

January 2023 CSE216: Database Sessional

Online Assignment on PL/SQL

Subsections: B1

Time: 30 minutes

Question 1

Required Tables: TAKES, ADVISOR

- a. Write a PL/SQL function that takes student ID as input and returns (+13) if the student has enrolled in strictly more courses in the fall semesters than in the spring semesters, (-7) if the student has enrolled in strictly less courses in the fall semesters than in the spring semesters and 0 otherwise.
- b. Write a PL/SQL anonymous block that loops over, in ascending order of the student ID, all students who are advised by the instructor with ID 90643. For each student, print whether they have more courses in spring semesters or otherwise. **You cannot use the INTO keyword in the anonymous block. In addition, in each iteration of the loop, you have to call your function exactly once.**

Intended Output

```
Student ID: 987 has more courses in fall semesters.
Student ID: 10736 has more courses in fall semesters.
Student ID: 13506 has more courses in fall semesters.
Student ID: 19735 has more courses in spring semesters.
Student ID: 22467 has more courses in fall semesters.
Student ID: 28252 has more courses in fall semesters.
Student ID: 33817 has more courses in spring semesters.
Student ID: 35175 has the same number of courses in spring and fall semesters.
Student ID: 35257 has more courses in fall semesters.
Student ID: 41299 has more courses in spring semesters.
Student ID: 46451 has more courses in fall semesters.
Student ID: 52019 has more courses in fall semesters.
Student ID: 57334 has more courses in fall semesters.
Student ID: 63361 has more courses in spring semesters.
Student ID: 72622 has more courses in fall semesters.
Student ID: 72959 has more courses in fall semesters.
Student ID: 77548 has more courses in fall semesters.
Student ID: 78637 has the same number of courses in spring and fall semesters.
Student ID: 79772 has more courses in fall semesters.
Student ID: 86736 has more courses in fall semesters.
Student ID: 88472 has the same number of courses in spring and fall semesters.
Student ID: 90082 has more courses in spring semesters.
Student ID: 90132 has more courses in fall semesters.
Student ID: 91442 has more courses in spring semesters.
```

Question 2

Required Tables: INSTRUCTOR, TEACHES, COURSE

Let SC be the average number of credits that an instructor teaches per year. Write a PL/SQL procedure that increases the salary of each instructor by SC% and prints that information in the following order. However, if the previous salary is greater than \$125000, there will be no increment. **You cannot join three or more tables together. You cannot write more than two SELECT statements. You can declare only one variable.**

Sample Output N.B.: If you (or your IDE) commit, the salary figures will vary each time you run the procedure.

```
Salary of Gustafsson has increased from 91507.33 to 94710.09
Salary of Bourrier has increased from 88289.96 to 90938.66
Salary of Luo has increased from 97024.82 to 99935.56
Salary of Mingoz has increased from 117099.37 to 121314.95
Salary of Lembr has increased from 36267.37 to 37718.06
Salary of Bawa has increased from 78830.29 to 81195.2
Salary of Wieland has increased from 129221.96 to 129221.96
Salary of DAgostino has increased from 66123.87 to 68412.77
Salary of Liley has increased from 102240.79 to 106330.42
Salary of Kean has increased from 38830.82 to 40189.9
Salary of Atanassov has increased from 94222.08 to 97519.85
Salary of Bondi has increased from 129887.04 to 129887.04
Salary of Morris has increased from 48108.21 to 49647.67
Salary of Tung has increased from 56241.16 to 58303.34
Salary of Vicentino has increased from 37450.68 to 38574.2
Salary of Romero has increased from 87666.4 to 90734.72
Salary of Lent has increased from 121461.09 to 126319.53
Salary of Sarkar has increased from 95668.03 to 98538.07
Salary of Shuming has increased from 121498.59 to 126358.53
Salary of Jaekel has increased from 114360.78 to 118363.41
Salary of Pimenta has increased from 87272.78 to 89890.96
Salary of Sullivan has increased from 98387.05 to 101338.66
Salary of Voronina has increased from 125785.77 to 125785.77
Salary of Mahmoud has increased from 109126.07 to 112581.73
Salary of Ullman has increased from 52197.25 to 53937.16
Salary of Queiroz has increased from 49760.95 to 51253.78
Salary of Valtchev has increased from 84179.52 to 86704.91
Salary of Bietzk has increased from 125012.75 to 125012.75
Salary of Choll has increased from 63167.37 to 65062.39
Salary of Sakurai has increased from 126558.79 to 126558.79
Salary of Dale has increased from 102666.44 to 105974.58
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