EXERCISE 6
SINGLE ROW FUNCTIONS

1.Write a query to display the current date. Label the column Date.

QUERY:

```
ALTER TABLE employee
ADD (current_date DATE DEFAULT SYSDATE);
```

OUTPUT:

```
Table altered.

0.05 seconds
```

2. The HR department needs a report to display the employee number, last name, salary, and increased by 15.5% (expressed as a whole number) for each employee. Label the column New Salary.

QUERY:

```
SELECT employee_no,
       lastname,
       salary,
       ROUND(salary * 1.155) AS "New Salary"
FROM employee;
```

OUTPUT:

EMPLOYEE_NO	LASTNAME	SALARY	New Salary
100	Patel	13700	15824
86	Dancs	12500	14438
121	Drexler	15050	17383
64	Haari	11500	13283
176	Ropebur	14000	16170
124	Newman	14350	16574

6 rows returned in 0.01 seconds   Download

3. Modify your query lab_03_02.sql to add a column that subtracts the old salary from the new salary. Label the column Increase.

QUERY:

```sql
SELECT employee_no,
       lastname,
       salary,
       ROUND(salary * 1.155) AS "New Salary",
       ROUND((salary * 1.155) - salary) AS Increase
FROM employee;
```

OUTPUT:

EMPLOYEE_NO	LASTNAME	SALARY	New Salary	INCREASE
100	Patel	13700	15824	2124
86	Dancs	12500	14438	1938
121	Drexler	15050	17383	2333
64	Haari	11500	13283	1783
176	Ropebur	14000	16170	2170
124	Newman	14350	16574	2224

6 rows returned in 0.00 seconds   Download

4. Write a query that displays the last name (with the first letter uppercase and all other letters lowercase) and the length of the last name for all employees whose name starts with the letters J, A, or M. Give each column an appropriate label. Sort the results by the employees last names.

QUERY:

```sql
SELECT INITCAP(lastname) AS "Last Name",
       LENGTH(lastname) AS "Length of Last Name"
FROM employee
WHERE lastname LIKE 'J%' OR lastname LIKE 'A%' OR lastname LIKE 'M%'
ORDER BY lastname;
```

OUTPUT:

```
no data found
```

5. Rewrite the query so that the user is prompted to enter a letter that starts the last name. For example, if the user enters H when prompted for a letter, then the output should show all employees whose last name starts with the letter H.

QUERY:

```sql
SELECT INITCAP(lastname) AS "Last Name",
       LENGTH(lastname) AS "Length of Last Name"
FROM employee
WHERE lastname LIKE 'H%'
ORDER BY lastname;
```

OUTPUT:

Last Name	Length of Last Name
Haari	5

1 rows returned in 0.00 seconds   Download

6. The HR department wants to find the length of employment for each employee. For each employee, display the last name and calculate the number of months between today and the date on which 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.

QUERY:

```sql
SELECT lastname,
       ROUND(MONTHS_BETWEEN(SYSDATE, hire_date)) AS "MONTHS_WORKED"
FROM employee
ORDER BY "MONTHS_WORKED" DESC;
```

OUTPUT:

LASTNAME	MONTHS_WORKED
Patel	361
Newman	315
Haari	315
Ropebur	10
Dancs	0
Drexler	-3

6 rows returned in 0.00 seconds   Download

7. Create a report that produces the following for each employee: earns monthly but wants. Label the column Dream Salaries.

QUERY:

```sql
SELECT lastname || ' earns ' || salary || ' monthly but wants ' || (salary * 3) AS "Dream Salaries"
FROM employee;
```

OUTPUT:

Dream Salaries
Patel earns 13700 monthly but wants 41100
Dancs earns 12500 monthly but wants 37500
Drexler earns 15050 monthly but wants 45150
Haari earns 11500 monthly but wants 34500
Ropebur earns 14000 monthly but wants 42000
Newman earns 14350 monthly but wants 43050

6 rows returned in 0.01 seconds   Download

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

QUERY:

```sql
SELECT lastname,
       LPAD(salary, 15, '$') AS "SALARY"
FROM employee;
```

OUTPUT:

LASTNAME	SALARY
Patel	$$$$$$$$$13700
Dancs	$$$$$$$$$12500
Drexler	$$$$$$$$$15050
Haari	$$$$$$$$$11500
Ropebur	$$$$$$$$$14000
Newman	$$$$$$$$$14350

6 rows returned in 0.01 seconds   Download

9. 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 in the format similar to —Monday, the Thirty-First of July, 2000.‖

QUERY:

```
SELECT lastname,
       hire_date,
       TO_CHAR(NEXT_DAY(
              CASE
                 WHEN ADD_MONTHS(hire_date, 6) - 1 IS NULL THEN hire_date -- Use hire_date if the result is NULL
                 ELSE ADD_MONTHS(hire_date, 6) - 1
              END,
              'MONDAY'
          ), 'FMDay, "the" DDth "of" Month, YYYY') AS "REVIEW"
FROM employee;
```

OUTPUT:

LASTNAME	HIRE_DATE	REVIEW
Patel	04/29/1994	Monday, the 31ST of October, 1994
Dancs	06/03/2024	Monday, the 9TH of December, 2024
Drexler	08/29/2024	Monday, the 3RD of March, 2025
Haari	02/28/1998	Monday, the 31ST of August, 1998
Ropebur	08/09/2023	Monday, the 12TH of February, 2024
Newman	03/05/1998	Monday, the 7TH of September, 1998

6 rows returned in 0.01 seconds   Download

10. 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.

QUERY:

```sql
SELECT lastname,
       hire_date,
       TO_CHAR(hire_date, 'Day') AS "DAY"
FROM employee
ORDER BY TO_CHAR(hire_date, 'D');
```

OUTPUT:

LASTNAME	HIRE_DATE	DAY
Dancs	06/03/2024	Monday
Ropebur	08/09/2023	Wednesday
Newman	03/05/1998	Thursday
Drexler	08/29/2024	Thursday
Patel	04/29/1994	Friday
Haari	02/28/1998	Saturday

6 rows returned in 0.00 seconds   Download