammar as input from a file (*e.g.,* input.txt) and generate FOLLOW sets as output according to the given grammar.