

**LAPORAN PRAKTIKUM BASIS DATA
“EVALUASI”**

**PRAKTIKUM KE-10
LAB C1**



Disusun Oleh :

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INFORMATIKA

FAKULTAS SAINS DAN MATEMATIKA

UNIVERSITAS DIPONEGORO

2022

SOAL!

Gunakan semua tabel yang dimiliki hasil import SQL schema pada APEX. Laporan berisi: Soal, Screenshoot MySQL + Hasil dan Penjelasan.

1. Tampilkan seluruh data nama lengkap karyawan, nama manager, nama departemen, tanggal masuk kerjanya, dan bonus untuk karyawan-karyawan yang masuk mulai tahun 1997 hingga 2000 , memiliki bonus, dan prosentase komisi!

| EMPLOYEE_NAME | MANAGER_NAME | DEPARTMENT_NAME | HIRE_DATE | BONUS | COMMISSION_PCT |
|-----------------|---------------|-----------------|------------|-------|----------------|
| Eleni Zlotkey | Steven King | Sales | 2000-01-29 | 1500 | 0.20 |
| Jonathon Taylor | Eleni Zlotkey | Sales | 1998-03-24 | 1250 | 0.20 |

Jawab :

Screenshot

```
24060121130060> select concat(e.first_name, ' ', e.last_name) as "employee_name",
-> concat(mgr.first_name, ' ', mgr.last_name) as "manager_name",
-> d.department_name, e.hire_date, e.bonus, e.commission_pct
-> from employees e, employees mgr, departments d
-> where e.manager_id = mgr.employee_id
-> AND e.department_id = d.department_id
-> AND ((extract(year from e.hire_date) >= 1997) AND
-> (extract(year from e.hire_date) <= 2000))
-> AND e.bonus is NOT NULL
-> AND e.commission_pct is NOT NULL;
```

```
+-----+-----+-----+-----+-----+-----+
| employee_name | manager_name | department_name | hire_date | bonus | commission_pct |
+-----+-----+-----+-----+-----+-----+
| Eleni Zlotkey | Steven King | Sales | 2000-01-29 | 1500 | 0.20 |
| Jonathon Taylor | Eleni Zlotkey | Sales | 1998-03-24 | 1250 | 0.20 |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.04 sec)
```

Pembahasan

Untuk menampilkan data dari beberapa table maka digunakan alias. Kemudian untuk menampilkan nama lengkap digunakan fungsi **concat**, karena nama employee dan manager berasal dari table yang sama maka digunakan alias e untuk employee_name dan mgr untuk manager_name. Kemudian dilakukan seleksi baris dengan menyamakan semua foreign key dari table terkait. Dalam source code diatas digunakan fungsi **extract year** untuk menampilkan tahun dari hire date yang kemudian dibandingkan apakah karyawan mulai masuk antara tahun 1997 hingga 2000 atau tidak. Terakhir dilakukan seleksi baris untuk menghilangkan data dari kolom bonus dan commission_pct yang berisi NULL.

2. Tampilkan seluruh data nomer identitas karyawan dan nama lengkapnya yang bekerja pada departemen yang berlokasi selain di kota Seattle terurut berdasarkan nomer identitasnya dari yang terbesar!

| | EMPLOYEE_ID | FULL_NAME |
|---|-------------|-------------------|
| ▶ | 206 | William Gietz |
| | 205 | Shelley Higgins |
| | 202 | Pat Fay |
| | 201 | Michael Hartstein |
| | 200 | Jennifer Whalen |
| | 176 | Jonathon Taylor |
| | 174 | Ellen Abel |
| | 149 | Eleni Zlotkey |
| | 144 | Peter Vargas |
| | 143 | Randall Matos |
| | 142 | Curtis Davies |
| | 141 | Trenna Rajs |
| | 124 | Kevin Mourgoss |
| | 107 | Diana Lorentz |
| | 104 | Bruce Ernst |
| | 103 | Alexander Hunold |
| | 102 | Lex De Haan |
| | 101 | Neena Kochhar |
| | 100 | Steven King |

Jawab :

Screenshot

```
24060121130060> select e.employee_id, concat(first_name, ' ', last_name) as "full_name"
-> from employees e, departments d, locations l
-> where e.department_id = d.department_id
-> AND d.location_id = l.location_id
-> AND l.city <> "Seattle"
-> order by e.employee_id DESC;
+-----+-----+
| employee_id | full_name |
+-----+-----+
|          202 | Pat Fay   |
|          201 | Michael Hartstein |
|          176 | Jonathon Taylor |
|          174 | Ellen Abel |
|          149 | Eleni Zlotkey |
|          144 | Peter Vargas |
|          143 | Randall Matos |
|          142 | Curtis Davies |
|          141 | Trenna Rajs |
|          124 | Kevin Mourgoss |
|          107 | Diana Lorentz |
|          104 | Bruce Ernst |
|          103 | Alexander Hunold |
+-----+-----+
13 rows in set (0.01 sec)
```

Pembahasan

Untuk menampilkan data dari beberapa table maka digunakan alias. Kemudian untuk menampilkan nama lengkap dari employee digunakan fungsi **concat**. Kemudian dilakukan seleksi baris dengan menyamakan semua foreign key dari table terkait. Dilakukan pula seleksi city selain 'Seattle' kemudian diurutkan berdasarkan employee_id dari table employee secara DESC (besar ke kecil).

3. Tampilkan nama job, jumlah masing-masing karyawan dari setiap job, nama departemen, dan total gajinya. Urutkan berdasarkan job_title!

| JOB_TITLE | DEPARTMENT_NAME | JUMLAH_KARYAWAN | TOTAL_GAJI |
|-------------------------------|-----------------|-----------------|------------|
| Accounting Manager | Accounting | 1 | 12000.00 |
| Administration Assistant | Administration | 1 | 4400.00 |
| Administration Vice President | Executive | 2 | 34000.00 |
| Marketing Manager | Marketing | 1 | 13000.00 |
| Marketing Representative | Marketing | 1 | 6000.00 |
| President | Executive | 1 | 24000.00 |
| Programmer | IT | 3 | 19200.00 |
| Public Accountant | Accounting | 1 | 8300.00 |
| Sales Manager | Sales | 1 | 10500.00 |
| Sales Representative | Sales | 2 | 19600.00 |
| Stock Clerk | Shipping | 4 | 11700.00 |
| Stock Manager | Shipping | 1 | 5800.00 |

Jawab :

Screenshot

```

24060121130060> select j.job_title, d.department_name,
-> count(j.job_id) as "jumlah_karyawan",
-> sum(e.salary) as "total_gaji"
-> from jobs j, departments d, employees e
-> where e.job_id = j.job_id
-> AND e.department_id = d.department_id
-> group by j.job_title
-> order by j.job_title;

```

| job_title | department_name | jumlah_karyawan | total_gaji |
|-------------------------------|-----------------|-----------------|------------|
| Accounting Manager | Accounting | 1 | 12000.00 |
| Administration Assistant | Administration | 1 | 4400.00 |
| Administration Vice President | Executive | 2 | 34000.00 |
| Marketing Manager | Marketing | 1 | 13000.00 |
| Marketing Representative | Marketing | 1 | 6000.00 |
| President | Executive | 1 | 24000.00 |
| Programmer | IT | 3 | 19200.00 |
| Public Accountant | Accounting | 1 | 8300.00 |
| Sales Manager | Sales | 1 | 10500.00 |
| Sales Representative | Sales | 2 | 19600.00 |
| Stock Clerk | Shipping | 4 | 11700.00 |
| Stock Manager | Shipping | 1 | 5800.00 |

12 rows in set (0.01 sec)

Pembahasan

Untuk menampilkan data dari beberapa table maka digunakan alias. Kemudian untuk menghitung jumlah karyawan dari setiap job digunakan fungsi **count**, sedangkan untuk menghitung total gaji digunakan fungsi **sum**. Kemudian dilakukan seleksi baris dengan menyamakan semua foreign key dari table terkait, grouping dan diurutkan berdasarkan job titlenya.

4. Tampilkan semua id pegawai, nama lengkap, nama pekerjaan, nama department, kota, dan nama jalan!

| employee_id | name | job_title | DEPARTMENT_NAME | city | STREET_ADDRESS |
|-------------|-------------------|-------------------------------|-----------------|---------------------|--|
| 103 | Alexander Hunold | Programmer | IT | Southlake | 2014 Jabbberwocky Rd |
| 104 | Bruce Ernst | Programmer | IT | Southlake | 2014 Jabbberwocky Rd |
| 107 | Diana Lorentz | Programmer | IT | Southlake | 2014 Jabbberwocky Rd |
| 124 | Kevin Mourgos | Stock Manager | Shipping | South San Francisco | 2011 Interiors Blvd |
| 141 | Trenna Rajs | Stock Clerk | Shipping | South San Francisco | 2011 Interiors Blvd |
| 142 | Curtis Davies | Stock Clerk | Shipping | South San Francisco | 2011 Interiors Blvd |
| 143 | Randall Matos | Stock Clerk | Shipping | South San Francisco | 2011 Interiors Blvd |
| 144 | Peter Vargas | Stock Clerk | Shipping | South San Francisco | 2011 Interiors Blvd |
| 200 | Jennifer Whalen | Administration Assistant | Administration | Seattle | 2004 Charade Rd |
| 100 | Steven King | President | Executive | Seattle | 2004 Charade Rd |
| 101 | Neena Kochhar | Administration Vice President | Executive | Seattle | 2004 Charade Rd |
| 102 | Lex De Haan | Administration Vice President | Executive | Seattle | 2004 Charade Rd |
| 205 | Shelley Higgins | Accounting Manager | Accounting | Seattle | 2004 Charade Rd |
| 206 | William Gietz | Public Accountant | Accounting | Seattle | 2004 Charade Rd |
| 201 | Michael Hartstein | Marketing Manager | Marketing | Toronto | 460 Bloor St. W. |
| 202 | Pat Fay | Marketing Representative | Marketing | Toronto | 460 Bloor St. W. |
| 149 | Eleni Zlotkey | Sales Manager | Sales | Oxford | Magdalen Centre, The Oxford Science Park |
| 174 | Ellen Abel | Sales Representative | Sales | Oxford | Magdalen Centre, The Oxford Science Park |
| 176 | Jonathon Taylor | Sales Representative | Sales | Oxford | Magdalen Centre, The Oxford Science Park |

Jawab :

Screenshot

```

24060121130060> select e.employee_id,
-> concat(concat(e.first_name, ' '), e.last_name) as "name",
-> j.job_title, d.department_name, l.city, l.street_address
-> from employees e, jobs j, departments d, locations l
-> where e.department_id = d.department_id
-> AND e.job_id = j.job_id
-> AND d.location_id = l.location_id;

```

| employee_id | name | job_title | department_name | city | street_address |
|-------------|-------------------|-------------------------------|-----------------|---------------------|--|
| 103 | Alexander Hunold | Programmer | IT | Southlake | 2014 Jabbberwocky Rd |
| 104 | Bruce Ernst | Programmer | IT | Southlake | 2014 Jabbberwocky Rd |
| 107 | Diana Lorentz | Programmer | IT | Southlake | 2014 Jabbberwocky Rd |
| 124 | Kevin Mourgos | Stock Manager | Shipping | South San Francisco | 2011 Interiors Blvd |
| 141 | Trenna Rajs | Stock Clerk | Shipping | South San Francisco | 2011 Interiors Blvd |
| 142 | Curtis Davies | Stock Clerk | Shipping | South San Francisco | 2011 Interiors Blvd |
| 143 | Randall Matos | Stock Clerk | Shipping | South San Francisco | 2011 Interiors Blvd |
| 144 | Peter Vargas | Stock Clerk | Shipping | South San Francisco | 2011 Interiors Blvd |
| 200 | Jennifer Whalen | Administration Assistant | Administration | Seattle | 2004 Charade Rd |
| 100 | Steven King | President | Executive | Seattle | 2004 Charade Rd |
| 101 | Neena Kochhar | Administration Vice President | Executive | Seattle | 2004 Charade Rd |
| 102 | Lex De Haan | Administration Vice President | Executive | Seattle | 2004 Charade Rd |
| 205 | Shelley Higgins | Accounting Manager | Accounting | Seattle | 2004 Charade Rd |
| 206 | William Gietz | Public Accountant | Accounting | Seattle | 2004 Charade Rd |
| 201 | Michael Hartstein | Marketing Manager | Marketing | Toronto | 460 Bloor St. W. |
| 202 | Pat Fay | Marketing Representative | Marketing | Toronto | 460 Bloor St. W. |
| 149 | Eleni Zlotkey | Sales Manager | Sales | Oxford | Magdalen Centre, The Oxford Science Park |
| 174 | Ellen Abel | Sales Representative | Sales | Oxford | Magdalen Centre, The Oxford Science Park |
| 176 | Jonathon Taylor | Sales Representative | Sales | Oxford | Magdalen Centre, The Oxford Science Park |

19 rows in set (0.01 sec)

Pembahasan

Untuk menampilkan data dari beberapa table maka digunakan alias. Kemudian untuk menampilkan nama lengkap employee digunakan fungsi **concat**. Dilakukan pula seleksi baris dengan menyamakan semua foreign key dari table terkait sehingga didapati hasil seperti gambar diatas.