January 2023 CSE216: Database Sessional

Online Assignment on PL/SQL

Subsection: A2, B2

Time: 30 minutes

Question 1 REQUIRED TABLES: STUDENT, TAKES, COURSE

a. Write a PL/SQL function that takes student ID as input and returns `TRUE` if that student has attended courses of more than ten departments and `FALSE` otherwise.
b. Write a PL/SQL anonymous block that loops over, in descending order of the student ID, all students who have completed exactly 125 credits. For each student, using the function you have just written, print whether they have enrolled in more than ten departments or not. **You cannot declare any variable in the anonymous block.**

Intended Output

```
Student ID: 99949 has not enrolled in more than ten departments.
Student ID: 92949 has enrolled in more than ten departments.
Student ID: 86969 has not enrolled in more than ten departments.
Student ID: 77664 has not enrolled in more than ten departments.
Student ID: 77000 has enrolled in more than ten departments.
Student ID: 61444 has enrolled in more than ten departments.
Student ID: 59538 has not enrolled in more than ten departments.
Student ID: 50386 has not enrolled in more than ten departments.
Student ID: 45200 has not enrolled in more than ten departments.
Student ID: 33349 has not enrolled in more than ten departments.
Student ID: 31086 has enrolled in more than ten departments.
Student ID: 25725 has not enrolled in more than ten departments.
Student ID: 5920 has enrolled in more than ten departments.
Student ID: 4345 has not enrolled in more than ten departments.
```

Question 2

REQUIRED TABLES: TAKES, COURSE

Write a PL/SQL stored procedure that takes in Student ID as input and emits the CGPA as output. Please note

$$CGPA = \frac{\Sigma_{course}(point\_grade \times credit)}{\Sigma_{course}(credit)}$$

For the letter grade and point grade equivalence, use the following table:

Letter Grade	Point Grade
A+	4.00
A	3.75
A-	3.50

Letter Grade	Point Grade
B+	3.25
B	3.00
B-	2.75
C+	2.50
C	2.25
C-	2.15

You can create another PL/SQL function/procedure for your convenience, if needs be.

Please note that a student may take the same course more than once. In that case, only consider the best grade the student has obtained in that course.