# horizontal lineDatabase R&D Exercise

Assignment 6

I confirm that this is my own work and that use of material from other sources, including the Internet, has been properly and fully acknowledged and referenced.

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**Total in points** (100 points total): \_\_\_\_\_

**Professor’s Comments:**

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**7.5. Specify the following queries on the database in Figure 5.5 in SQL. Show the query results if each query is applied to the database state in Figure 5.6.**

**a. For each department whose average employee salary is more than $30,000, retrieve the department name and the number of employees working for that department.**

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|  |  |
| --- | --- |
| **Dname** | **count(\*)** |
| Research | 4 |
| Administration | 3 |
| Headquarters | 1 |

**b. Suppose that we want the number of male employees in each department making more than $30,000, rather than all employees (as in Exercise 7.5a). Can we specify this query in SQL? Why or why not?**

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| --- | --- |
| **Dname** | **count(\*)** |
| Research | 3 |
| Administration | 1 |
| Headquarters | 1 |

Yeah. Select the Dno first who is in the department making more than $30,000. Then Select the male from them.

**7.6. Specify the following queries in SQL on the database schema in Figure 1.2.**

**a. Retrieve the names and major departments of all straight-A students**

**(students who have a grade of A in all their courses).**

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**b. Retrieve the names and major departments of all students who do not have a grade of A in any of their courses.**

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**7.7. In SQL, specify the following queries on the database in Figure 5.5 using the concept of nested queries and other concepts described in this chapter.**

**a. Retrieve the names of all employees who work in the department that has the employee with the highest salary among all employees.**

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**b. Retrieve the names of all employees whose supervisor’s supervisor has ‘888665555’ for Ssn.**

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**c. Retrieve the names of employees who make at least $10,000 more than the employee who is paid the least in the company.**

**Text

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**7.8. Specify the following views in SQL on the COMPANY database schema shown in Figure 5.5.**

**a. A view that has the department name, manager name, and manager salary for every department**

**Graphical user interface

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**b. A view that has the employee name, supervisor name, and employee salary for each employee who works in the ‘Research’ department**

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**c. A view that has the project name, controlling department name, number of employees, and total hours worked per week on the project for each project**

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**d. A view that has the project name, controlling department name, number of employees, and total hours worked per week on the project for each project with more than one employee working on it**

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**7.9. Consider the following view, DEPT\_SUMMARY, defined on the COMPANY database in Figure 5.6:**

**State which of the following queries and updates would be allowed on the view. If a query or update would be allowed, show what the correspond- ing query or update on the base relations would look like, and give its result when applied to the database in Figure 5.6.**

a. allowed.

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|  |  |  |  |
| --- | --- | --- | --- |
| D | C | Total\_s | Average\_s |
| 1 | 1 | 55000 | 55000 |
| 4 | 3 | 93000 | 31000 |
| 5 | 4 | 133000 | 33250 |

b. allowed

Text

Description automatically generated with medium confidence

|  |  |
| --- | --- |
| D | C |
| 5 | 4 |

c. allowed

Text

Description automatically generated with medium confidence

|  |  |  |
| --- | --- | --- |
| D | C | Average\_s |
| 5 | 4 | 33250 |

d. Not allowed

e. Not allowed