

# Database Management System LAB

Session: 2021-22, 3<sup>rd</sup> Semester

## Assignment 2

Name:

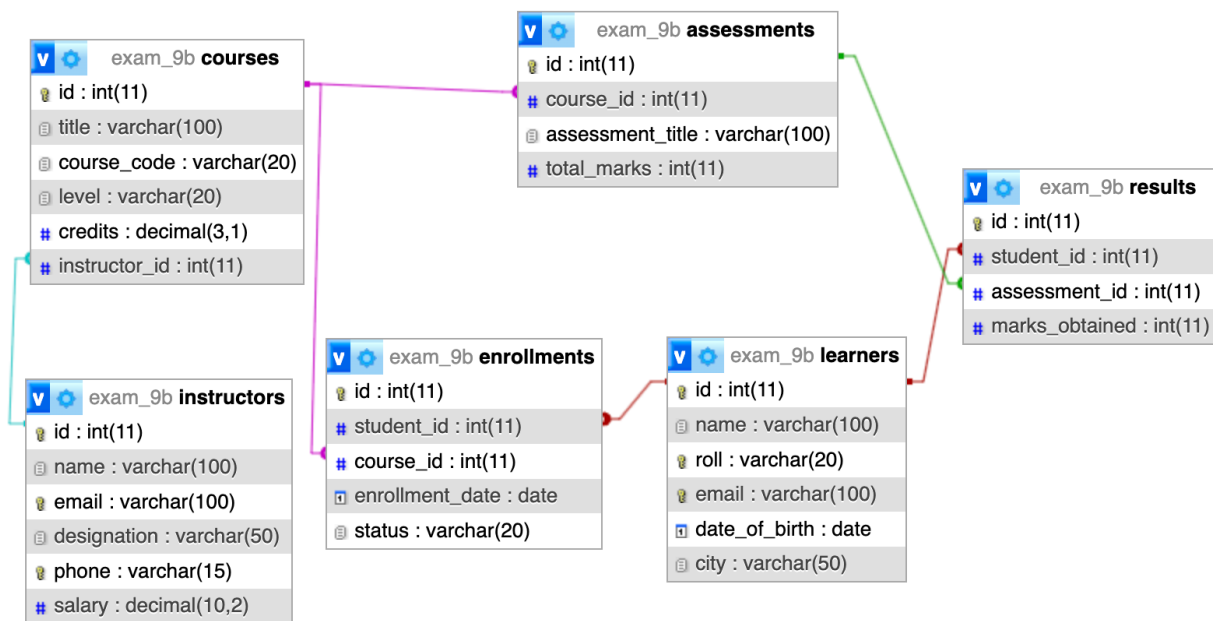
Time: 40 minutes

Class Roll:

Marks: 20

### Problem#1:

Consider the following schema:



**Instructions:** Import the provided database and refer to the above schema diagram to understand the structure, relationships, data types, and column names. Now, write SQL queries for the following questions:

**[Answer only marked questions- total 10 questions where 2 from each part]**

### PART - A:

1. Find the details of the employee who receive the second highest salary.
2. Find the list of courses offered at Advanced level.
3. Show the name and salary of all instructors who have a salary greater than 50000.
4. Find the number of distinct cities where learners are located.
5. Find the list of all courses with credits between 3 and 4.
6. Find the list of instructors who are Professor or Lecturer.
7. Find the list of all students who joined before 10th march 2024.
8. Retrieve the name of courses along with instructor name who teach them.
9. Find the list of students along with their enrolled courses title.
10. Find the highest marks obtained by any student in the 'Midterm Exam' assessment.

## **PART B:**

11. Show the list of all learners who are from the same city of 'Alice'.
12. Show the list of all instructors except who received the highest salary and display according to their highest salary.
13. Find the total number of enrollments made by students from the city 'Dhaka'.
14. Find the list of students whose name start with 'a' and end with 's'.
15. Retrieve the names of instructors who have students from 'Dhaka' enrolled in their courses.
16. Find the names of instructors who do not have any courses assigned to them.
17. Retrieve the names of students who have scored the highest marks in any assessment.
18. List the learners who are not enrolled in any course.
19. Find the total number of students who have enrolled in courses taught by 'Khalid Hossain'.
20. List the names of students who have obtained more than the average marks in any assessment.

## **PART C:**

21. *Find the instructor's name and phone number for the courses that have exactly 3 credits.*
22. *Get a list of students (learners) along with their course titles and the instructor's name for each course they are enrolled in.*
23. *Find the names of students who have obtained more than 75 marks in any assessment, along with the title of the assessment.*
24. *List all the learners who are from either 'Dhaka', 'Chittagong', or 'Sylhet'.*
25. *Find the list of instructors who get the same salary of an instructor having id 3;*
26. *Find the list of learners who enrolled between '2023-01-01' and '2023-06-30'.*
27. *Order instructors by their number of courses taken in descending order.*
28. *Order courses by credits and then by course title.*
29. *Find the total number of learners from each city.*
30. **Find** *the total salary paid to instructors grouped by their designation.*

## **PART D:**

31. List the courses title along the number of students enrolled of that course.
32. Show the list of courses that have more than 3 students enrolled.
33. Create a view to show the list of all instructors along with the courses taken by them.
34. **Show** the student name and their obtained marks.
35. Find the list of top three students who achieved highest marks.
36. Find the List of all instructors who have salary more than average salary.
37. **Categorize** the number of instructors by their designation.
38. Find the list of all instructors who have the same designation of 'Tanvir Hossain'.
39. Find the courses that have more enrollments than the average number of enrollments per course.
40. Find the titles of courses that no students are enrolled in.
41. Retrieve the list of learners who have enrolled in more than 3 courses.

## **PART E:**

42. *Increase the salary of all instructors by 10%.*

43. Pad the phone numbers with leading '+880' so that they have exactly 14 digits.

**Problem#2:**

*Exercises from book*

**Instructions:** *Submit handwritten assignment on Mid Exam day.*