


1. Create a procedure using a CURSOR that accepts a manager ID and displays the manager's name followed by the names of the employees who report to this manager.

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```
1 use db2;
2 DELIMITER $
3 drop procedure if exists myproc1;
4 create procedure myproc1(man_id int)
5 BEGIN
6     declare done int;
7     declare tempID int(5);
8     declare mag_first_name varchar(10);
9
10    # -- set my cursor of the subset to be table of manager first name and manager id
11    declare cursor1 cursor for select first_name, manager_id
12    from employees
13    where manager_id = man_id;
14
15    declare continue handler for not found set done = TRUE;
16    open cursor1;
17    read_loop: LOOP
18
19        # -- insert these first_name and manger id into tempFN and tempID
20
21        fetch cursor1 into mag_first_name, tempID;
22
23        select first_name from employees
24        # -- get the first name of the employees where employees id is equal to manager_id
25        where employee_id = tempID;
26        #if employee_id = tempID;
27        if done then leave read_loop; end if;
28        #-- select tempFN, tempID;
29        #if done then leave read_loop; end if;
30        #-- select tempFN, tempID;
31        select mag_first_name;
32    end loop;
33    close cursor1;
34 END$
35
36 DELIMITER ;
37
38 call myproc1(205);
```

```
mysql> source q1_new;
Database changed
Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected, 1 warning (0.02 sec)

+-----+
| first_name |
+-----+
| Shelley    |
+-----+
1 row in set (0.00 sec)

+-----+
| mag_first_name |
+-----+
| William        |
+-----+
1 row in set (0.01 sec)

+-----+
| first_name |
+-----+
| Shelley    |
+-----+
1 row in set (0.01 sec)

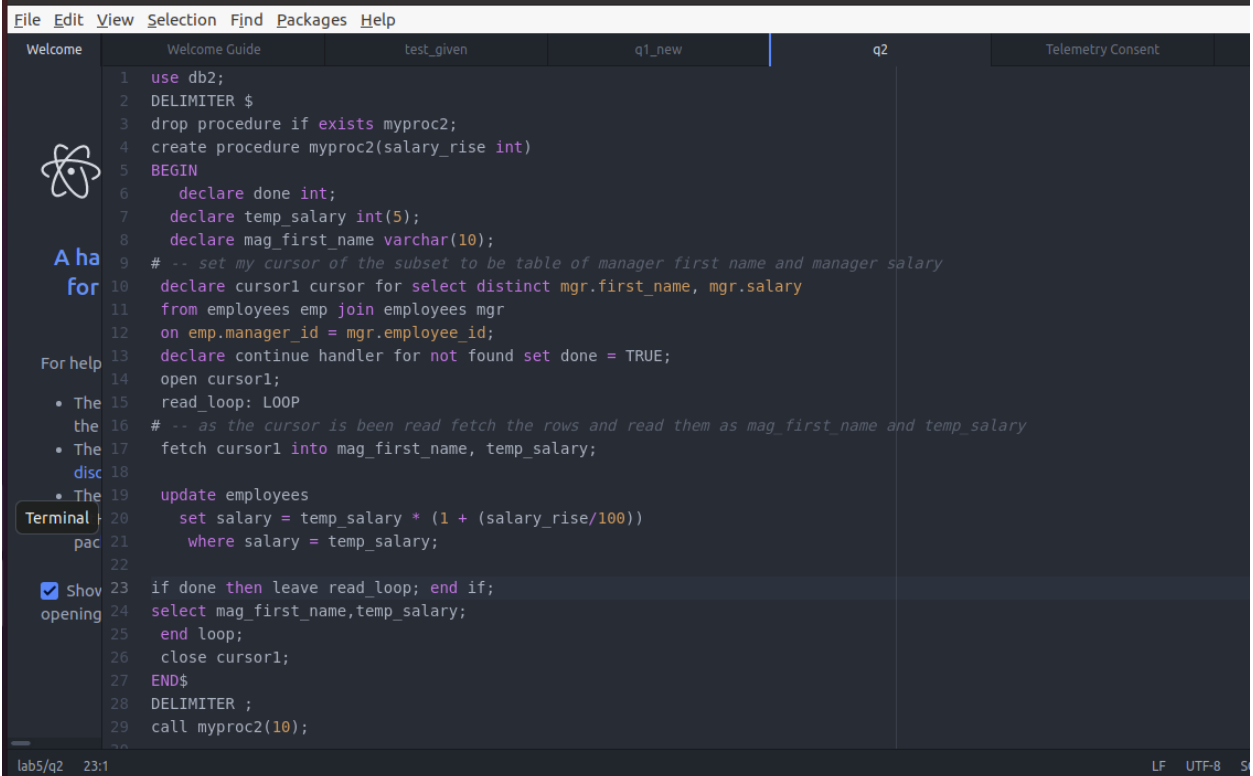
Query OK, 0 rows affected (0.01 sec)
```

2. Create a procedure with a cursor that provides a 10% salary increase to department managers.

The screen shot below is the result Before the code run

```
mysql>
mysql>
mysql> select distinct mgr.first_name, mgr.salary
-> from employees emp join employees mgr
-> on emp.manager_id = mgr.employee_id;
+-----+-----+
| first_name | salary |
+-----+-----+
| Steven    | 24000.00 |
| Neena     | 17000.00 |
| Lex       | 17000.00 |
| Alexander | 9000.00  |
| Nancy     | 12008.00 |
| Den       | 11000.00 |
| Matthew   | 8000.00  |
| Adam      | 8200.00  |
| Payam     | 7900.00  |
| Shanta    | 6500.00  |
| Kevin     | 5800.00  |
| John      | 14000.00 |
| Atom      | 13500.00 |
| Alberto   | 12000.00 |
| Gerald    | 11000.00 |
| Eleni     | 10500.00 |
| Michael   | 13000.00 |
| Shelley   | 12008.00 |
+-----+-----+
18 rows in set (0.00 sec)

mysql>
```



The screenshot shows a code editor with a dark theme. The editor has a menu bar (File, Edit, View, Selection, Find, Packages, Help) and a toolbar with icons for Welcome, Welcome Guide, test_given, q1_new, q2, and Telemetry Consent. The main editor area displays a MySQL procedure named myproc2. The procedure takes an integer parameter salary_raise. It declares a cursor cursor1 to select distinct manager first names and salaries. It then uses a loop to fetch each manager's name and salary, and updates their salary by 10% (salary * (1 + (salary_raise/100))). The procedure ends with a call to myproc2(10). The status bar at the bottom shows 'lab5/q2 23:1' and 'LF UTF-8 S'.

```
1 use db2;
2 DELIMITER $
3 drop procedure if exists myproc2;
4 create procedure myproc2(salary_raise int)
5 BEGIN
6     declare done int;
7     declare temp_salary int(5);
8     declare mag_first_name varchar(10);
9     # -- set my cursor of the subset to be table of manager first name and manager salary
10    declare cursor1 cursor for select distinct mgr.first_name, mgr.salary
11    from employees emp join employees mgr
12    on emp.manager_id = mgr.employee_id;
13    declare continue handler for not found set done = TRUE;
14    open cursor1;
15    read_loop: LOOP
16        # -- as the cursor is been read fetch the rows and read them as mag_first_name and temp_salary
17        fetch cursor1 into mag_first_name, temp_salary;
18
19        update employees
20        set salary = temp_salary * (1 + (salary_raise/100))
21        where salary = temp_salary;
22
23    if done then leave read_loop; end if;
24    select mag_first_name,temp_salary;
25    end loop;
26    close cursor1;
27 END$
28 DELIMITER ;
29 call myproc2(10);
```

```
mysql> source q2;  
Database changed  
Query OK, 0 rows affected (0.01 sec)
```

```
Query OK, 0 rows affected, 1 warning (0.02 sec)
```

```
+-----+-----+  
| mag_first_name | temp_salary |  
+-----+-----+  
| Steven        |          26403 |  
+-----+-----+  
1 row in set (0.01 sec)
```

```
+-----+-----+  
| mag_first_name | temp_salary |  
+-----+-----+  
| Neena          |          18702 |  
+-----+-----+  
1 row in set (0.01 sec)
```

```
+-----+-----+  
| mag_first_name | temp_salary |  
+-----+-----+  
| Lex            |          18702 |  
+-----+-----+  
1 row in set (0.01 sec)
```

```
+-----+-----+  
| mag_first_name | temp_salary |  
+-----+-----+  
| Alexander      |           9902 |  
+-----+-----+  
1 row in set (0.01 sec)
```

```
+-----+-----+
```

```
| mag_first_name | temp_salary |
+-----+-----+
| Nancy          |          13211 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Den            |          12102 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Matthew        |           8802 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Adam           |           9022 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Payam          |           8692 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Shanta         |          7152 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Kevin          |          6382 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| John           |         15402 |
+-----+-----+
1 row in set (0.03 sec)
```

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```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Karen          |         14852 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Alberto        |         13202 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| Alberto      |      13202 |
+-----+-----+
1 row in set (0.03 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Gerald         |      12102 |
+-----+-----+
1 row in set (0.04 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Eleni          |      11552 |
+-----+-----+
1 row in set (0.05 sec)
```

```
+-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Michael        |      14302 |
+-----+-----+
1 row in set (0.06 sec)
```

```
+ Atom +-----+-----+
| mag_first_name | temp_salary |
+-----+-----+
| Shelley        |      13211 |
+-----+-----+
1 row in set (0.06 sec)
```

Query OK, 0 rows affected (0.06 sec)

mysql>

3. Create a procedure that determine and display the amount X needed to give all employees 20% of his/her salary.

The screen shot below is the result Before the code run

```
Query OK, 107 rows affected (0.06 sec)

mysql> select first_name, employee_id, salary from employees;
+-----+-----+-----+
| first_name | employee_id | salary |
+-----+-----+-----+
| Steven    | 100         | 30771.30 |
| Neena     | 101         | 23070.20 |
| Lex       | 102         | 23070.20 |
| Alexander | 103         | 14270.20 |
| Bruce     | 104         | 10368.00 |
| David     | 105         | 9168.00  |
| Valli     | 106         | 9168.00  |
| Diana     | 107         | 8568.00  |
| Nancy     | 108         | 18900.10 |
| Daniel    | 109         | 14270.20 |
| Help      | 110         | 13390.20 |
| Ismael    | 111         | 12068.00 |
| Jose Manuel | 112        | 12168.00 |
| Luis      | 113         | 11268.00 |
| Den       | 114         | 16470.20 |
| Alexander | 115         | 7468.00  |
| Shelli    | 116         | 7268.00  |
| Sigal     | 117         | 7168.00  |
| Guy       | 118         | 6968.00  |
| Karen     | 119         | 6868.00  |
| Matthew   | 120         | 13170.20 |
```


File Edit View Selection Find Packages Help

Welcome

Welcome Guide

test_given

q1_new

q2

q3



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```
1 use db2;
2 DELIMITER $
3 drop procedure if exists myproc3;
4 create procedure myproc3(id_x int)
5 BEGIN
6 declare original_salary int default 0;
7 declare twenty_percent_salary int default 0;
8
9 select salary into original_salary
10 from employees
11 where employee_id = id_x;
12 select original_salary;
13 set twenty_percent_salary = original_salary * (20/100);
14 select twenty_percent_salary;
15
16 update employees
17   set salary = salary + twenty_percent_salary
18   # -- the 20 percent rise
19   where salary = salary;
20 select salary from employees;
21 END$
22 DELIMITER ;
23
24 call myproc3(104);
25
```

```
yaret@yaret-VirtualBox: ~/Desktop/CINS570/lab5
mysql> source q3;
Database changed
Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.01 sec)

+-----+
| original_salary |
+-----+
|          10368 |
+-----+
1 row in set (0.00 sec)


+-----+
| twenty_percent_salary |
+-----+
|              2074 |
+-----+
1 row in set (0.01 sec)

+-----+
| salary |
+-----+
| 32845.30 |
| 25144.20 |
| 25144.20 |
| 16344.20 |
| 12442.00 |
| 11242.00 |
| 11242.00 |
| 10642.00 |
| 20974.10 |
| 16344.20 |
```

4. Create a procedure. The company wants to award \$100,000 of profit by giving a bonus. The bonus is calculated as 20% of an employee's salary. Employees who earn lower salary values are given priority such that the \$100,000 profit is distributed starting with the lowest salary earners in ascending order until the \$100,000 is exhausted. If the \$100,000 is exhausted, display the quantity of employees who received a bonus (condition 1) otherwise, display the portion from the \$100,000 not used (condition 2). Run the procedure a second time with a different initial \$100,000 amount to test the other condition. Clearly label both test runs.

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Welcome Welcome Guide test_given q1_new q2 q3 q4



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```
1 use db2;
2 DELIMITER $
3 drop procedure if exists myproc4;
4 create procedure myproc4(bonus int)
5 BEGIN
6 declare twenty_percent_salary int default 0;
7 declare done int;
8 declare temp_salary int ;
9 declare tempID int;
10 declare count int default 0;
11 declare add_up int default 0;
12 declare not_used int default 0;
13 declare num_employees int default 0;
14
15 declare cursor1 cursor for select salary, employee_id
16 from employees
17 order by salary asc;
18
19 set num_employees = select count (*) from employees;
20
21 declare continue handler for not found set done = TRUE;
22 open cursor1;
23 read_loop: LOOP
24 fetch cursor1 into temp_salary,tempID;
25 if done then leave read_loop; end if;
26
```

lab5/q4 15:55



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```
24  fetch cursor1 into temp_salary,tempID;
25  if done then leave read_loop; end if;
26
27  # -- take 20 percent of each
28  set twenty_percent_salary = temp_salary * 0.2;
29
30  set add_up = add_up + twenty_percent_salary;
31  set count = count + 1;
32  if (add_up < bonus and count < num_employees)
33  then
34  select twenty_percent_salary,tempID, count, add_up;
35  end if;
36
37  if (count = num_employees)
38  then
39  set not_used = bonus - add_up;
40  select not_used
41  where not_used > 0;
42  end if;
43  end loop;
44  close cursor1;
45  END$
46  DELIMITER ;
47
48  #call myproc4(100000);
49  #call myproc4(500000);
```

lab5/q4 41:21

```
mysql> call myproc4(100000);
```

```
+-----+-----+-----+-----+
| twenty_percent_salary | tempID | count | add_up |
+-----+-----+-----+-----+
|           2248 |     106 |     49 | 93532 |
+-----+-----+-----+-----+
1 row in set (0.01 sec)
```

```
+-----+-----+-----+-----+
| twenty_percent_salary | tempID | count | add_up |
+-----+-----+-----+-----+
|           2488 |     104 |     50 | 96020 |
+-----+-----+-----+-----+
1 row in set (0.01 sec)
```

```
+-----+-----+-----+-----+
| twenty_percent_salary | tempID | count | add_up |
+-----+-----+-----+-----+
|           2488 |     202 |     51 | 98508 |
+-----+-----+-----+-----+
1 row in set (0.02 sec)
```

Empty set (0.02 sec)

Query OK, 0 rows affected (0.02 sec)

```
mysql> call myproc4(500000);
```

```
+-----+
| not_used |
+-----+
|   217513 |
+-----+
1 row in set (0.02 sec)
```

Query OK, 0 rows affected (0.02 sec)