INFSCI 2710 Database Management, Fall 2024
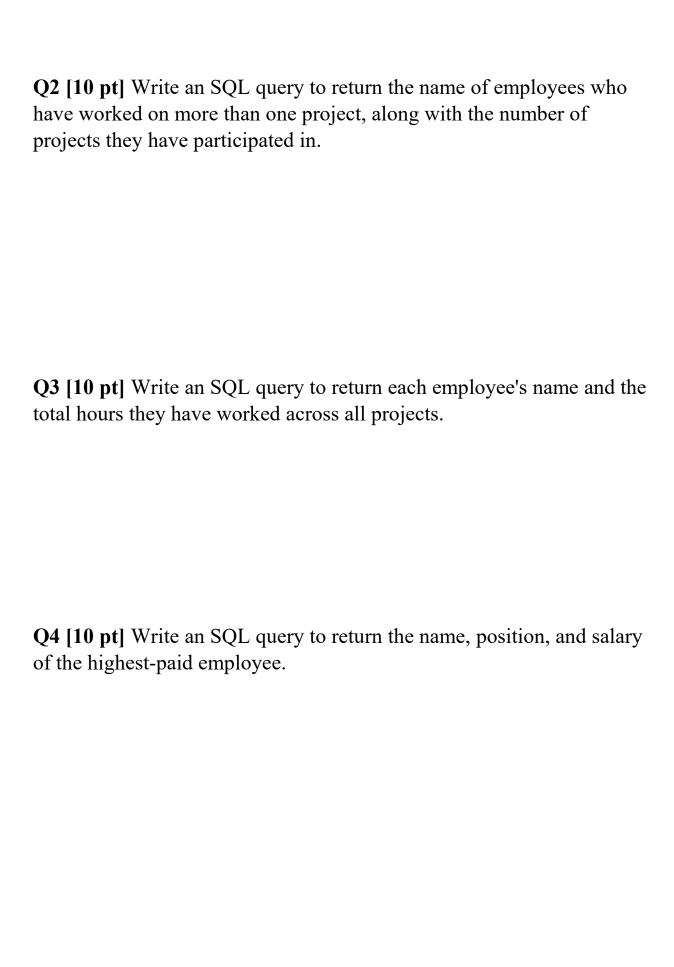
Homework 2: SQL

Due Date: 10/7, at the end of the day. Please submit a pdf to the Canvas assignment.

Note: No actual data provided in this assignment, you can assume that enough records have been inserted to the database, **you just need to provide MYSQL query statements**

Consider the following relational database, where feature with in bold text is the primary key for each table

- Employees(**employee_id**, employee_name, position, salary,department_id)
- Departments (**department_id**, department_name)
- Projects(**project_id**, project_name, start_date, end_date)
- Employee_project(**employee_id**,**project_id**, hours_worked)

Q1 [10 pt] Write an SQL query to return the department name and the average salary of the employees in each department. Order the result by average salary in descending order.

Q2 [10 pt] Write an SQL query to return the name of employees who have worked on more than one project, along with the number of projects they have participated in.

Q3 [10 pt] Write an SQL query to return each employee's name and the total hours they have worked across all projects.

Q4 [10 pt] Write an SQL query to return the name, position, and salary of the highest-paid employee.

Q5 [10 pt] Write an SQL query to return the name of all employees and the names of projects they are involved in. If an employee is not involved in any projects, display NULL for the project name.

Consider the following Travel Booking System,

- Customers(**customer_id**, customer_name, email, join_date)
- Hotels(**hotel_id**, hotel_name,location, star_rating)
- Bookings(**booking_id, customer_id, hotel_id,** check_in, check_out, total_cost)
- Reviews(**review_id**, **customer_id, hotel_id,** rating, review_text)

Q6 [10 pt] Write an SQL query to return all customers who have never left a review, showing their name and email.

Q7 [10 pt] Write an SQL query to return all hotel bookings that occurred between March 1, 2024, and June 30, 2024, showing the booking ID, customer name, hotel name, and total cost.

Q8 [10 pt] Write an SQL query to return the top 3 longest hotel stays by customers, showing the customer name, hotel name, and number of nights stayed.

Q9 [10 pt] Write an SQL query to find all customers who have made more than one hotel booking, displaying the customer name and the number of bookings they have made.