SECTION 27

Task 4

Create an SQL stored procedure that will allow you to obtain the average male and female salary per department within a certain salary range. Let this range be defined by two values the user can insert when calling the procedure.

Finally, visualize the obtained result-set in Tableau as a double bar chart.

Solution:

We will first write a query to get min and max avg salary. See the query below:

```
46
47 •  select min(salary) from t_salaries;
48
49 •  select max(salary) from t_salaries;
50
51
52
53
54
55
56
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ĀA

max(salary)
160377

Result 6 ×

Read Only   Context Help   Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	81	13:25:46	select min(salary) from t_salaries	1 row(s) returned	0.703 sec / 0.000 sec
✓	82	13:26:55	select max(salary) from t_salaries	1 row(s) returned	0.453 sec / 0.000 sec

```
50
51 •  DROP PROCEDURE IF EXISTS filter_salary;
52
53    DELIMITER $$
54 •  CREATE PROCEDURE filter_salary (IN p_min_salary FLOAT, IN p_max_salary FLOAT)
55 ⊖  BEGIN
56    SELECT e.gender, d.dept_name, AVG(s.salary) as avg_salary
57    FROM t_salaries s
58          JOIN t_employees e ON s.emp_no = e.emp_no
59          JOIN t_dept_emp de ON de.emp_no = e.emp_no
60          JOIN t_departments d ON d.dept_no = de.dept_no
61       WHERE s.salary BETWEEN p_min_salary AND p_max_salary
62    GROUP BY d.dept_no, e.gender;
63    END$$
64    DELIMITER ;
65 •  CALL filter_salary(50000, 90000);
66
67
68
69
```

Context Help   Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	82	13:26:55	select max(salary) from t_salaries	1 row(s) returned	0.453 sec / 0.000 sec
⚠	83	13:30:35	DROP PROCEDURE IF EXISTS filter_salary	0 row(s) affected, 1 warning(s): 1305 PROCEDURE employees_mod.filter_salary does not exist	0.031 sec

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects
- covid
- employees
- employees_mod
  - Tables
  - Views
  - Stored Procedures
  - Functions
- sys

Administration   Schemas

Information

No object selected

SQL File 11*   employees_mod

Don't Limit

```
54   CREATE PROCEDURE filter_salary (IN p_min_salary FLOAT, IN p_max_salary FLOAT)
55   BEGIN
56   SELECT e.gender, d.dept_name, AVG(s.salary) as avg_salary
57   FROM t_salaries s
58        JOIN t_employees e ON s.emp_no = e.emp_no
59        JOIN t_dept_emp de ON de.emp_no = e.emp_no
60        JOIN t_departments d ON d.dept_no = de.dept_no
61    WHERE s.salary BETWEEN p_min_salary AND p_max_salary
62   GROUP BY d.dept_no, e.gender;
63   END$$
64   DELIMITER ;
65   CALL filter_salary(50000, 90000);
```

Result Grid   Filter Rows: Export: Wrap Cell Content: IA

gender	dept_name	avg_salary
M	Development	62924.4289
M	Sales	72609.2690
F	Marketing	67554.2469
F	Production	61860.7746
M	Production	62978.9139

Result 7   Read Only   Context Help   Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
84	13:31:32	CREATE PROCEDURE filter_salary (IN p_min_salary FLOAT, IN p_max_salary FLOAT) BEG...	0 row(s) affected	0.282 sec
85	13:31:33	CALL filter_salary(50000, 90000);	18 row(s) returned	3.125 sec / 0.000 sec

SQLAdditions

Jump to

Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.

Object Info   Session

Tableau Public - chart 2

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard   Show Me

Data   Analytics

- task 2
- task 3
- task 4

Search

Tables
- Abc Dept Name
- Abc Gender
- Abc Measure Names
- #   Avg Salary
- #   task 4.csv (Count)
- #   Measure Values

Pages

Columns   Dept Name   Gender

Rows   AVG(Avg Salary)

Filters

Marks

Bar

Color   Size   Label

Detail   Tooltip

Gender

Gender
- F
- M

chart 4

Dept Name / Gender

Avg. Avg Salary (vertical axis: 0K to 70K)

Departments: Customer Service, Development, Finance, Human Resources, Marketing, Production, Quality Management, Research, Sales (each split by F and M)

Data Source   chart 2   chart 3   chart 4

18 marks   1 row by 18 columns   SUM of AVG(Avg Salary): 1,158,009   Hamna Maqs...