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COURSE CODE: CT-261  
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TASK: DBMS LAB#03**

**Q1. Write a query that displays the employee's last names with the first letter capitalized and all other letters lowercase and the length of the names, for all employees whose name starts with J, A, or M. Give each column an appropriate label. Sort the results by the employees' last names.**

**SQL QUERY:**

```
1  /*Write a query that displays the employee's last names with the
2  first letter capitalized and all other letters lowercase and
3  the length of the names, for all employees whose name starts
4  with J, A, or M. Give each column an appropriate label.
5  Sort the results by the employees' last names.*/
6
7  SELECT INITCAP(last_name) AS "Employee Name", LENGTH(last_name)
8  AS "Length of Name" FROM HR.EMPLOYEES WHERE last_name LIKE 'J%'
9  OR last_name LIKE 'A%' OR last_name LIKE 'M%' ORDER BY last_name;
10
```

**OUTPUT:**

Query result	Script output	DBMS output	Explain Plan	SQL history
Download ▾ Execution time: 0.007 seconds				
	EMPLOYEE NAME	LENGTH OF NAME		
1	Abel	4		
2	Ande	4		
3	Atkinson	8		
4	Jackson	7		
5	Jacobs	6		
6	James	5		
7	Johnson	7		
8	Jones	5		

**Q2. For each employee, display the employee's last name, and calculate the number of months between today and the date the employee was hired.**

**Label the column MONTHS\_WORKED. Order your results by the number of months employed. Round the number of months up to the closest whole number.**

### **SQL QUERY:**

```
1  /*For each employee, display the employee's last name, and
2   calculate the number of months between today and the date the
3   employee was hired. Label the column MONTHS_WORKED.
4   Order your results by the number of months employed.
5   Round the number of months up to the closest whole number.*/
6
7  SELECT last_name,CEIL(MONTHS_BETWEEN(SYSDATE,hire_date))
8  AS "MONTHS_WORKED" FROM HR.EMPLOYEES
9  ORDER BY MONTHS_WORKED;
```

### **OUTPUT:**

	LAST_NAME	MONTHS_WORKED
1	Kumar	94
2	Banda	94
3	Ande	95
4	Markle	95
5	Philtanker	96
6	Zlotkey	96
7	Lee	96
8	Geoni	96

	LAST_NAME	MONTHS_WORKED
100	Li	158
101	Faviet	162
102	Gruenberg	162
103	Gietz	164
104	Higgins	164
105	Jacobs	164
106	Brown	164
107	Garcia	181

**Q3. Write a query that produces the following for each employee: < employee last name > earns < salary > monthly but wants < 3 times salary >. Label the column Dream Salaries.**

**SQL QUERY:**

```
1  /*Write a query that produces the following for
2  each employee: < employee last name > earns < salary >
3  monthly but wants < 3 times salary >.
4  Label the column Dream Salaries.*/
5
6  SELECT last_name || ' earns ' || salary || ' monthly but wants '
7  || (salary*3) AS "Dream Salaries" FROM HR.EMPLOYEES;
```

**OUTPUT:**

Query result	Script output	DBMS output	Explain Plan	SQL history			
	Download ▾	Execution time: 0.005 seconds					
		<b>DREAM SALARIES</b>					
1	King earns 24000 monthly but wants 72000						
2	Yang earns 17000 monthly but wants 51000						
3	Garcia earns 17000 monthly but wants 51000						
4	James earns 9000 monthly but wants 27000						
5	Miller earns 6000 monthly but wants 18000						
6	Williams earns 4800 monthly but wants 14400						
7	Jackson earns 4800 monthly but wants 14400						
8	Nguyen earns 4200 monthly but wants 12600						

**Q4. Create a query to display the last name and salary for all employees. Format the salary to be 15 characters long, left-padded with \$. Label the column SALARY.**

**SQL QUERY:**

```
1  /*Create a query to display the last name and salary for all
2  employees. Format the salary to be 15 characters long,
3  left-padded with $. Label the column SALARY.*/
4
5  SELECT last_name,LPAD(salary,15,'$') AS "SALARY"
6  FROM HR.EMPLOYEES;
```

**OUTPUT:**

	Query result	Script output	DBMS output	Explain Plan	SQL history
	Download ▾ Execution time: 0.002 seconds				
	LAST_NAME	SALARY			
1	King	\$\$\$\$\$\$\$\$\$\$24000			
2	Yang	\$\$\$\$\$\$\$\$\$\$17000			
3	Garcia	\$\$\$\$\$\$\$\$\$\$17000			
4	James	\$\$\$\$\$\$\$\$\$\$9000			
5	Miller	\$\$\$\$\$\$\$\$\$\$6000			
6	Williams	\$\$\$\$\$\$\$\$\$\$4800			
7	Jackson	\$\$\$\$\$\$\$\$\$\$4800			
8	Nguyen	\$\$\$\$\$\$\$\$\$\$4200			

**Q5. Display each employee's last name, hire date, and salary review date, which is the first Monday after six months of service. Label the column REVIEW. Format the dates to appear similar to "Monday, the Thirty-First of July, 2000."**

**SQL QUERY:**

```
1  /*Display each employee's last name, hire date, and salary review date,
2  which is the first Monday after six months of service.
3  Label the column REVIEW. Format the dates to appear similar to
4  "Monday, the Thirty-First of July, 2000."*/
5
6  SELECT last_name,TO_CHAR(NEXT_DAY(ADD_MONTHS(hire_date,6),'Monday'),
7  'fmDay, "the" Ddspth "of" Month,YYYY')
8  AS "REVIEW" FROM HR.EMPLOYEES;
```

**OUTPUT:**

Query result	Script output	DBMS output	Explain Plan	SQL history
		Download ▾	Execution time: 0.006 seconds	
	LAST_NAME	REVIEW		
1	King	Monday, the Twenty-Third of December,2013		
2	Yang	Monday, the Twenty-Eighth of March,2016		
3	Garcia	Monday, the Eighteenth of July,2011		
4	James	Monday, the Fourth of July,2016		
5	Miller	Monday, the Twenty-Seventh of November,2017		
6	Williams	Monday, the Twenty-Eighth of December,2015		
7	Jackson	Monday, the Eighth of August,2016		
8	Nguyen	Monday, the Fourteenth of August,2017		

**Q6. Display the last name, hire date, and day of the week on which the employee started. Label the column DAY. Order the results by the day of the week starting with Monday.**

## SOL QUERY:

```
1 /*Display the last name, hire date, and day of the week on  
2 which the employee started. Label the column DAY. Order  
3 the results by the day of the week starting with Monday.*/  
4  
5 SELECT last_name,hire_date,TO_CHAR(hire_date,'Day') AS "DAY"  
6 FROM HR.EMPLOYEES ORDER BY TO_CHAR(hire_date-1,'D');
```

## **OUTPUT:**

Query result    Script output    DBMS output    Explain Plan    SQL history

Download ▾ Execution time: 0.006 seconds

	LAST_NAME	HIRE_DATE	DAY
1	King	6/17/2013, 12:00:00	Monday
2	Davis	8/17/2015, 12:00:00	Monday
3	Yang	9/21/2015, 12:00:00	Monday
4	Martinez	2/17/2014, 12:00:00	Monday
5	Feeney	5/23/2016, 12:00:00	Monday
6	Venzl	7/11/2016, 12:00:00	Monday
7	Sarchand	1/27/2014, 12:00:00	Monday
8	Zlotkey	1/29/2018, 12:00:00	Monday

**Q7. Create a query that displays the employees' last names and commission amounts. If an employee does not earn commission, put "No Commission." Label the column COMM.**

**SQL QUERY:**

```
1  /*Create a query that displays the employees' last names and
2   commission amounts. If an employee does not earn commission,
3   put "No Commission." Label the column COMM.*/
4
5  SELECT last_name,COALESCE(TO_CHAR(commission_pct),'No Commission')
6  AS COMM FROM HR.EMPLOYEES;
7
```

**OUTPUT:**

Query result    Script output    DBMS output    Explain Plan    SQL history

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Download ▾ Execution time: 0.006 seconds

	LAST_NAME	COMM
1	King	No Commission
2	Yang	No Commission
3	Garcia	No Commission
4	James	No Commission
5	Miller	No Commission
6	Williams	No Commission
7	Jackson	No Commission
8	Nguyen	No Commission

**Q8.** Create a query that displays the employees' last names and indicates the amounts of their annual salaries with asterisks. Each asterisk signifies a thousand dollars. Sort the data in descending order of salary. Label the column **EMPLOYEES\_AND\_THEIR\_SALARIES**.

## SOL QUERY:

```
1 /*Create a query that displays the employees' last names and
2 indicates the amounts of their annual salaries with asterisks.
3 Each asterisk signifies a thousand dollars. Sort the data in
4 descending order of salary. Label the column EMPLOYEES_AND THEIR_SALARIES.*/
5
6 SELECT last_name || ' ' || RPAD('*', salary/1000, '*')
7 AS "EMPLOYEES_AND THEIR_SALARIES"
8 FROM HR.EMPLOYEES ORDER BY salary DESC;
```

## OUTPUT:

Query result    Script output    DBMS output    Explain Plan    SQL history

Download ▾ Execution time: 0.002 seconds

	EMPLOYEES_AND THEIR SALARIES
1	King *****
2	Yang *****
3	Garcia *****
4	Singh *****
5	Partners *****
6	Martinez *****
7	Gruenberg *****
8	Higgins *****

**Q9. Using the DECODE function, write a query that displays the grade of all employees based on the value of the column JOB\_ID , as per the following data: Job Grade *AD\_PRES A ST\_MAN B IT\_PROG C SA\_REP D ST\_CLERK E None of the above 0*"**

**SQL QUERY:**

```
1  /*Using the DECODE function, write a query that displays
2   the grade of all employees based on the value of the
3   column JOB_ID , as per the following data:
4   Job Grade AD_PRES A ST_MAN B IT_PROG C SA_REP
5   D ST_CLERK E None of the above 0*/
6
7  SELECT last_name,job_id,DECODE(job_id,'AD_PRES','A','ST_MAN','B',
8  'IT_PROG','C','SA_REP','D','ST_CLERK','E','0')
9  AS "GRADE" FROM HR.EMPLOYEES;
```

**OUTPUT:**

Query result    Script output    DBMS output    Explain Plan    SQL history

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Download ▾ Execution time: 0.007 seconds

	LAST_NAME	JOB_ID	GRADE
1	Abel	SA_REP	D
2	Ande	SA_REP	D
3	Atkinson	ST_CLERK	E
4	Baida	PU_CLERK	O
5	Banda	SA_REP	D
6	Bates	SA_REP	D
7	Bell	SH_CLERK	O
8	Bernstein	SA_REP	D

**Q10.** Rewrite the statement in the preceding question using the CASE syntax.

**SQL QUERY:**

```
1  /*Rewrite the statement in the preceding question using the
2  CASE syntax*/
3
4  SELECT last_name,job_id,CASE job_id WHEN 'AD_PRES' THEN 'A'
5  WHEN 'ST_MAN' THEN 'B' WHEN 'IT_PROG' THEN 'C'
6  WHEN 'SA_REP' THEN 'D' WHEN 'ST_CLERK' THEN 'E'
7  ELSE 'O' END AS "GRADE" FROM HR.EMPLOYEES;
8
```

**OUTPUT:**

Query result    Script output    DBMS output    Explain Plan    SQL history

---

Download ▾ Execution time: 0.007 seconds

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	LAST_NAME	JOB_ID	GRADE
1	Abel	SA_REP	D
2	Ande	SA_REP	D
3	Atkinson	ST_CLERK	E
4	Baida	PU_CLERK	O
5	Banda	SA_REP	D
6	Bates	SA_REP	D
7	Bell	SH_CLERK	O
8	Bernstein	SA_REP	D