

## Experiment No. 02

**Experiment Name:** - Ret rival Commands-I

**Aim:** - Performing practical by using restricting, sorting conditions and single-row functions.

**Resource required:** - Oracle 9i - iSQLplus

**Theory:** -

### **RESTRICTING DATA:**

#### **Limiting the Rows Selected:**

**Syntax:-**

```
SELECT *| {[DISTINCT] column / expression [alias],....}  
FROM table  
[WHERE condition(s)];
```

Restrict the rows returned by using the WHERE clause

Example:

```
SELECT employee_id, last_name, job_id, department_id  
FROM employees  
WHERE department_id = 90;
```

#### **Comparison Conditions**

1) 

```
SELECT last_name, salary  
FROM employees  
WHERE salary <= 3000;
```

2) **BETWEEN Condition:** display row based on a range of values

```
SELECT last_name, salary  
FROM employees  
WHERE salary BETWEEN 2500 AND 3500;
```

3) **IN Condition:** test for values in a list

```
SELECT employee_id, last_name, salary, manager_id  
FROM employees  
WHERE manager_id IN (100,101,201);
```

4) **LIKE Condition:** Combine pattern-matching character

```
SELECT last_name  
FROM employees  
WHERE last_name LIKE '_o%';
```

## Logical Conditions

### 5) AND & OR operator:

```
SELECT employee_id, last_name, job_id, salary
FROM employees
WHERE (job_id = 'SA_REP'
OR job_id = 'AD_PRES')
AND salary > 15000;
```

### 6) NOT operator:

```
SELECT last_name, job_id
FROM employees
WHERE job_id
NOT IN ('IT_PROG', 'ST_CLERK', 'SA_REP');
```

## SORTING DATA:

### ORDER BY Clause: Sort rows

```
SELECT employee_id, last_name, salary*12 annsal
FROM employees
ORDER BY annsal;
```

### NULL Keyword:

NULL is a value.

## SINGLE ROW FUNCTIONS:

Character Function  
Number Function  
Date Function  
Conversion Function  
General Function

### Character-Manipulation Functions

```
CONCAT( str1, str2 )
LENGTH (str)
INSTR (str, ' <finding character>')
SUBSTR (str, <index in string>)
INITCAP(str)
```

### Example:

```
SELECT employee_id, CONCAT (first_name, last_name) NAME,
Job_id, LENGTH (last_name), INITCAP(first_name)
INSTR (last_name, 'a') "Contains 'a'?"
FROM employees
WHERE SUBSTR (job_id, 4) = 'REP';
```

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Class: SE-C	Batch: C1
Date of Experiment:	Date of Submission:
Grade:	

### Lab Assignment No-02

(Paste your code completed during the 2 hours of practical in the lab here)

1. Create a query to display the last\_name, department\_id of all employees whose salary is greater than \$7000.

The screenshot shows the Live SQL web application interface. On the left is a sidebar with navigation options: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains a SQL query editor with the following code:

```
1 SELECT last_name, department_id
2 FROM employees
3 WHERE salary <= 7000;
4
```

Below the editor, the results are displayed in a table:

LAST_NAME	DEPARTMENT_ID
Ernst	60
Mourgos	50
Rajs	50
Davies	50
Matos	50
Vargas	50
Whalen	10
Fay	20

Below the table, it says '8 rows selected.' and there is a 'Download CSV' button. At the bottom of the interface, a status bar indicates: '2023 Oracle - Live SQL 23.1.1, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym'. The system tray at the very bottom shows the date and time as 23-01-2023, 15:26.

2. Create a query to display the last\_name and salary for all employees whose salary is not in the range of \$5,000 and \$12,000. Order the output in descending order by last\_name.

The screenshot shows the Oracle Live SQL web interface. The top navigation bar includes 'Live SQL', 'Feedback', 'Help', a user profile, and a dark mode toggle. The left sidebar contains navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled 'SQL Worksheet' and contains a SQL query editor with the following code:


```
4 SELECT last_name, salary
5 FROM employees
6 WHERE salary NOT BETWEEN 5000 AND 12000;
7
8
```





Below the editor, the query results are displayed in a table:





LAST_NAME	SALARY
king	24000
Kochhar	17000
De Haan	17000
Lorentz	42000
Rajs	3500
Davies	3100
Matos	2600
Vargas	2500
Whalen	4400
Hartstein	13000

At the bottom of the interface, a status bar indicates: '2023 Oracle - Live SQL 23.1.1, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym'. Below this, it says 'Built with ❤️ using Oracle APEX - Privacy - Terms of Use'. The Windows taskbar at the very bottom shows various application icons and the system clock displaying 'ENG INTL 15:41 23-01-2023'.

3. Display the last\_name and department number of all employees in departments 20 and 50 in alphabetical order by name. (Make use of the IN clause.)


 **Live SQL**

 Feedback  Help  gholappravin2122@ternaengg.ac.in 



**SQL Worksheet**  Clear  Find **Actions**  Save **Run** 





```
1 select last_name,department_id
2 from employees
3 where department_id in(20,50)
4 order by first_name asc;
```



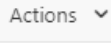


LAST_NAME	DEPARTMENT_ID
Davies	50
Mourgos	50
Hartstein	20
Fay	20
Vargas	50
Matos	50
Rajs	50

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4. Display the last\_name, salary, and commission for all employees who earn commissions.

 **Live SQL**

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**SQL Worksheet**  Clear  Find  Actions  Save 

```
1 select last_name,salary,commission_pct
2 from employees
3 where commission_pct>0;
```

LAST_NAME	SALARY	COMMISSION_PCT
Zlotkey	10500	.2
Abel	11000	.3
Taylor	8600	.2
Grant	7040	.15



Download CSV





4 rows selected.





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5. Display the last name, job, and salary for all employees whose job is Sales Representative (SA\_REP) or Stock Clerk (ST\_CLERK) and whose salary is not equal to \$2, 500, \$3,500, or \$7,000. Make use of the IN clause.

  **Live SQL**

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**SQL Worksheet**  Clear  Find **Actions**  Save **Run** 


```
1 select last_name,salary,job_id,salary
2 from employees
3 where (job_id in('SA_REP','ST_CLERK')) AND (salary not in(2500,3500,7000));
```

LAST_NAME	SALARY	JOB_ID	SALARY
Davies	3100	ST_CLERK	3100
Matos	2600	ST_CLERK	2600
Abel	11000	SA_REP	11000
Taylor	8600	SA_REP	8600
Grant	7040	SA_REP	7040



Download CSV

5 rows selected.

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6. Write a query that displays the employee's last names with the first letter capitalized and all other letters lowercase, and length of the names, for all employees whose name starts with J,A, or M.

 Feedback Help gholappavin2122@ternaengg.ac.in 

**SQL Worksheet** Clear Find Actions Save Run

```
1 select initcap(last_name), length(last_name)
2 from employees
3 where last_name LIKE 'J%' OR last_name LIKE 'A%' OR last_name LIKE 'M%'
4 order by last_name;
```

INITCAP(LAST_NAME)	LENGTH(LAST_NAME)
Abel	4
Matos	5
Mourgos	7

Download CSV

3 rows selected.

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