Online
Topic: PL/SQL
Full Points: 40, Time: 75 minutes

In this assignment, you will write a procedure and a trigger. All tasks are based on the HR schema.

Task 1: Write a PL/SQL procedure (25 points)

First, create the following table in your database:

```
Create table lowest_paid_employees(employee_id varchar2(100), department_id
varchar2(100), saldiff number, bonus number, tag varchar2(100));
```

Every year the company requires publishing a report that shows the lowest paid employees of each department.

Create a procedure `Update_Lowest_Paid_Employees(m number, n number)` that populates the table lowest_paid_employees. The procedure would find the lowest salaried **permanent** employee of each department and then insert those records in the table appropriately. The company has adopted the following policy to find the lowest paid **permanent** employee of a department:

- Case 1: If there is only one such employee having the lowest salary, then insert his records.
- Case 2: If there is more than one such employee with the lowest salary, then insert the employee who joined the company earlier.
- Case 3: A lowest salaried employee cannot also be the highest salaried employee of the same department. In this case, no employee of that department will be considered as a lowest paid employee.
- Note that, an employee is not permanent until his probation period has passed. The company uses a 1-year probation period from the hiring date.

See the table definition above to understand the columns you will need to insert.

- The *saldiff* column stores the difference between the employee's salary and the highest salary of the employee's department.
- The *tag* column should be inserted null at this point. This column will later be populated automatically by a trigger (Task 2).
- Bonus is calculated as follows.
   - Bonus amount is m for every n year period the employee has worked in the company. Employees do not get any bonus for fractional periods. For example, if the employee has worked for 6 years where $m = 10,000$ and $n = 5$, then he will get bonus 10,000 for completing only 1 period (first 5 years).
   - 5,000 management bonus if the employee is a manager and manages at least 5 employees.

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Task 2: Write a PL/SQL trigger (15 points)

Write a trigger Update_LPET_Tag_Trigger that performs the following:

- Is fired when an insert is being done on the lowest_paid_employees table.
- Perform a sanity check on the saldiff value. The value is correct when it is not greater than the maximum of global saldiff values among all departments. The global saldiff for a department is the difference of minimum and maximum salary of the department. If the sanity check fails, the trigger should throw an exception so that the resulting SQL fails. Otherwise, it is executed as given below.
- Automatically updates the *tag* column of an employee based on *saldiff* as follows:
  - If saldiff is less than 10k, tag will be 'low'.
  - If saldiff is above or equal to 10k but less than 20k, tag will be 'very low'.
  - If saldiff is above or equal to 20k, tag will be 'extremely low'.
- Must be a row level trigger.