Lab Exercise 4: Using Conversion Functions and Conditional Expressions

By using HR Schema in Oracle Express Edition, answer the following SQL questions.

1. Produce the SQL that have a result as shown. (1 Mark)

	EMPLOYEE_ID	LAST_NAME	HIREDATE	SALARY
10	109	Faviet	16 AUG 02	9000
11	110	Chen	28 SEP 05	8200
12	111	Sciarra	30 SEP 05	7700

```
select employee_id,last_name, TO_CHAR(hire_date,'dd MON YY')HIREDATE, salary
from employees
```

Query Result

SQL | Fetched 50 rows in 0.006 seconds

	EMPLOYEE_ID	LAST_NAME	HIREDATE	SALARY
1	100	King	17 JUN 03	24000
2	101	Kochhar	21 SEP 05	17000
3	102	De Haan	13 JAN 01	17000
4	103	Hunold	03 JAN 06	9000
5	104	Ernst	21 MAY 07	6000

2. Produce the SQL that follows the following result. (1 Mark)

	Statement
7	Valli earns $4,800.00 monthly but spend $2,400.00 for housing loan.
8	Diana earns $4,200.00 monthly but spend $2,100.00 for housing loan.
9	Nancy earns $12,008.00 monthly but spend $6,004.00 for housing loan.
10	Daniel earns $9,000.00 monthly but spend $4,500.00 for housing loan.

```
select first_name || ' earns ' || TO_CHAR(salary, 'fm$9,999,999.00') || ' monthly but spend ' || TO_CHAR(salary/2, 'fm$9,999,999.00') || ' for housing loan ' "Statement"
from employees
```

Query Result

SQL | Fetched 50 rows in 0.003 seconds

	Statement
1	Steven earns $24,000.00 monthly but spend $12,000.00 for housing loan
2	Neena earns $17,000.00 monthly but spend $8,500.00 for housing loan
3	Lex earns $17,000.00 monthly but spend $8,500.00 for housing loan
4	Alexander earns $9,000.00 monthly but spend $4,500.00 for housing loan
5	Bruce earns $6,000.00 monthly but spend $3,000.00 for housing loan
6	David earns $4,800.00 monthly but spend $2,400.00 for housing loan
7	Valli earns $4,800.00 monthly but spend $2,400.00 for housing loan
8	Diana earns $4,200.00 monthly but spend $2,100.00 for housing loan
9	Nancy earns $12,008.00 monthly but spend $6,004.00 for housing loan

3. Find the employees from department 50 that are hired after 2004. (1 Mark)

```
SELECT first_name, hire_date, department_id
FROM employees
WHERE department_id = '50' AND hire_date > '31-DEC-2004';
```

Query Result

SQL | All Rows Fetched: 38 in 0.004 seconds

	FIRST_NAME	HIRE_DATE	DEPARTMENT_ID
1	Adam	10-APR-05	50
2	Shanta	10-OCT-05	50
3	Kevin	16-NOV-07	50
4	Julia	16-JUL-05	50
5	Irene	28-SEP-06	50
6	James	14-JAN-07	50

4. Find all the employees that have no manager and make sure to put 'No Manager' as a display to null value. (1 Mark)

```
SELECT first_name , manager_id ,nvl(to_char(manager_id),'No Manager')Manager
FROM employees;
```

Query Result

SQL | All Rows Fetched: 107 in 0.011 seconds

	FIRST_NAME	MANAGER_ID	MANAGER
1	Steven	(null)	No Manager
2	Neena	100	100
3	Lex	100	100
4	Alexander	102	102
5	Bruce	103	103

5. Find the departments that ends with ‘ng’ and indicate with ‘Yes’ or ‘No’ for Manager_ID column. ‘Yes’ is for department with manager, and ‘No’ is for department with no manager. (1 Mark)

```
SELECT department_id,department_name,manager_id,nvl2(manager_id,'Yes','No')
FROM departments
WHERE department_name LIKE '%ng'
```

Script Output | Query Result

SQL | All Rows Fetched: 7 in 0.002 seconds

	DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	NVL2(MANAGER_ID,'YES','NO')
1	20	Marketing	201	Yes
2	30	Purchasing	114	Yes
3	50	Shipping	121	Yes
4	110	Accounting	205	Yes
5	170	Manufacturing	(null)	No
6	190	Contracting	(null)	No
7	260	Recruiting	(null)	No

6. Find whether the employees first name have an equal length with their last name. (1 Mark)

```
SELECT first_name, last_name, length(first_name),length(last_name), nullif (length(first_name),length(last_name))
FROM employees
```

Script Output | Query Result

SQL | Fetched 100 rows in 0.004 seconds

	FIRST_NAME	LAST_NAME	LENGTH(FIRST_NAME)	LENGTH(LAST_NAME)	NULLIF(LENGTH(FIRST_NAME),LENGTH(LAST_NAME))
13	Alexis	Bull	6	4	6
14	Anthony	Cabrio	7	6	7
15	Gerald	Cambrault	6	9	6
16	Nanette	Cambrault	7	9	7
17	John	Chen	4	4	(null)
18	Kelly	Chung	5	5	(null)
19	Karen	Colmenares	5	10	5
20	Curtis	Davies	6	6	(null)
21	Lex	De Haan	3	7	3

7. Find the employee ID and last name, salary, commission and manager. By using COALESCE function, if the commission and manager is null, display 'No Manager and Commission'. If not, display either commission, followed by manager ID. (1 Mark)

```
SELECT employee_id,last_name, salary, commission_pct, manager_id,
COALESCE(to_char(commission_pct), to_char(manager_id),'No Commission and Manager') Result
FROM employees
```

Script Output | Query Result

SQL | Fetched 50 rows in 0.003 seconds

	EMPLOYEE_ID	LAST_NAME	SALARY	COMMISSION_PCT	MANAGER_ID	RESULT
1	100	King	24000	(null)	(null)	No Commission and Manager
2	101	Kochhar	17000	(null)	100	100
3	102	De Haan	17000	(null)	100	100
4	103	Hunold	9000	(null)	102	102
5	104	Ernst	6000	(null)	103	103
6	105	Austin	4800	(null)	103	103
7	106	Pataballa	4800	(null)	103	103

8. BY using DECODE function, write a query that displays the salary of all employees based on the value of the JOB_ID column, using the following data:

JOB_ID	SALARY INCREMENT
FI_ACCOUNT	10%

IT_PROG	20%
SA_REP	25%
PU_CLERK	24%
None of the above	40%

```
SELECT first_name, DECODE (job_id, 'FI_ACCOUNT', 0.1,
                                   'IT_PROG', 0.2,
                                   'SA_REP', 0.25,
                                   'PU_CLERK', 0.24,
                                   0.4) SALARY_INCREMENT
FROM employees
```

Script Output | Query Result

SQL | Fetched 50 rows in 0.003 seconds

	FIRST_NAME	SALARY_INCREMENT
1	Ellen	0.25
2	Sundar	0.25
3	Mozhe	0.4
4	David	0.2
5	Hermann	0.4
6	Shelli	0.24
7	Amit	0.25
8	Elizabeth	0.25

9. Rewrite the code by using CASE function. (1 Mark)

```
SELECT first_name,
(CASE job_id WHEN 'FI_ACCOUNT' THEN 0.1
             WHEN 'IT_PROG'  THEN 0.2
             WHEN 'SA_REP '  THEN 0.25
             WHEN 'PU_CLERK' THEN 0.24
                          ELSE 0.4 END) AS SALARY_INCREMENT
FROM employees
```

Script Output | Query Result

SQL | Fetched 50 rows in 0.003 seconds

	FIRST_NAME	SALARY_INCREMENT
1	Ellen	0.4
2	Sundar	0.4
3	Mozhe	0.4
4	David	0.2
5	Hermann	0.4
6	Shelli	0.24
7	Amit	0.4
8	Elizabeth	0.4

10. Have you started your group project work? (1 Mark)

AHAHAHHA not yet :c