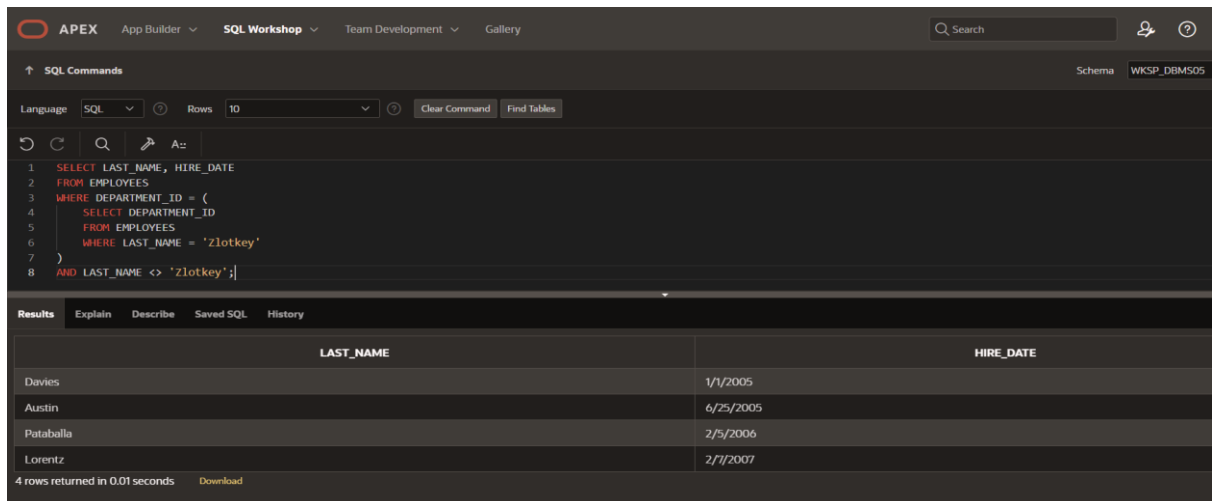


## EXERCISE-9

### Sub queries

Name: Vedhasree S  
Register Number: 240701580  
Department: CSE

1. The HR department needs a query that prompts the user for an employee last name. The query then displays the last name and hire date of any employee in the same department as the employee whose name they supply (excluding that employee). For example, if the user enters Zlotkey, find all employees who work with Zlotkey (excluding Zlotkey).



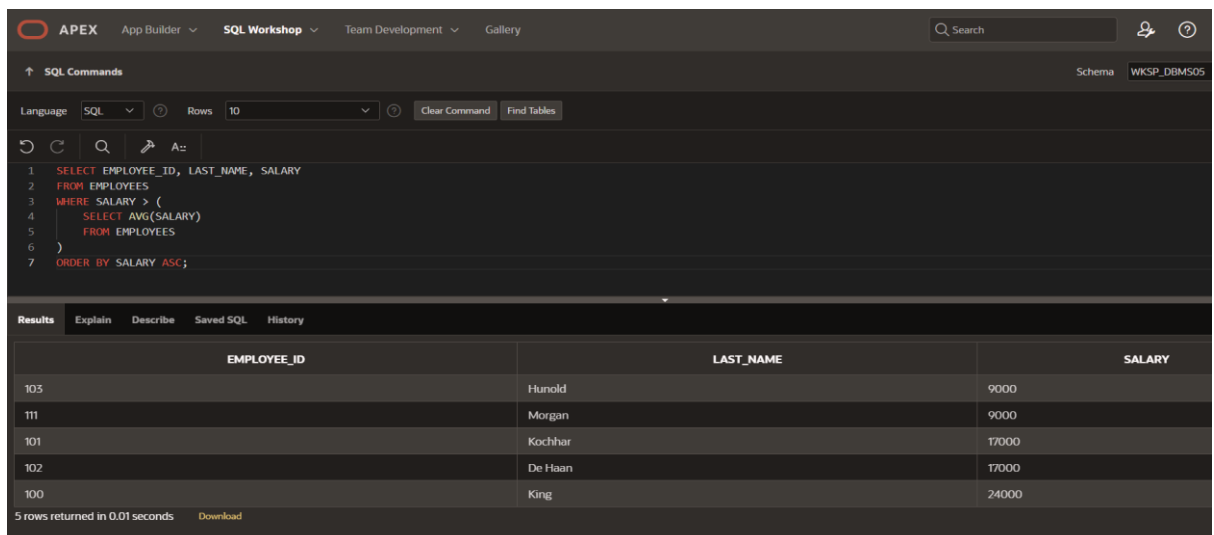
The screenshot shows the APEX SQL Workshop interface. The SQL command entered is:

```
1 SELECT LAST_NAME, HIRE_DATE
2 FROM EMPLOYEES
3 WHERE DEPARTMENT_ID = (
4   SELECT DEPARTMENT_ID
5   FROM EMPLOYEES
6   WHERE LAST_NAME = 'Zlotkey'
7 )
8 AND LAST_NAME <> 'Zlotkey';
```

The results tab shows 4 rows returned in 0.01 seconds. The data is as follows:

| LAST_NAME | HIRE_DATE |
|-----------|-----------|
| Davies    | 1/1/2005  |
| Austin    | 6/25/2005 |
| Pataballa | 2/5/2006  |
| Lorentz   | 2/1/2007  |

2. Create a report that displays the employee number, last name, and salary of all employees who earn more than the average salary. Sort the results in order of ascending salary.



The screenshot shows the APEX SQL Workshop interface. The SQL command entered is:

```
1 SELECT EMPLOYEE_ID, LAST_NAME, SALARY
2 FROM EMPLOYEES
3 WHERE SALARY > (
4   SELECT AVG(SALARY)
5   FROM EMPLOYEES
6 )
7 ORDER BY SALARY ASC;
```

The results tab shows 5 rows returned in 0.01 seconds. The data is as follows:

| EMPLOYEE_ID | LAST_NAME | SALARY |
|-------------|-----------|--------|
| 103         | Hunold    | 9000   |
| 111         | Morgan    | 9000   |
| 101         | Kochhar   | 17000  |
| 102         | De Haan   | 17000  |
| 100         | King      | 24000  |

- Write a query that displays the employee number and last name of all employees who work in a department with any employee whose last name contains a u.

The screenshot shows the APEX SQL Workshop interface. The SQL command is as follows:

```
1 SELECT e.employee_id, e.last_name
2 FROM employees e
3 WHERE e.department_id IN (
4     SELECT DISTINCT d.department_id
5     FROM employees d
6     WHERE d.last_name LIKE '%u%'
7 );
```

The results are displayed in a table with the following data:

| EMPLOYEE_ID | LAST_NAME |
|-------------|-----------|
| 109         | Davies    |
| 105         | Austin    |
| 106         | Pataballa |
| 107         | Lorentz   |
| 113         | Zlotkey   |
| 104         | Ernst     |
| 103         | Hunold    |

7 rows returned in 0.02 seconds

- The HR department needs a report that displays the last name, department number, and job ID of all employees whose department location ID is 1700.

The screenshot shows the APEX SQL Workshop interface. The SQL command is as follows:

```
1 SELECT e.last_name, e.department_id, e.job_id
2 FROM employees e
3 JOIN departments d
4 ON e.department_id = d.department_id
5 WHERE d.location_id = 1700;
```

The results are displayed in a table with the following data:

| LAST_NAME | DEPARTMENT_ID | JOB_ID  |
|-----------|---------------|---------|
| White     | 90            | CLERK   |
| Morgan    | 90            | MANAGER |
| Doe       | 90            | IT_PROG |

3 rows returned in 0.02 seconds

5. Create a report for HR that displays the last name and salary of every employee who reports to King.

The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar is on the right. Below the navigation bar, the 'SQL Commands' tab is active, showing a query: 

```
1 SELECT e.last_name, e.salary
2 FROM employees e
3 WHERE e.manager_id = (
4     SELECT employee_id
5     FROM employees
6     WHERE last_name = 'King'
7 );
```

 The 'Results' tab is selected, displaying a table with two columns: 'LAST\_NAME' and 'SALARY'. The table contains two rows: 'Kochhar' with salary '17000' and 'De Haan' with salary '17000'. Below the table, it states '2 rows returned in 0.01 seconds' and provides a 'Download' link.

| LAST_NAME | SALARY |
|-----------|--------|
| Kochhar   | 17000  |
| De Haan   | 17000  |

6. Create a report for HR that displays the department number, last name, and job ID for every employee in the Executive department.

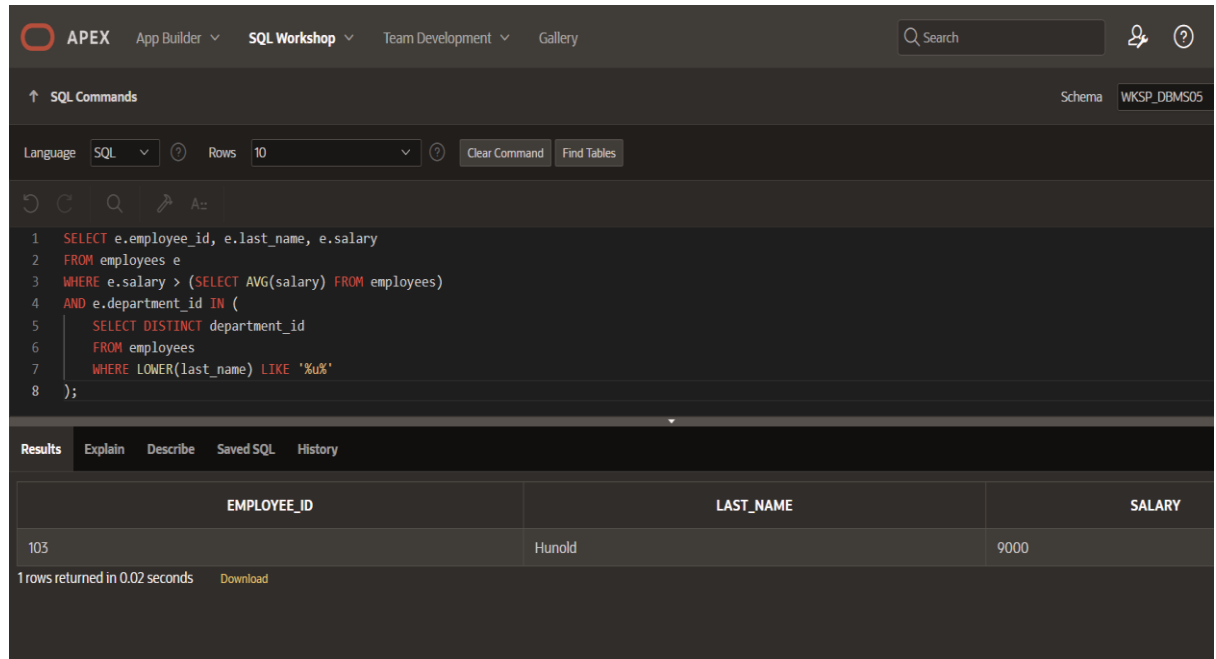
The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar is on the right. Below the navigation bar, the 'SQL Commands' tab is active, showing a query: 

```
1 SELECT e.department_id, e.last_name, e.job_id
2 FROM employees e
3 JOIN departments d
4 ON e.department_id = d.department_id
5 WHERE d.department_name = 'Executive';
```

 The 'Results' tab is selected, displaying a table with three columns: 'DEPARTMENT\_ID', 'LAST\_NAME', and 'JOB\_ID'. The table contains three rows: '90' with last name 'White' and job ID 'CLERK', '90' with last name 'Morgan' and job ID 'MANAGER', and '90' with last name 'Doe' and job ID 'IT\_PROG'. Below the table, it states '3 rows returned in 0.01 seconds' and provides a 'Download' link.

| DEPARTMENT_ID | LAST_NAME | JOB_ID  |
|---------------|-----------|---------|
| 90            | White     | CLERK   |
| 90            | Morgan    | MANAGER |
| 90            | Doe       | IT_PROG |

7. Modify the query 3 to display the employee number, last name, and salary of all employees who earn more than the average salary and who work in a department with any employee whose last name contains a u.



The screenshot shows the APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user icons are on the right. The 'SQL Commands' tab is active, showing a query in the editor. The query is as follows:

```
1 SELECT e.employee_id, e.last_name, e.salary
2 FROM employees e
3 WHERE e.salary > (SELECT AVG(salary) FROM employees)
4 AND e.department_id IN (
5     SELECT DISTINCT department_id
6     FROM employees
7     WHERE LOWER(last_name) LIKE '%u%'
8 );
```

Below the editor, the 'Results' tab is active, displaying a table with the following data:

| EMPLOYEE_ID | LAST_NAME | SALARY |
|-------------|-----------|--------|
| 103         | Hunold    | 9000   |

At the bottom of the results section, it states '1 rows returned in 0.02 seconds' and provides a 'Download' link.