University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Information Storage & Management I
Lecturer: Dr. Alejandro Arbelaez

Submission:

This assignment is due on Nov/28/2019. You should submit a file with your solution ([your-name-assignment1.sql] electronically via Canvas.

Please note that this assignment will account for 10% of your module grade.

Declaration:

By submitting this assignment. I agree to the following:

"I have read and understand the UCC academic policy on plagiarism and I agree to the requirements set out thereby in relation to plagiarism and referencing. I confirm that I have referenced and acknowledged properly all sources used in preparation of this assignment.

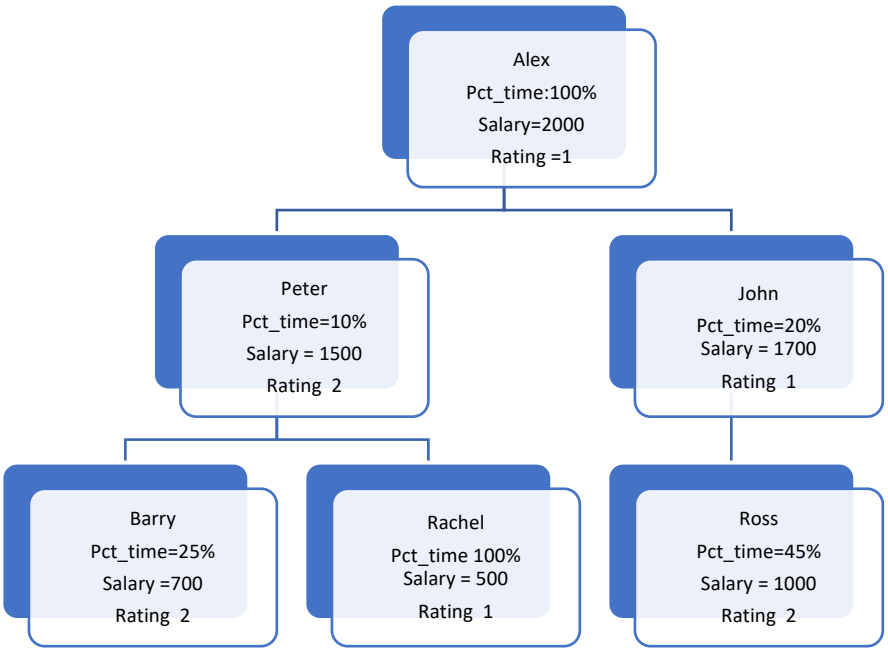
I declare that this assignment is entirely my own work based on my personal study. I further declare that I have not engaged the services of another to either assist me in, or complete this assignment"

Consider the following relational database. An employee can work in more than one department; the pct_time field of the works relation represents the percentage of time that a given employee works in a given department.

Employee(eid, ename, age, salary)
Supervisor(eid, supervisor_id, did)
Works(eid, did, pct_time, rating)
Department(did, budget)

Write integrity constraints (domain, key, foreign key, or CHECK constraints or assertions), views, and triggers to ensure each of the following requirements (considered independently).

1. **[5 Marks]** Write SQL statements to create the tables (including primary keys and foreign keys).
2. **[5 Marks]** Populate the DB with the following information (assume did=1, budget=10000)



3. **[5 Marks]** The national minimum wage is 200 Euros.
4. **[10 Marks]** All employees must start (a new appointment) with a minimum rating of 1 point and a maximum of 3 points.
5. **[10 Marks]** The minimum rating is 0 points and the maximum is 10 points.
6. **[5 Marks]** Every supervisor must be also an employee.
7. **[10 Marks]** The total pct_time value (considering all appointments) for an employee must be less than or equal to 100%.
8. **[10 Marks]** A supervisor must always have a higher salary than any employee that he or she supervises.
9. **[10 Marks]** Create a trigger that increases 10% the salary of a given employee every time his (or her) rating improves at least 1 point.
10. **[10 Marks]** Create a view (named MANAGER_SALARY) to retrieve the name and salary of the highest ranked employee (who doesn't report to anybody) for each department.
11. **[10 Marks]** Create a SQL procedure to calculate the lowest ranked employees in a given department.
12. **[10 Marks]** Create a view which outputs 2 columns named ename (employee name) and "min_pct_time" containing the name of the employee and the minimum pct_time of the employee.