# PAMANTASAN NG LUNGSOD NG MAYNILA

College of Information Systems and Technology Management

## Object Oriented Programming (OOP)

## DML and SELECT Command Activity

*A.Y. 2024- 2025*


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**BSCS 2-1**

**Professor Francis Atienza**

## Connect HR User

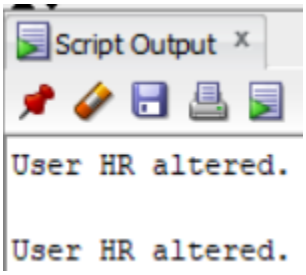
1. Use and connect to HR user (password is hr)

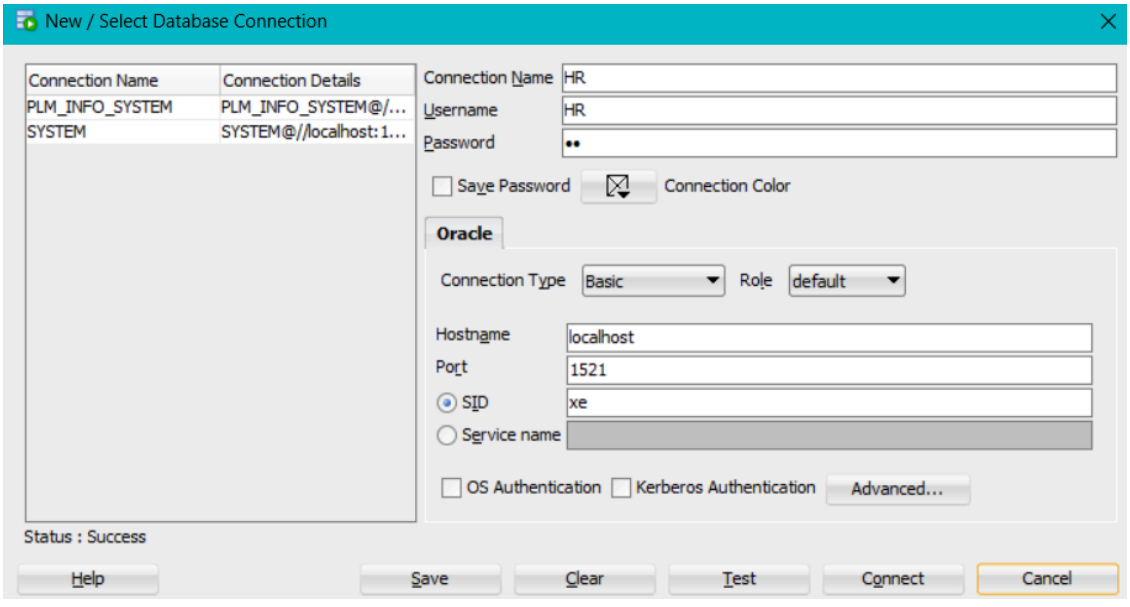
**Script:**

```
-- SYSTEM (to connect to the HR user, we need to unlock
the HR User and make a new password.)
-- Complications may arise such as ORA-28000

ALTER USER HR ACCOUNT UNLOCK;
ALTER USER HR IDENTIFIED BY hr;
```

**Outputs:**



## Questions

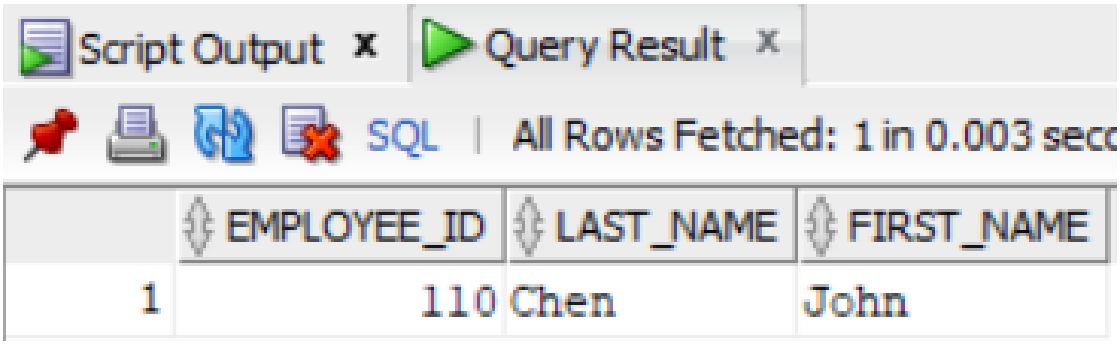
1. Display the employee id, surname and firstname whose employee id is equal to 110.

**Script:**

```
-- 1. Display the employee id, surname and firstname whose
employee id is equal to 110.

SELECT employee_id
      , last_name
      , first_name
  FROM employees
WHERE employee_id = 110;
```

**Outputs:**




2. Display the employee id, surname, firstname, manager id, job id and salary whose manager id is equal to 100.

**Script:**

```
-- 2. Display the employee id, surname, firstname, manager id,
job id and salary whose manager id is equal to 100.

SELECT employee_id
      , last_name
      , first_name
      , manager_id
      , job_id
      , salary
  FROM employees
WHERE manager_id = 100;
```

**Outputs:**

Script Output | Query Result

SQL | All Rows Fetched: 14 in 0.028 seconds

| | EMPLOYEE_ID | LAST_NAME | FIRST_NAME | MANAGER_ID | JOB_ID | SALARY |
|---|---|---|---|---|---|---|
| 1 | 101 | Kochhar | Neena | 100 | AD_VP | 17000 |
| 2 | 102 | De Haan | Lex | 100 | AD_VP | 17000 |
| 3 | 114 | Raphaely | Den | 100 | PU_MAN | 11000 |
| 4 | 120 | Weiss | Matthew | 100 | ST_MAN | 8000 |
| 5 | 121 | Fripp | Adam | 100 | ST_MAN | 8200 |
| 6 | 122 | Kaufling | Payam | 100 | ST_MAN | 7900 |
| 7 | 123 | Vollman | Shanta | 100 | ST_MAN | 6500 |
| 8 | 124 | Mourgos | Kevin | 100 | ST_MAN | 5800 |
| 9 | 145 | Russell | John | 100 | SA_MAN | 14000 |
| 10 | 146 | Partners | Karen | 100 | SA_MAN | 13500 |
| 11 | 147 | Errazuriz | Alberto | 100 | SA_MAN | 12000 |
| 12 | 148 | Cambrault | Gerald | 100 | SA_MAN | 11000 |
| 13 | 149 | Zlotkey | Eleni | 100 | SA_MAN | 10500 |
| 14 | 201 | Hartstein | Michael | 100 | MK_MAN | 13000 |

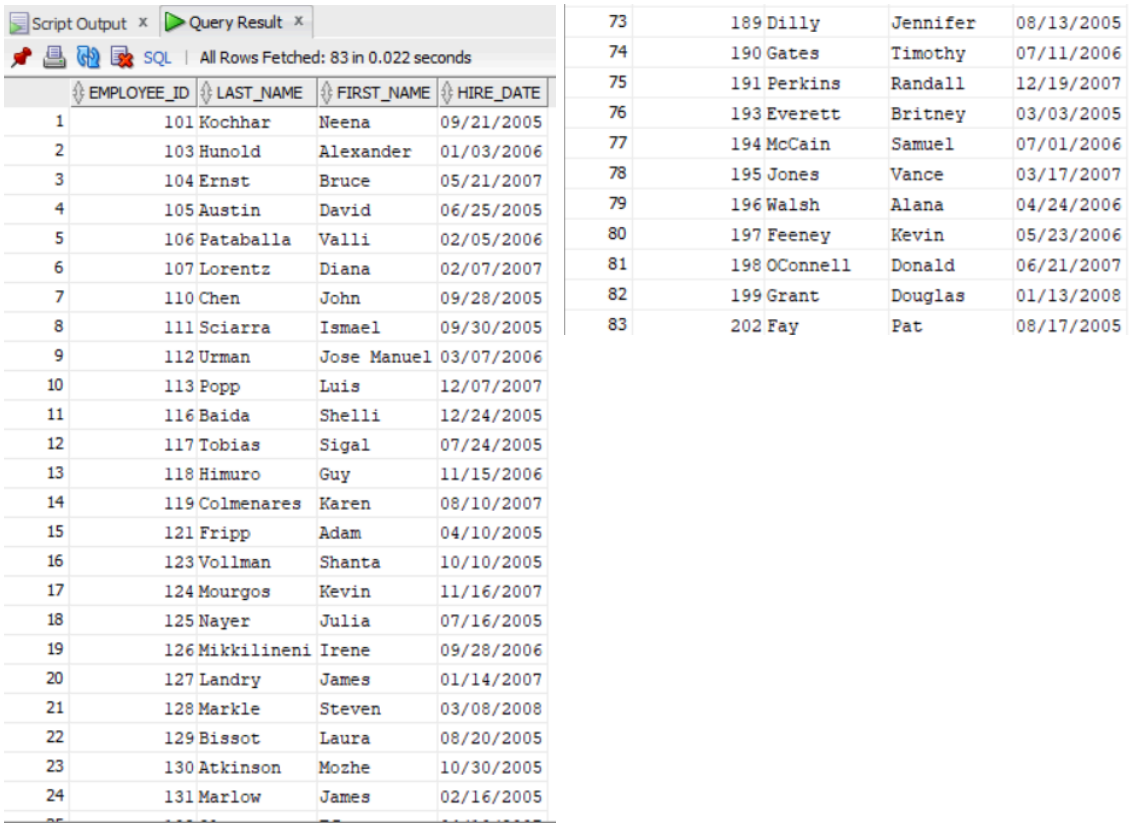
3. Display the employee id, surname, firstname and hire date of all employees whose hire dates are between January 01, 2005 and Dec. 31, 2010.

**Script:**

```
-- 3. Display the employee id, surname, firstname and hire date
of all employees whose hire dates are between January 01, 2005
and Dec. 31, 2010.

SELECT employee_id
      , last_name
      , first_name
      , hire_date
  FROM employees
WHERE hire_date BETWEEN TO_DATE('01-01-2005', 'MM-DD-YYYY')
  AND TO_DATE('12-31-2010', 'MM-DD-YYYY');
```

**Outputs:**



Script Output | Query Result

SQL | All Rows Fetched: 83 in 0.022 seconds

| | EMPLOYEE_ID | LAST_NAME | FIRST_NAME | HIRE_DATE |
|---|---|---|---|---|
| 1 | 101 | Kochhar | Neena | 09/21/2005 |
| 2 | 103 | Hunold | Alexander | 01/03/2006 |
| 3 | 104 | Ernst | Bruce | 05/21/2007 |
| 4 | 105 | Austin | David | 06/25/2005 |
| 5 | 106 | Pataballa | Valli | 02/05/2006 |
| 6 | 107 | Lorentz | Diana | 02/07/2007 |
| 7 | 110 | Chen | John | 09/28/2005 |
| 8 | 111 | Sciarra | Ismael | 09/30/2005 |
| 9 | 112 | Urman | Jose Manuel | 03/07/2006 |
| 10 | 113 | Popp | Luis | 12/07/2007 |
| 11 | 116 | Baida | Shelli | 12/24/2005 |
| 12 | 117 | Tobias | Sigal | 07/24/2005 |
| 13 | 118 | Himuro | Guy | 11/15/2006 |
| 14 | 119 | Colmenares | Karen | 08/10/2007 |
| 15 | 121 | Fripp | Adam | 04/10/2005 |
| 16 | 123 | Vollman | Shanta | 10/10/2005 |
| 17 | 124 | Mourgos | Kevin | 11/16/2007 |
| 18 | 125 | Nayer | Julia | 07/16/2005 |
| 19 | 126 | Mikkilineni | Irene | 09/28/2006 |
| 20 | 127 | Landry | James | 01/14/2007 |
| 21 | 128 | Markle | Steven | 03/08/2008 |
| 22 | 129 | Bissot | Laura | 08/20/2005 |
| 23 | 130 | Atkinson | Mozhe | 10/30/2005 |
| 24 | 131 | Marlow | James | 02/16/2005 |
| 73 | 189 | Dilly | Jennifer | 08/13/2005 |
| 74 | 190 | Gates | Timothy | 07/11/2006 |
| 75 | 191 | Perkins | Randall | 12/19/2007 |
| 76 | 193 | Everett | Britney | 03/03/2005 |
| 77 | 194 | McCain | Samuel | 07/01/2006 |
| 78 | 195 | Jones | Vance | 03/17/2007 |
| 79 | 196 | Walsh | Alana | 04/24/2006 |
| 80 | 197 | Feeney | Kevin | 05/23/2006 |
| 81 | 198 | OConnell | Donald | 06/21/2007 |
| 82 | 199 | Grant | Douglas | 01/13/2008 |
| 83 | 202 | Fay | Pat | 08/17/2005 |

4. Display all fields of hr.employees whose salaries are greater or equal to 10,000.

**Script:**

```
-- 4. Display all fields of hr.employees whose salaries are
greater or equal to 10,000.

SELECT *
  FROM hr.employees
WHERE salary >= 10000;
```

**Outputs:**

Script Output | Query Result

SQL | All Rows Fetched: 19 in 0.015 seconds

| | EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL | PHONE_NUMBER | HIRE_DATE | JOB_ID | SALARY | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 100 | Steven | King | SKING | 515.123.4567 | 06/17/2003 | AD_PRES | 24000 | (null) | (null) | 90 |
| 2 | 101 | Neena | Kochhar | NKOCHHAR | 515.123.4568 | 09/21/2005 | AD_VP | 17000 | (null) | 100 | 90 |
| 3 | 102 | Lex | De Haan | LDEHAAN | 515.123.4569 | 01/13/2001 | AD_VP | 17000 | (null) | 100 | 90 |
| 4 | 108 | Nancy | Greenberg | NGREENBE | 515.124.4569 | 08/17/2002 | FI_MGR | 12008 | (null) | 101 | 100 |
| 5 | 114 | Den | Raphaely | DRAPHEAL | 515.127.4561 | 12/07/2002 | PU_MAN | 11000 | (null) | 100 | 30 |
| 6 | 145 | John | Russell | JRUSSEL | 011.44.1344.429268 | 10/01/2004 | SA_MAN | 14000 | 0.4 | 100 | 80 |
| 7 | 146 | Karen | Partners | KPARTNER | 011.44.1344.467268 | 01/05/2005 | SA_MAN | 13500 | 0.3 | 100 | 80 |
| 8 | 147 | Alberto | Errazuriz | AERRAZUR | 011.44.1344.429278 | 03/10/2005 | SA_MAN | 12000 | 0.3 | 100 | 80 |
| 9 | 148 | Gerald | Cambrault | GCAMBRAU | 011.44.1344.619268 | 10/15/2007 | SA_MAN | 11000 | 0.3 | 100 | 80 |
| 10 | 149 | Eleni | Zlotkey | EZLOTKEY | 011.44.1344.429018 | 01/29/2008 | SA_MAN | 10500 | 0.2 | 100 | 80 |
| 11 | 150 | Peter | Tucker | PTUCKER | 011.44.1344.129268 | 01/30/2005 | SA_REP | 10000 | 0.3 | 145 | 80 |
| 12 | 156 | Janette | King | JKING | 011.44.1345.429268 | 01/30/2004 | SA_REP | 10000 | 0.35 | 146 | 80 |
| 13 | 162 | Clara | Vishney | CVISHNEY | 011.44.1346.129268 | 11/11/2005 | SA_REP | 10500 | 0.25 | 147 | 80 |
| 14 | 168 | Lisa | Ozer | LOZER | 011.44.1343.929268 | 03/11/2005 | SA_REP | 11500 | 0.25 | 148 | 80 |
| 15 | 169 | Harrison | Bloom | HBLOOM | 011.44.1343.829268 | 03/23/2006 | SA_REP | 10000 | 0.2 | 148 | 80 |
| 16 | 174 | Ellen | Abel | EABEL | 011.44.1644.429267 | 05/11/2004 | SA_REP | 11000 | 0.3 | 149 | 80 |
| 17 | 201 | Michael | Hartstein | MHARTSTE | 515.123.5555 | 02/17/2004 | MK_MAN | 13000 | (null) | 100 | 20 |
| 18 | 204 | Hermann | Baer | HBAER | 515.123.8888 | 06/07/2002 | PR_REP | 10000 | (null) | 101 | 70 |
| 19 | 205 | Shelley | Higgins | SHIGGINS | 515.123.8080 | 06/07/2002 | AC_MGR | 12008 | (null) | 101 | 110 |

5. Display the employee id, surname, firstname, hire date and salary of all employees whose hire dates are between January 01, 2020 and Dec. 31, 2024 or salaries are in the range of 100 to 15000.

**Script:**

```
-- 5. Display the employee id, surname, firstname, hire date and
salary of all employees whose hire dates are between January 01,
2020 and Dec. 31, 2024 or salaries are in the range of 100 to
15000.

SELECT employee_id
      , last_name
      , first_name
      , hire_date
      , salary
  FROM employees
WHERE (hire_date BETWEEN TO_DATE('01-01-2020', 'MM-DD-YYYY') AND
TO_DATE('12-31-2024', 'MM-DD-YYYY'))
  OR (salary BETWEEN 100 AND 15000);
```

**Outputs:**

SQL | Fetched 50 rows in 0.009 seconds

| | EMPLOYEE_ID | LAST_NAME | FIRST_NAME | HIRE_DATE | SALARY |
|---|---|---|---|---|---|
| 1 | 103 | Hunold | Alexander | 01/03/2006 | 9000 |
| 2 | 104 | Ernst | Bruce | 05/21/2007 | 6000 |
| 3 | 105 | Austin | David | 06/25/2005 | 4800 |
| 4 | 106 | Pataballa | Valli | 02/05/2006 | 4800 |
| 5 | 107 | Lorentz | Diana | 02/07/2007 | 4200 |
| 6 | 108 | Greenberg | Nancy | 08/17/2002 | 12008 |
| 7 | 109 | Faviet | Daniel | 08/16/2002 | 9000 |
| 8 | 110 | Chen | John | 09/28/2005 | 8200 |
| 9 | 111 | Sciarra | Ismael | 09/30/2005 | 7700 |
| 10 | 112 | Urman | Jose Manuel | 03/07/2006 | 7800 |
| 11 | 113 | Popp | Luis | 12/07/2007 | 6900 |
| 12 | 114 | Raphaely | Den | 12/07/2002 | 11000 |
| 13 | 115 | Khoo | Alexander | 05/18/2003 | 3100 |
| 14 | 116 | Baida | Shelli | 12/24/2005 | 2900 |
| 15 | 117 | Tobias | Sigal | 07/24/2005 | 2800 |
| 16 | 118 | Himuro | Guy | 11/15/2006 | 2600 |
| 17 | 119 | Colmenares | Karen | 08/10/2007 | 2500 |
| 18 | 120 | Weiss | Matthew | 07/18/2004 | 8000 |
| 19 | 121 | Fripp | Adam | 04/10/2005 | 8200 |
| 20 | 122 | Kaufling | Payam | 05/01/2003 | 7900 |
| 21 | 123 | Vollman | Shanta | 10/10/2005 | 6500 |
| 22 | 124 | Mourgos | Kevin | 11/16/2007 | 5800 |
| 23 | 125 | Nayer | Julia | 07/16/2005 | 3200 |
| 24 | 126 | Mikkilineni | Irene | 09/28/2006 | 2700 |

| | | | | | |
|---|---|---|---|---|---|
| 96 | 198 | OConnell | Donald | 06/21/2007 | 2600 |
| 97 | 199 | Grant | Douglas | 01/13/2008 | 2600 |
| 98 | 200 | Whalen | Jennifer | 09/17/2003 | 4400 |
| 99 | 201 | Hartstein | Michael | 02/17/2004 | 13000 |
| 100 | 202 | Fay | Pat | 08/17/2005 | 6000 |
| 101 | 203 | Mavris | Susan | 06/07/2002 | 6500 |
| 102 | 204 | Baer | Hermann | 06/07/2002 | 10000 |
| 103 | 205 | Higgins | Shelley | 06/07/2002 | 12008 |
| 104 | 206 | Gietz | William | 06/07/2002 | 8300 |

6. Display the employee id, surname, firstname, hire date, salary, job id and department id of all employees whose job ids contain a string ‘CLERK’ and department ids equal to 10,20,30,40 and 50.

**Script:**

```
-- 6. Display the employee id, surname, firstname, hire date,
salary, job id and department id of all employees whose job ids
contain a string ‘CLERK’ and department ids equal to 10,20,30,40
and 50.

SELECT employee_id
      , last_name
      , first_name
      , hire_date
      , salary
      , job_id
      , department_id
  FROM employees
WHERE job_id LIKE '%CLERK%'
  AND department_id IN (10, 20, 30, 40, 50);
```

**Outputs:**

Script Output | Query Result

SQL | All Rows Fetched: 45 in 0.006 seconds

| | EMPLOYEE_ID | LAST_NAME | FIRST_NAME | HIRE_DATE | SALARY | JOB_ID | DEPARTMENT_ID |
|---|---|---|---|---|---|---|---|
| 1 | 115 | Khoo | Alexander | 05/18/2003 | 3100 | PU_CLERK | 30 |
| 2 | 116 | Baida | Shelli | 12/24/2005 | 2900 | PU_CLERK | 30 |
| 3 | 117 | Tobias | Sigal | 07/24/2005 | 2800 | PU_CLERK | 30 |
| 4 | 118 | Himuro | Guy | 11/15/2006 | 2600 | PU_CLERK | 30 |
| 5 | 119 | Colmenares | Karen | 08/10/2007 | 2500 | PU_CLERK | 30 |
| 6 | 125 | Nayer | Julia | 07/16/2005 | 3200 | ST_CLERK | 50 |
| 7 | 126 | Mikkilineni | Irene | 09/28/2006 | 2700 | ST_CLERK | 50 |
| 8 | 127 | Landry | James | 01/14/2007 | 2400 | ST_CLERK | 50 |
| 9 | 128 | Markle | Steven | 03/08/2008 | 2200 | ST_CLERK | 50 |
| 10 | 129 | Bissot | Laura | 08/20/2005 | 3300 | ST_CLERK | 50 |
| 11 | 130 | Atkinson | Mozhe | 10/30/2005 | 2800 | ST_CLERK | 50 |
| 12 | 131 | Marlow | James | 02/16/2005 | 2500 | ST_CLERK | 50 |
| 13 | 132 | Olson | TJ | 04/10/2007 | 2100 | ST_CLERK | 50 |
| 14 | 133 | Mallin | Jason | 06/14/2004 | 3300 | ST_CLERK | 50 |
| 15 | 134 | Rogers | Michael | 08/26/2006 | 2900 | ST_CLERK | 50 |
| 16 | 135 | Gee | Ki | 12/12/2007 | 2400 | ST_CLERK | 50 |
| 17 | 136 | Philtanker | Hazel | 02/06/2008 | 2200 | ST_CLERK | 50 |
| 18 | 137 | Ladwig | Renske | 07/14/2003 | 3600 | ST_CLERK | 50 |
| 19 | 138 | Stiles | Stephen | 10/26/2005 | 3200 | ST_CLERK | 50 |
| 20 | 139 | Seo | John | 02/12/2006 | 2700 | ST_CLERK | 50 |
| 21 | 140 | Patel | Joshua | 04/06/2006 | 2500 | ST_CLERK | 50 |
| 22 | 141 | Rajs | Trenna | 10/17/2003 | 3500 | ST_CLERK | 50 |
| 23 | 142 | Davies | Curtis | 01/29/2005 | 3100 | ST_CLERK | 50 |
| 24 | 143 | Matos | Randall | 03/15/2006 | 2600 | ST_CLERK | 50 |
| 25 | 144 | Vargas | Peter | 07/09/2006 | 2500 | ST_CLERK | 50 |
| 26 | 180 | Taylor | Winston | 01/24/2006 | 3200 | SH_CLERK | 50 |
| 27 | 181 | Fleaur | Jean | 02/23/2006 | 3100 | SH_CLERK | 50 |
| 28 | 182 | Sullivan | Martha | 06/21/2007 | 2500 | SH_CLERK | 50 |
| 29 | 183 | Geoni | Girard | 02/03/2008 | 2800 | SH_CLERK | 50 |
| 30 | 184 | Sarchand | Nandita | 01/27/2004 | 4200 | SH_CLERK | 50 |
| 31 | 185 | Bull | Alexis | 02/20/2005 | 4100 | SH_CLERK | 50 |
| 32 | 186 | Dellinger | Julia | 06/24/2006 | 3400 | SH_CLERK | 50 |
| 33 | 187 | Cabrio | Anthony | 02/07/2007 | 3000 | SH_CLERK | 50 |
| 34 | 188 | Chung | Kelly | 06/14/2005 | 3800 | SH_CLERK | 50 |
| 35 | 189 | Dilly | Jennifer | 08/13/2005 | 3600 | SH_CLERK | 50 |
| 36 | 190 | Gates | Timothy | 07/11/2006 | 2900 | SH_CLERK | 50 |
| 37 | 191 | Perkins | Randall | 12/19/2007 | 2500 | SH_CLERK | 50 |
| 38 | 192 | Bell | Sarah | 02/04/2004 | 4000 | SH_CLERK | 50 |
| 39 | 193 | Everett | Britney | 03/03/2005 | 3900 | SH_CLERK | 50 |
| 40 | 194 | McCain | Samuel | 07/01/2006 | 3200 | SH_CLERK | 50 |
| 41 | 195 | Jones | Vance | 03/17/2007 | 2800 | SH_CLERK | 50 |
| 42 | 196 | Walsh | Alana | 04/24/2006 | 3100 | SH_CLERK | 50 |
| 43 | 197 | Feeney | Kevin | 05/23/2006 | 3000 | SH_CLERK | 50 |
| 44 | 198 | OConnell | Donald | 06/21/2007 | 2600 | SH_CLERK | 50 |
| 45 | 199 | Grant | Douglas | 01/13/2008 | 2600 | SH_CLERK | 50 |

7. Display the employee id, surname, firstname, hire date, salary, job id, department id and the below condition (name the derived column as Remarks):

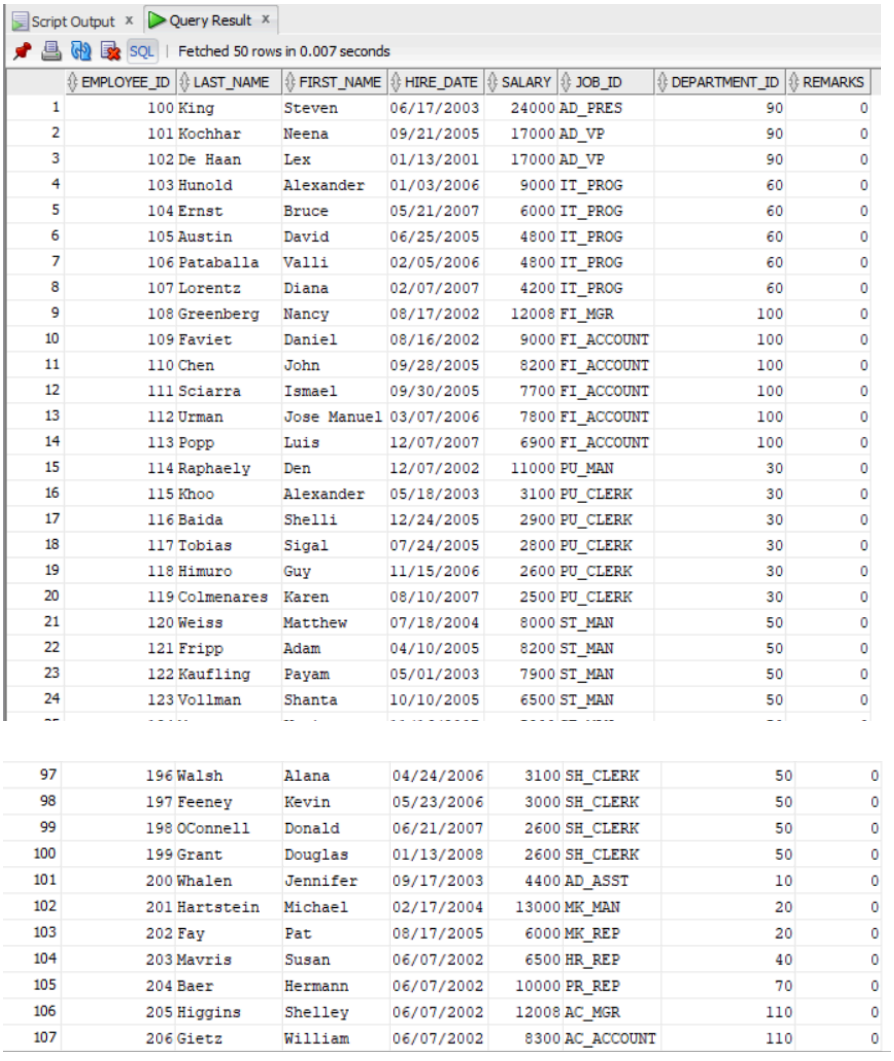
   If commission_pct is null then make it 0 else display the commission_pct.

**Script:**

```
-- 7. Display the employee id, surname, firstname, hire date,
salary, job id, department id and the below condition (name the
derived column as Remarks):
-- If commission_pct is null then make it 0 else display the
commission_pct.

SELECT employee_id
      , last_name
      , first_name
      , hire_date
      , salary
      , job_id
      , department_id
      , NVL(commission_pct, 0)
  AS Remarks
FROM employees;
```

**Outputs:**



Script Output | Query Result

Fetched 50 rows in 0.007 seconds

| | EMPLOYEE_ID | LAST_NAME | FIRST_NAME | HIRE_DATE | SALARY | JOB_ID | DEPARTMENT_ID | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 1 | 100 | King | Steven | 06/17/2003 | 24000 | AD_PRES | 90 | 0 |
| 2 | 101 | Kochhar | Neena | 09/21/2005 | 17000 | AD_VP | 90 | 0 |
| 3 | 102 | De Haan | Lex | 01/13/2001 | 17000 | AD_VP | 90 | 0 |
| 4 | 103 | Hunold | Alexander | 01/03/2006 | 9000 | IT_PROG | 60 | 0 |
| 5 | 104 | Ernst | Bruce | 05/21/2007 | 6000 | IT_PROG | 60 | 0 |
| 6 | 105 | Austin | David | 06/25/2005 | 4800 | IT_PROG | 60 | 0 |
| 7 | 106 | Pataballa | Valli | 02/05/2006 | 4800 | IT_PROG | 60 | 0 |
| 8 | 107 | Lorentz | Diana | 02/07/2007 | 4200 | IT_PROG | 60 | 0 |
| 9 | 108 | Greenberg | Nancy | 08/17/2002 | 12008 | FI_MGR | 100 | 0 |
| 10 | 109 | Faviet | Daniel | 08/16/2002 | 9000 | FI_ACCOUNT | 100 | 0 |
| 11 | 110 | Chen | John | 09/28/2005 | 8200 | FI_ACCOUNT | 100 | 0 |
| 12 | 111 | Sciarra | Ismael | 09/30/2005 | 7700 | FI_ACCOUNT | 100 | 0 |
| 13 | 112 | Urman | Jose Manuel | 03/07/2006 | 7800 | FI_ACCOUNT | 100 | 0 |
| 14 | 113 | Popp | Luis | 12/07/2007 | 6900 | FI_ACCOUNT | 100 | 0 |
| 15 | 114 | Raphaely | Den | 12/07/2002 | 11000 | PU_MAN | 30 | 0 |
| 16 | 115 | Khoo | Alexander | 05/18/2003 | 3100 | PU_CLERK | 30 | 0 |
| 17 | 116 | Baida | Shelli | 12/24/2005 | 2900 | PU_CLERK | 30 | 0 |
| 18 | 117 | Tobias | Sigal | 07/24/2005 | 2800 | PU_CLERK | 30 | 0 |
| 19 | 118 | Himuro | Guy | 11/15/2006 | 2600 | PU_CLERK | 30 | 0 |
| 20 | 119 | Colmenares | Karen | 08/10/2007 | 2500 | PU_CLERK | 30 | 0 |
| 21 | 120 | Weiss | Matthew | 07/18/2004 | 8000 | ST_MAN | 50 | 0 |
| 22 | 121 | Fripp | Adam | 04/10/2005 | 8200 | ST_MAN | 50 | 0 |
| 23 | 122 | Kaufling | Payam | 05/01/2003 | 7900 | ST_MAN | 50 | 0 |
| 24 | 123 | Vollman | Shanta | 10/10/2005 | 6500 | ST_MAN | 50 | 0 |
| 97 | 196 | Walsh | Alana | 04/24/2006 | 3100 | SH_CLERK | 50 | 0 |
| 98 | 197 | Feeney | Kevin | 05/23/2006 | 3000 | SH_CLERK | 50 | 0 |
| 99 | 198 | OConnell | Donald | 06/21/2007 | 2600 | SH_CLERK | 50 | 0 |
| 100 | 199 | Grant | Douglas | 01/13/2008 | 2600 | SH_CLERK | 50 | 0 |
| 101 | 200 | Whalen | Jennifer | 09/17/2003 | 4400 | AD_ASST | 10 | 0 |
| 102 | 201 | Hartstein | Michael | 02/17/2004 | 13000 | MK_MAN | 20 | 0 |
| 103 | 202 | Fay | Pat | 08/17/2005 | 6000 | MK_REP | 20 | 0 |
| 104 | 203 | Mavris | Susan | 06/07/2002 | 6500 | HR_REP | 40 | 0 |
| 105 | 204 | Baer | Hermann | 06/07/2002 | 10000 | PR_REP | 70 | 0 |
| 106 | 205 | Higgins | Shelley | 06/07/2002 | 12008 | AC_MGR | 110 | 0 |
| 107 | 206 | Gietz | William | 06/07/2002 | 8300 | AC_ACCOUNT | 110 | 0 |

8. Repeat question # 4 and add a derived column (alternale_email) by getting only the first 5 letters of an employee's surname and firstname. Concatenate this by adding '@plm.edu.ph'.

   Example: ATIEN_FRANC@plm_edu.ph

   Note: If there are surnames that contain space/s, delete it.

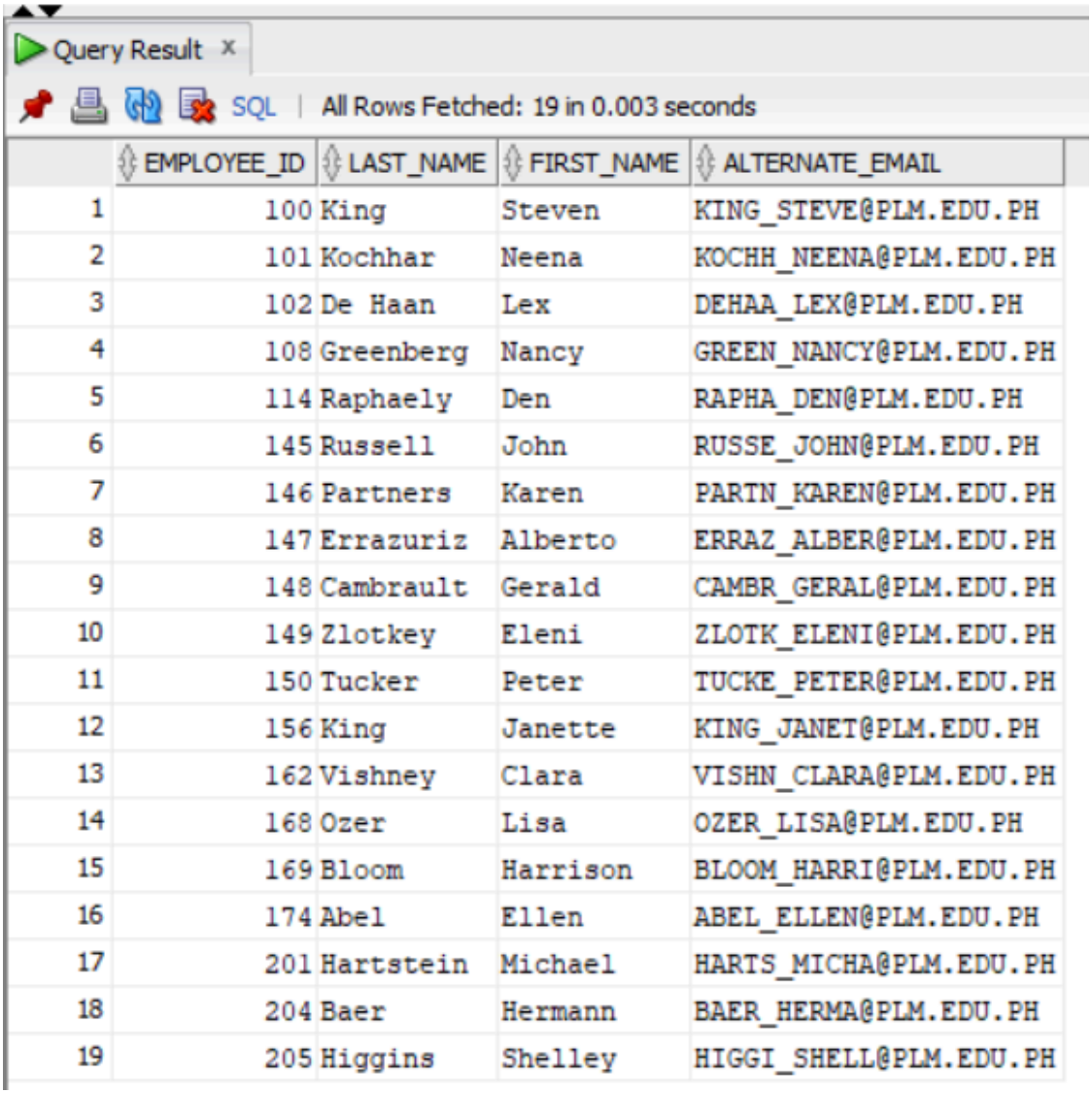
   Example: De Los Santos -> DELOS

**Script:**

```
-- 8. Repeat question # 4 and add a derived column
(alternale_email) by getting only the first 5 letters of an
employee's surname and firstname. Concatenate this by adding
'@plm.edu.ph'.

SELECT employee_id, last_name, first_name,
       UPPER(SUBSTR(REPLACE(last_name, ' ', ''), 1, 5) || '_' ||
       SUBSTR(first_name, 1, 5) || '@plm.edu.ph')
       AS alternate_email
  FROM hr.employees
WHERE salary >= 10000;
```

**Outputs:**




| | EMPLOYEE_ID | LAST_NAME | FIRST_NAME | ALTERNATE_EMAIL |
|---|---|---|---|---|
| 1 | 100 | King | Steven | KING_STEVE@PLM.EDU.PH |
| 2 | 101 | Kochhar | Neena | KOCHH_NEENA@PLM.EDU.PH |
| 3 | 102 | De Haan | Lex | DEHAA_LEX@PLM.EDU.PH |
| 4 | 108 | Greenberg | Nancy | GREEN_NANCY@PLM.EDU.PH |
| 5 | 114 | Raphaely | Den | RAPHA_DEN@PLM.EDU.PH |
| 6 | 145 | Russell | John | RUSSE_JOHN@PLM.EDU.PH |
| 7 | 146 | Partners | Karen | PARTN_KAREN@PLM.EDU.PH |
| 8 | 147 | Errazuriz | Alberto | ERRAZ_ALBER@PLM.EDU.PH |
| 9 | 148 | Cambrault | Gerald | CAMBR_GERAL@PLM.EDU.PH |
| 10 | 149 | Zlotkey | Eleni | ZLOTK_ELENI@PLM.EDU.PH |
| 11 | 150 | Tucker | Peter | TUCKE_PETER@PLM.EDU.PH |
| 12 | 156 | King | Janette | KING_JANET@PLM.EDU.PH |
| 13 | 162 | Vishney | Clara | VISHN_CLARA@PLM.EDU.PH |
| 14 | 168 | Ozer | Lisa | OZER_LISA@PLM.EDU.PH |
| 15 | 169 | Bloom | Harrison | BLOOM_HARRI@PLM.EDU.PH |
| 16 | 174 | Abel | Ellen | ABEL_ELLEN@PLM.EDU.PH |
| 17 | 201 | Hartstein | Michael | HARTS_MICHA@PLM.EDU.PH |
| 18 | 204 | Baer | Hermann | BAER_HERMA@PLM.EDU.PH |
| 19 | 205 | Higgins | Shelley | HIGGI_SHELL@PLM.EDU.PH |

9. Repeat question # 5 by adding a derived column (salary_increase) by increasing the employee's salary by 10%.

   Example: Employee's salary = 10,000 then salary_increase = 11,000.

**Script:**

```
-- 9. Repeat question # 5 by adding a derived column
(salary_increase) by increasing the employee's salary by 10%.
-- Example: Employee's salary = 10,000 then salary_increase =
11,000

 SELECT employee_id
        , last_name
        , first_name
        , hire_date
        , salary, job_id
        , department_id
        , salary * 1.10
    AS salary_increase
    FROM employees
  WHERE (hire_date BETWEEN TO_DATE('01-01-2020', 'MM-DD-YYYY')
AND TO_DATE('12-31-2024', 'MM-DD-YYYY'))
    OR (salary BETWEEN 100 AND 15000);
```

**Outputs:**

SQL | Fetched 50 rows in 0.004 seconds

| | EMPLOYEE_ID | LAST_NAME | FIRST_NAME | HIRE_DATE | SALARY | JOB_ID | DEPARTMENT_ID | SALARY_INCREASE |
|---|---|---|---|---|---|---|---|---|
| 1 | 103 | Hunold | Alexander | 01/03/2006 | 9000 | IT_PROG | 60 | 9900 |
| 2 | 104 | Ernst | Bruce | 05/21/2007 | 6000 | IT_PROG | 60 | 6600 |
| 3 | 105 | Austin | David | 06/25/2005 | 4800 | IT_PROG | 60 | 5280 |
| 4 | 106 | Pataballa | Valli | 02/05/2006 | 4800 | IT_PROG | 60 | 5280 |
| 5 | 107 | Lorentz | Diana | 02/07/2007 | 4200 | IT_PROG | 60 | 4620 |
| 6 | 108 | Greenberg | Nancy | 08/17/2002 | 12008 | FI_MGR | 100 | 13208.8 |
| 7 | 109 | Faviet | Daniel | 08/16/2002 | 9000 | FI_ACCOUNT | 100 | 9900 |
| 8 | 110 | Chen | John | 09/28/2005 | 8200 | FI_ACCOUNT | 100 | 9020 |
| 9 | 111 | Sciarra | Ismael | 09/30/2005 | 7700 | FI_ACCOUNT | 100 | 8470 |
| 10 | 112 | Urman | Jose Manuel | 03/07/2006 | 7800 | FI_ACCOUNT | 100 | 8580 |
| 11 | 113 | Popp | Luis | 12/07/2007 | 6900 | FI_ACCOUNT | 100 | 7590 |
| 12 | 114 | Raphaely | Den | 12/07/2002 | 11000 | PU_MAN | 30 | 12100 |
| 13 | 115 | Khoo | Alexander | 05/18/2003 | 3100 | PU_CLERK | 30 | 3410 |
| 14 | 116 | Baida | Shelli | 12/24/2005 | 2900 | PU_CLERK | 30 | 3190 |
| 15 | 117 | Tobias | Sigal | 07/24/2005 | 2800 | PU_CLERK | 30 | 3080 |
| 16 | 118 | Himuro | Guy | 11/15/2006 | 2600 | PU_CLERK | 30 | 2860 |
| 17 | 119 | Colmenares | Karen | 08/10/2007 | 2500 | PU_CLERK | 30 | 2750 |
| 18 | 120 | Weiss | Matthew | 07/18/2004 | 8000 | ST_MAN | 50 | 8800 |
| 19 | 121 | Fripp | Adam | 04/10/2005 | 8200 | ST_MAN | 50 | 9020 |
| 20 | 122 | Kaufling | Payam | 05/01/2003 | 7900 | ST_MAN | 50 | 8690 |
| 21 | 123 | Vollman | Shanta | 10/10/2005 | 6500 | ST_MAN | 50 | 7150 |
| 22 | 124 | Mourgos | Kevin | 11/16/2007 | 5800 | ST_MAN | 50 | 6380 |
| 23 | 125 | Nayer | Julia | 07/16/2005 | 3200 | ST_CLERK | 50 | 3520 |
| 24 | 126 | Mikkilineni | Irene | 09/28/2006 | 2700 | ST_CLERK | 50 | 2970 |

SQL | All Rows Fetched: 104 in 0.01 seconds

| | EMPLOYEE_ID | LAST_NAME | FIRST_NAME | HIRE_DATE | SALARY | JOB_ID | DEPARTMENT_ID | SALARY_INCREASE |
|---|---|---|---|---|---|---|---|---|
| 81 | 183 | Geoni | Girard | 02/03/2008 | 2800 | SH_CLERK | 50 | 3080 |
| 82 | 184 | Sarchand | Nandita | 01/27/2004 | 4200 | SH_CLERK | 50 | 4620 |
| 83 | 185 | Bull | Alexis | 02/20/2005 | 4100 | SH_CLERK | 50 | 4510 |
| 84 | 186 | Dellinger | Julia | 06/24/2006 | 3400 | SH_CLERK | 50 | 3740 |
| 85 | 187 | Cabrio | Anthony | 02/07/2007 | 3000 | SH_CLERK | 50 | 3300 |
| 86 | 188 | Chung | Kelly | 06/14/2005 | 3800 | SH_CLERK | 50 | 4180 |
| 87 | 189 | Dilly | Jennifer | 08/13/2005 | 3600 | SH_CLERK | 50 | 3960 |
| 88 | 190 | Gates | Timothy | 07/11/2006 | 2900 | SH_CLERK | 50 | 3190 |
| 89 | 191 | Perkins | Randall | 12/19/2007 | 2500 | SH_CLERK | 50 | 2750 |
| 90 | 192 | Bell | Sarah | 02/04/2004 | 4000 | SH_CLERK | 50 | 4400 |
| 91 | 193 | Everett | Britney | 03/03/2005 | 3900 | SH_CLERK | 50 | 4290 |
| 92 | 194 | McCain | Samuel | 07/01/2006 | 3200 | SH_CLERK | 50 | 3520 |
| 93 | 195 | Jones | Vance | 03/17/2007 | 2800 | SH_CLERK | 50 | 3080 |
| 94 | 196 | Walsh | Alana | 04/24/2006 | 3100 | SH_CLERK | 50 | 3410 |
| 95 | 197 | Feeney | Kevin | 05/23/2006 | 3000 | SH_CLERK | 50 | 3300 |
| 96 | 198 | OConnell | Donald | 06/21/2007 | 2600 | SH_CLERK | 50 | 2860 |
| 97 | 199 | Grant | Douglas | 01/13/2008 | 2600 | SH_CLERK | 50 | 2860 |
| 98 | 200 | Whalen | Jennifer | 09/17/2003 | 4400 | AD_ASST | 10 | 4840 |
| 99 | 201 | Hartstein | Michael | 02/17/2004 | 13000 | MK_MAN | 20 | 14300 |
| 100 | 202 | Fay | Pat | 08/17/2005 | 6000 | MK_REP | 20 | 6600 |
| 101 | 203 | Mavris | Susan | 06/07/2002 | 6500 | HR_REP | 40 | 7150 |
| 102 | 204 | Baer | Hermann | 06/07/2002 | 10000 | PR_REP | 70 | 11000 |
| 103 | 205 | Higgins | Shelley | 06/07/2002 | 12008 | AC_MGR | 110 | 13208.8 |
| 104 | 206 | Gietz | William | 06/07/2002 | 8300 | AC_ACCOUNT | 110 | 9130 |

10. Repeat question # 1and the output should have surnames and firstnames arranged ascendingly.

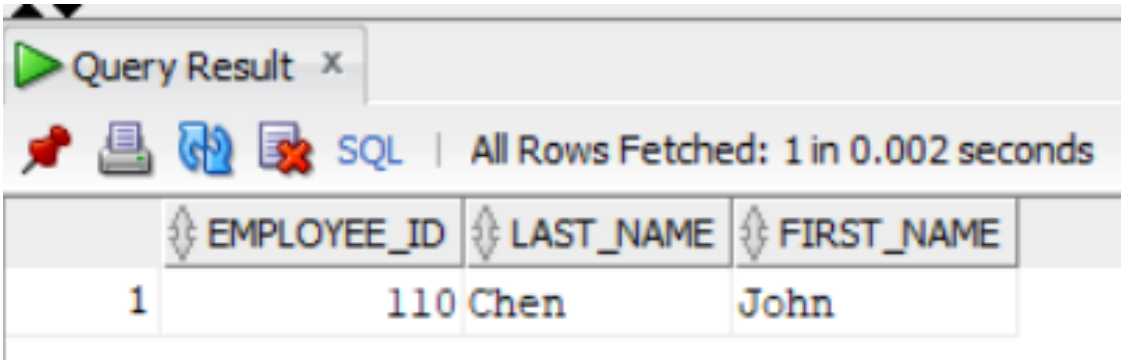
**Script:**

```
-- 10. Repeat question # 1and the output should have surnames and
firstnames arranged ascendingly.

SELECT employee_id, last_name, first_name
  FROM employees
 WHERE employee_id = 110
 ORDER BY last_name, first_name ASC;

COMMIT;
```

**Outputs:**



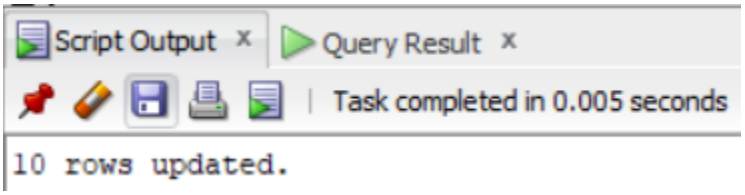

11. Modify the commission_pct of all employees to 0 whose manager id is equal to 101,102,103 and 104.

**Script:**

```
-- 11. Modify the commission_pct of all employees to 0 whose
manager id is equal to 101,102,103 and 104.

UPDATE employees
  SET commission_pct = 0
WHERE manager_id IN (101, 102, 103, 104);
```

**Outputs:**




12. Modify the salary of all employees to 20,000 whose job_ids are IT_PROG and commission_pct is NULL.

**Script:**

```
-- 12. Modify the salary of all employees to 20,000 whose  job_ids
are IT_PROG and commission_pct is NULL.

 UPDATE employees
   SET salary = 20000
 WHERE job_id = 'IT_PROG'
   AND commission_pct IS NULL;
```

**Outputs:**

0 rows updated.

| EMPLOYE... | FIRST_NA... | LAST_NAME | EMAIL | PHONE_N... | HIRE_DATE | JOB_ID | SALARY | COMMISS... | MANAGER... | DEPARTM... |
|---|---|---|---|---|---|---|---|---|---|---|

13. Modify  manager id to 100, salary to 25000 and email to ‘default@plm.edu.ph’ whose employee ids are 101 to 110 and their hire dates are between Jan, 01, 1900 to Dec. 31, 2024.

**Script:**

```
-- 13. Modify  manager id to 100, salary to 25000 and email to
‘default@plm.edu.ph’ whose employee ids are 101 to 110 and their
hire dates are between Jan, 01, 1900 to Dec. 31, 2024.

UPDATE employees
SET manager_id = 100,
    salary = 25000,
    email = 'default’ || employee_id || ‘@plm.edu.ph'
WHERE employee_id BETWEEN 101 AND 110
  AND hire_date BETWEEN TO_DATE('01-01-1900', 'MM-DD-YYYY')
                    AND TO_DATE('12-31-2024', 'MM-DD-YYYY');
```

**Outputs:**

All Rows Fetched: 10 in 0.002 seconds

| | EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL | PHONE_NUMBER | HIRE_DATE | JOB_ID | SALARY | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 101 | Neena | Kochhar | default101@plm.edu.ph | 515.123.4568 | 09/21/2005 | AD_VP | 25000 | (null) | 100 | 90 |
| 2 | 102 | Lex | De Haan | default102@plm.edu.ph | 515.123.4569 | 01/13/2001 | AD_VP | 25000 | (null) | 100 | 90 |
| 3 | 103 | Alexander | Hunold | default103@plm.edu.ph | 590.423.4567 | 01/03/2006 | IT_PROG | 25000 | 0 | 100 | 60 |
| 4 | 104 | Bruce | Ernst | default104@plm.edu.ph | 590.423.4568 | 05/21/2007 | IT_PROG | 25000 | 0 | 100 | 60 |
| 5 | 105 | David | Austin | default105@plm.edu.ph | 590.423.4569 | 06/25/2005 | IT_PROG | 25000 | 0 | 100 | 60 |
| 6 | 106 | Valli | Pataballa | default106@plm.edu.ph | 590.423.4560 | 02/05/2006 | IT_PROG | 25000 | 0 | 100 | 60 |
| 7 | 107 | Diana | Lorentz | default107@plm.edu.ph | 590.423.5567 | 02/07/2007 | IT_PROG | 25000 | 0 | 100 | 60 |
| 8 | 108 | Nancy | Greenberg | default108@plm.edu.ph | 515.124.4569 | 08/17/2002 | FI_MGR | 25000 | 0 | 100 | 100 |
| 9 | 109 | Daniel | Faviet | default109@plm.edu.ph | 515.124.4169 | 08/16/2002 | FI_ACCOUNT | 25000 | (null) | 100 | 100 |
| 10 | 110 | John | Chen | default110@plm.edu.ph | 515.124.4269 | 09/28/2005 | FI_ACCOUNT | 25000 | (null) | 100 | 100 |

14. Delete all employee records whose manager ids are 120,121,122 and123 or job_ids are ‘AD_PRES’.

**Script:**

```
-- 14. Delete all employee records whose manager ids are
120,121,122 and123 or job_ids  are ‘AD_PRES’.

DELETE
  FROM employees
WHERE manager_id IN (120, 121, 122, 123)
   OR job_id = 'AD_PRES';
```

**Outputs:**

```
Error starting at line : 141 in command -
DELETE
  FROM employees
WHERE manager_id IN (120, 121, 122, 123)
   OR job_id = 'AD_PRES'
Error report -
SQL Error: ORA-02292: integrity constraint (HR.DEPT_MGR_FK) violated - child record found
02292. 00000 - "integrity constraint (%s.%s) violated - child record found"
*Cause:    attempted to delete a parent key value that had a foreign
           dependency.
*Action:   delete dependencies first then parent or disable constraint.
```

**Explanation:**

This error occurs because the command is attempting to delete records that is also referenced in another table

15. Delete all employee records whose salaries are 0 to 5000 and department ids are 10,20,50,70 and 90.

**Script:**

```
-- 15. Delete all employee records whose salaries are 0 to 5000
and department ids are 10,20,50,70 and 90.

DELETE
  FROM employees
WHERE salary BETWEEN 0 AND 5000
  AND department_id IN (10, 20, 50, 70, 90);
```

**Outputs:**

```
Error starting at line : 156 in command -
DELETE
  FROM employees
WHERE salary BETWEEN 0 AND 5000
  AND department_id IN (10, 20, 50, 70, 90)
Error report -
SQL Error: ORA-02292: integrity constraint (HR.DEPT_MGR_FK) violated - child record found
02292. 00000 - "integrity constraint (%s.%s) violated - child record found"
*Cause:    attempted to delete a parent key value that had a foreign
           dependency.
*Action:   delete dependencies first then parent or disable constraint.
```

**Explanation:**

Similar to the error occurring in number 14, this occurred because the command is trying to delete records that must be in use in another table.

16. Delete all records in JOBS table whose job ids have the string ‘AD’ anywhere on it. (Provide the error message and explain.)

**Script:**

```
-- 16. Delete all records in JOBS table whose job ids have the
string ‘AD’ anywhere on it. (Provide the error message and
explain.)

DELETE FROM jobs
WHERE job_id LIKE '%AD%';
```

**Outputs:**

```
Error starting at line : 155 in command -
DELETE FROM jobs
WHERE job_id LIKE '%AD%'
Error report -
SQL Error: ORA-02292: integrity constraint (HR.EMP_JOB_FK) violated - child record found
02292. 00000 - "integrity constraint (%s.%s) violated - child record found"
*Cause:    attempted to delete a parent key value that had a foreign
           dependency.
*Action:   delete dependencies first then parent or disable constraint.
```

**Explanation:**

This error means that we are trying to delete a record in the JOBS table that is being

referenced by a foreign key in another table. The deletion is not allowed because of the foreign key constraint.

17. Delete all employee records whose employee ids are not equal to 131,132,133,134 and 150.

**Script:**

```
-- 17. Delete all employee records whose employee ids are not
equal to 131,132,133,134   and 150.

DELETE
  FROM hr.employees
WHERE employee_id NOT IN (131, 132, 133, 134, 150);
```

**Outputs:**

```
Error starting at line : 160 in command -
DELETE
  FROM employees
WHERE employee_id NOT IN (131, 132, 133, 134, 150)
Error report -
SQL Error: ORA-02292: integrity constraint (HR.DEPT_MGR_FK) violated - child record found
02292. 00000 - "integrity constraint (%s.%s) violated - child record found"
*Cause:    attempted to delete a parent key value that had a foreign
           dependency.
*Action:   delete dependencies first then parent or disable constraint.
```

**Explanation:**

These records are likely to have been used in another table, thus making them a foreign key constraints. This occurs if there are records in other tables that reference the employees being deleted through foreign key relationships. In such cases, Oracle prevents the deletion to maintain referential integrity, which ensures that all foreign key references in related tables are valid.

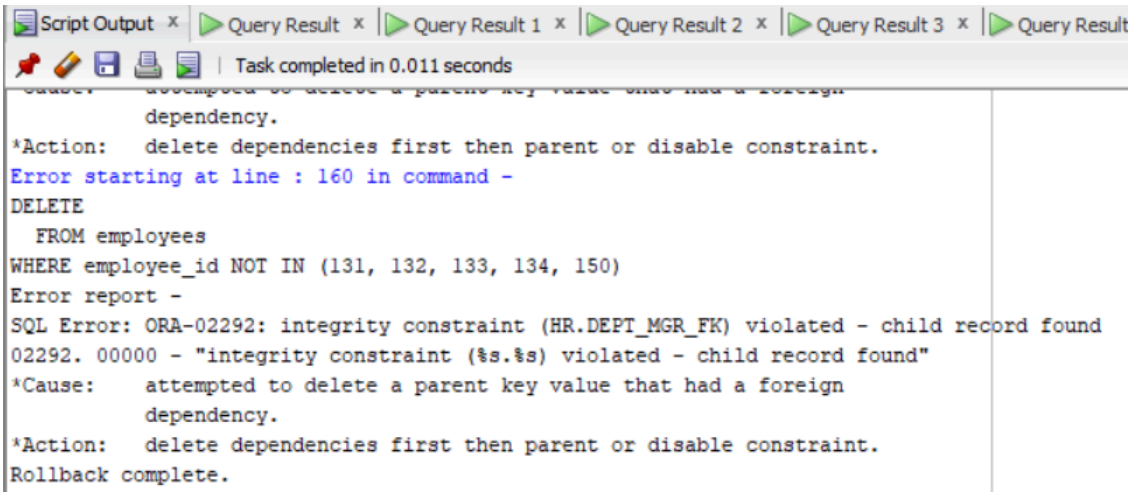
18. Rollback everything you made in #s 11 to 17.

**Script:**

```
-- 18. Rollback everything you made in #s 11 to 17.

ROLLBACK;
```

**Outputs:**




19. UPDATE hr.employees

SET commission_pct = 0

WHERE commission_pct IS NULL;

SELECT *

FROM hr.employees

WHERE commission_pct IS NULL;

ROLLBACK;

SELECT *

FROM hr.employees

WHERE commission_pct IS NULL;

***Explain what happened.***

**Outputs:**

The UPDATE command successfully set all NULL values in commission_pct to 0.

The first SELECT showed that there were no NULL values left, confirming the update.

The ROLLBACK command reverted the database to its previous state, restoring any NULL values in commission_pct.

The second SELECT confirmed that the NULL values were restored, showing the state of the database before the UPDATE.

The overall result of this sequence is that no permanent changes were made to the commission_pct values in the hr.employees table, as the ROLLBACK reverted the update. If you needed to make the changes permanent, you would have to commit the transaction with a COMMIT command after the update instead of rolling it back.

20. UPDATE hr.employees

```
        SET commission_pct = 0
 WHERE commission_pct IS NULL;
 SELECT *
        FROM hr.employees
 WHERE commission_pct IS NULL;
COMMIT;
SELECT *
        FROM hr.employees
 WHERE commission_pct IS NULL;
```

***Explain what happened.***

**Outputs:**

The UPDATE command successfully set all NULL values in the commission_pct field to 0.

The first SELECT confirmed that there were no NULL values left in the commission_pct column after the update, indicating that the update was effective.

The COMMIT command made those changes permanent in the database, ensuring that the 0

values are saved.

The second SELECT confirmed once again that there are no records with NULL values in the commission_pct column, reflecting the final state of the data after the update and commit.

The entire sequence resulted in successfully updating all NULL commission percentages to 0, with the changes being made permanent in the database. After executing these commands, the hr.employees table no longer has any NULL values in the commission_pct column, and this state is preserved due to the commit.