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Database Lab - Lab 02
In-Lab & Post-Lab Tasks

Q1)

The screenshot shows the SQL Developer interface with a 'Query Builder' tab. The query entered is: `SELECT SUM(SALARY) AS TOTAL_SALARY FROM EMPLOYEES;`. The 'Query Result' tab shows the execution status: 'All Rows Fetched: 1 in 0.04 seconds'. The result table has one column, 'TOTAL_SALARY', and one row with the value 691416.

TOTAL_SALARY
691416

Q2)

The screenshot shows the SQL Developer interface with a 'Query Builder' tab. The query entered is: `SELECT AVG(SALARY) AS AVG_SALARY FROM EMPLOYEES;`. The 'Query Result' tab shows the execution status: 'All Rows Fetched: 1 in 0.013 seconds'. The result table has one column, 'AVG_SALARY', and one row with the value 6461.831775700934579439252336448598130841.

AVG_SALARY
6461.831775700934579439252336448598130841

Q3)

The screenshot shows the SQL Developer interface with a 'Query Builder' tab. The query entered is: `SELECT MANAGER_ID, COUNT(*) AS NUMBER_EMPLOYEES FROM EMPLOYEES GROUP BY MANAGER_ID;`. The 'Query Result' tab shows the execution status: 'All Rows Fetched: 19 in 0.017 seconds'. The result table has two columns: 'MANAGER_ID' and 'NUMBER_EMPLOYEES'. It contains 19 rows of data.

MANAGER_ID	NUMBER_EMPLOYEES
(null)	1
100	14
123	8
120	8
121	8
147	6
108	5
148	6
149	6
205	1
102	1
201	1
101	5
114	5
124	8
145	6
146	6
103	4
122	8

Q4)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is: `SELECT * FROM EMPLOYEES WHERE SALARY = (SELECT MIN(SALARY) FROM EMPLOYEES);`. The Query Result pane shows one row of data.

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT
1	132 TJ	Olson	TJOLSON	650.124.8234	10-APR-07	ST_CLERK	2100	(null)

Q5)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is: `SELECT SYSDATE FROM DUAL;`. The Query Result pane shows one row of data.

SYSDATE
1 02-SEP-25

Q6)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is: `SELECT TO_CHAR(SYSDATE, 'DAY MONTH YYYY') FROM DUAL;`. The Query Result pane shows one row of data.

TO_CHAR(SYSDATE, 'DAY MONTH YYYY')
1 TUESDAY SEPTEMBER 2025

Q7)

Worksheet Query Builder

```
SELECT *
FROM EMPLOYEES
WHERE TO_CHAR(HIRE_DATE, 'Day') = 'Wednesday';
```

Query Result x

SQL | All Rows Fetched: 15 in 0.015 seconds

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMIS
1	101	Neena	Kochhar	NKOCHHAR	515.123.4568	21-SEP-05	AD_VP	17000	
2	107	Diana	Lorentz	DLORENTZ	590.423.5567	07-FEB-07	IT_PROG	4200	
3	110	John	Chen	JCHEN	515.124.4269	28-SEP-05	FI_ACCOUNT	8200	
4	118	Guy	Himuro	GHIMURO	515.127.4565	15-NOV-06	PU_CLERK	2600	
5	131	James	Marlow	JAMRLOW	650.124.7234	16-FEB-05	ST_CLERK	2500	
6	135	Ki	Gee	KGEE	650.127.1734	12-DEC-07	ST_CLERK	2400	
7	136	Hazel	Philtanker	HPHILTAN	650.127.1634	06-FEB-08	ST_CLERK	2200	
8	138	Stephen	Stiles	SSTILES	650.121.2034	26-OCT-05	ST_CLERK	3200	
9	143	Randall	Matos	RMATOS	650.121.2874	15-MAR-06	ST_CLERK	2600	
10	146	Karen	Partners	KPARTNER	011.44.1344.467268	05-JAN-05	SA_MAN	13500	
11	187	Anthony	Cabrio	ACABRIO	650.509.4876	07-FEB-07	SH_CLERK	3000	
12	191	Randall	Perkins	RPERKINS	650.505.4876	19-DEC-07	SH_CLERK	2500	
13	192	Sarah	Bell	SBELL	650.501.1876	04-FEB-04	SH_CLERK	4000	
14	200	Jennifer	Whalen	JWHALEN	515.123.4444	17-SEP-03	AD_ASST	4400	
15	202	Pat	Fay	PFAY	603.123.6666	17-AUG-05	MK_REP	6000	

Q8)

Worksheet Query Builder

```
SELECT MONTHS_BETWEEN('01-JAN-2025', '01-OCT-2024')
FROM DUAL;
```

Query Result x

SQL | All Rows Fetched: 1 in 0.012 seconds

	MONTHS_BETWEEN('01-JAN-2025','01-OCT-2024')
1	3

Q9)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is: `SELECT EMPLOYEE_ID, FIRST_NAME, LAST_NAME, TRUNC(MONTHS_BETWEEN(SYSDATE, HIRE_DATE)) AS MONTHS_WORK FROM EMPLOYEES;`. The Query Result pane shows 50 rows of data, with the first 25 rows displayed. The columns are EMPLOYEE_ID, FIRST_NAME, LAST_NAME, and MONTHS_WORK.

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	MONTHS_WORK
1	100 Steven	King	266
2	101 Neena	Kochhar	239
3	102 Lex	De Haan	295
4	103 Alexander	Hunold	236
5	104 Bruce	Ernst	219
6	105 David	Austin	242
7	106 Valli	Pataballa	234
8	107 Diana	Lorentz	222
9	108 Nancy	Greenberg	276
10	109 Daniel	Faviet	276
11	110 John	Chen	239
12	111 Ismael	Sciarra	239
13	112 Jose Manuel	Urman	233
14	113 Luis	Popp	212
15	114 Den	Raphaely	272
16	115 Alexander	Khoo	267
17	116 Shelli	Baida	236
18	117 Sigal	Tobias	241
19	118 Guy	Himuro	225
20	119 Karen	Colmenares	216
21	120 Matthew	Weiss	253
22	121 Adam	Fripp	244
23	122 Payam	Kaufling	268
24	123 Shanta	Vollman	238
25	124 Kevin	Mourgos	213

Q10)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is: `SELECT EMPLOYEE_ID, LAST_NAME, SUBSTR(LAST_NAME, 1, 5) AS SURNAME_FIRST5 FROM EMPLOYEES;`. The Query Result pane shows 50 rows of data, with the first 15 rows displayed. The columns are EMPLOYEE_ID, LAST_NAME, and SURNAME_FIRST5.

EMPLOYEE_ID	LAST_NAME	SURNAME_FIRST5
1	174 Abel	Abel
2	166 Ande	Ande
3	130 Atkinson	Atkin
4	105 Austin	Austi
5	204 Baer	Baer
6	116 Baida	Baida
7	167 Banda	Banda
8	172 Bates	Bates
9	192 Bell	Bell
10	151 Bernstein	Berns
11	129 Bissot	Bisso
12	169 Bloom	Bloom
13	185 Bull	Bull
14	187 Cabrio	Cabri
15	148 Cambrault	Cambr

Q11)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is: `SELECT LPAD(FIRST_NAME, 15, '*')` `FROM EMPLOYEES;`. The Query Result pane shows 50 rows fetched in 0.004 seconds. The first 15 rows are displayed, showing names padded with asterisks to a total length of 15 characters.

	LPAD(FIRST_NAME,15,'*')
1	*****Ellen
2	*****Sundar
3	*****Mozhe
4	*****David
5	*****Hermann
6	*****Shelli
7	*****Amit
8	*****Elizabeth
9	*****Sarah
10	*****David
11	*****Laura
12	*****Harrison
13	*****Alexis
14	*****Anthony
15	*****Gerald

Q12)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is: `SELECT LTRIM(' Oracle') AS TRIM_TEXT` `FROM DUAL;`. The Query Result pane shows all rows fetched in 0.003 seconds. The result is a single row with the value 'Oracle' in the column TRIM_TEXT.

	TRIM_TEXT
1	Oracle

Q13)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is:

```
SELECT EMPLOYEE_ID, INITCAP(FIRST_NAME || ' ' || LAST_NAME)
FROM EMPLOYEES;
```

The Query Result pane shows 15 rows of data. The first column is EMPLOYEE_ID and the second column is INITCAP(FIRST_NAME || ' ' || LAST_NAME).

EMPLOYEE_ID	INITCAP(FIRST_NAME ' ' LAST_NAME)
1	100 Steven King
2	101 Neena Kochhar
3	102 Lex De Haan
4	103 Alexander Hunold
5	104 Bruce Ernst
6	105 David Austin
7	106 Valli Pataballa
8	107 Diana Lorentz
9	108 Nancy Greenberg
10	109 Daniel Faviet
11	110 John Chen
12	111 Ismael Sciarra
13	112 Jose Manuel Urman
14	113 Luis Popp
15	114 Den Raphaely

Q14)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is:

```
SELECT NEXT_DAY('20-AUG-2022', 'MONDAY')
FROM DUAL;
```

The Query Result pane shows 1 row of data. The first column is NEXT_DAY('20-AUG-2022','MONDAY') and the value is 22-AUG-22.

NEXT_DAY('20-AUG-2022','MONDAY')
22-AUG-22

Q15)

The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is:

```
SELECT TO_CHAR(TO_DATE('25-DEC-2023', 'DD-MON-YYYY'), 'MM-YYYY')
FROM DUAL;
```

The Query Result pane shows 1 row of data. The first column is TO_CHAR(TO_DATE('25-DEC-2023','DD-MON-YYYY'),'MM-YYYY') and the value is 12-2023.

TO_CHAR(TO_DATE('25-DEC-2023','DD-MON-YYYY'),'MM-YYYY')
12-2023

Q16)

The screenshot shows a database query tool interface. The top bar includes a 'Welcome Page' tab and a 'hr' database connection. Below the toolbar, the 'Query Builder' tab is active, displaying the following SQL query:

```
SELECT DISTINCT SALARY
FROM EMPLOYEES
ORDER BY SALARY ASC;
```

The 'Query Result' tab is also visible, showing the results of the query. The results are displayed in a table with 15 rows and 1 column, 'SALARY'. The data is sorted in ascending order.

	SALARY
1	2100
2	2200
3	2400
4	2500
5	2600
6	2700
7	2800
8	2900
9	3000
10	3100
11	3200
12	3300
13	3400
14	3500
15	3600

Q17)

The screenshot shows a database query tool interface. The top bar includes a 'Welcome Page' tab and a 'hr' database connection. Below the toolbar, the 'Query Builder' tab is active, displaying the following SQL query:

```
SELECT EMPLOYEE_ID, SALARY, ROUND(SALARY, -2)
FROM EMPLOYEES;
```

The 'Query Result' tab is also visible, showing the results of the query. The results are displayed in a table with 15 rows and 3 columns: 'EMPLOYEE_ID', 'SALARY', and 'ROUND(SALARY, -2)'. The data is sorted in ascending order by 'SALARY'.

	EMPLOYEE_ID	SALARY	ROUND(SALARY, -2)
1	100	24000	24000
2	101	17000	17000
3	102	17000	17000
4	103	9000	9000
5	104	6000	6000
6	105	4800	4800
7	106	4800	4800
8	107	4200	4200
9	108	12008	12000
10	109	9000	9000
11	110	8200	8200
12	111	7700	7700
13	112	7800	7800
14	113	6900	6900
15	114	11000	11000

Q18)

The screenshot shows the SQL Developer interface. The 'Query Builder' tab is active, displaying the following SQL query:

```
SELECT DEPARTMENT_ID, COUNT(*) AS TOTAL_NUM_EMPLOYEES
FROM EMPLOYEES
GROUP BY DEPARTMENT_ID
ORDER BY TOTAL_NUM_EMPLOYEES DESC;
```

The 'Query Result' tab shows the results of the query, indicating that all 12 rows were fetched in 0.002 seconds. The results are displayed in a table with two columns: DEPARTMENT_ID and TOTAL_NUM_EMPLOYEES.

	DEPARTMENT_ID	TOTAL_NUM_EMPLOYEES
1	50	45
2	80	34
3	100	6
4	30	6
5	60	5
6	90	3
7	20	2
8	110	2
9	40	1
10	10	1
11	(null)	1
12	70	1

Q19)

The screenshot shows the SQL Developer interface. The 'Query Builder' tab is active, displaying the following SQL query:

```
SELECT DEPARTMENT_ID, SUM(SALARY) AS TOTAL_SALARY
FROM EMPLOYEES
GROUP BY DEPARTMENT_ID
ORDER BY TOTAL_SALARY DESC;
```

The 'Query Result' tab shows the results of the query, indicating that all 12 rows were fetched in 0.005 seconds. The results are displayed in a table with two columns: DEPARTMENT_ID and TOTAL_SALARY.

	DEPARTMENT_ID	TOTAL_SALARY
1	80	304500
2	50	156400
3	90	58000
4	100	51608
5	60	28800
6	30	24900
7	110	20308
8	20	19000
9	70	10000
10	(null)	7000
11	40	6500
12	10	4400

Q20)

The screenshot shows a database query tool interface. The top bar includes a 'Welcome Page' tab and a 'hr' database connection. Below the toolbar, the 'Query Builder' tab is active, displaying the following SQL query:

```
SELECT DEPARTMENT_ID, COUNT(*) AS TOTAL_NUM_EMPLOYEES
FROM EMPLOYEES
GROUP BY DEPARTMENT_ID
ORDER BY TOTAL_NUM_EMPLOYEES DESC;
```

The 'Query Result' tab is also visible, showing the results of the query. The status bar indicates 'All Rows Fetched: 12 in 0.002 seconds'. The results are displayed in a table with two columns: 'DEPARTMENT_ID' and 'TOTAL_NUM_EMPLOYEES'.

	DEPARTMENT_ID	TOTAL_NUM_EMPLOYEES
1	50	45
2	80	34
3	100	6
4	30	6
5	60	5
6	90	3
7	20	2
8	110	2
9	40	1
10	10	1
11	(null)	1
12	70	1