

## EXERCISE-5

### Restricting and Sorting data

After the completion of this exercise, the students will be able to do the following:

- Limit the rows retrieved by the queries
- Sort the rows retrieved by the queries
- 

#### Limiting the Rows selected

- Using WHERE clause
- Alias cannot be used in WHERE clause

#### Syntax

```
SELECT-----  
FROM-----  
WHERE condition;
```

#### Example:

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

#### Character strings and Dates

Character strings and date values are enclosed in single quotation marks.

Character values are case sensitive and date values are format sensitive.

#### Example:

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

#### Comparison Conditions

All relational operators can be used. (=, >, >=, <, <=, <>, !=)

#### Example:

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

#### Other comparison conditions

Operator	Meaning
BETWEEN ...AND...	Between two values
IN	Match any of a list of values
LIKE	Match a character pattern
IS NULL	Is a null values

#### Example:1

Find the Solution for the following:

1. Create a query to display the last name and salary of employees earning more than 12000.

select last\_name, salary from employees where salary > 12000;

2. Create a query to display the employee last name and department number for employee number 176.

select last\_name, department\_id from employees where  
employee\_id = 176;

3. Create a query to display the last name and salary of employees whose salary is not in the range of 5000 and 12000. (hints: not between )

select last\_name, salary from employees where salary not between  
5000 and 12000;

4. Display the employee last name, job ID, and start date of employees hired between February 20, 1998 and May 1, 1998. order the query in ascending order by start date. (hints: between)

select last\_name, job\_id, hire\_date from employees where  
hire\_date between '1998-02-20' and '1998-05-01' order by  
hire\_date;



5. Display the last name and department number of all employees in departments 20 and 50 in alphabetical order by name.(hints: in, orderby)

select last-name and dept-id from employees where  
department id between 20 and 50 order by first-name;

6. Display the last name and salary of all employees who earn between 5000 and 12000 and are in departments 20 and 50 in alphabetical order by name. Label the columns EMPLOYEE, MONTHLY SALARY respectively.(hints: between, in)

select last-name as EMPLOYEE, salary as 'MONTHLY SALARY'  
from employees where salary between 5000 and 12000  
and department-id between 20 and 50 order by first-name;

7. Display the last name and hire date of every employee who was hired in 1994.(hints: like)

select last-name, hire-date from employees where  
hire-date like "1994%";

8. Display the last name and job title of all employees who do not have a manager.(hints: is null)

select last-name, job-id from employees where  
manager-id is NULL;

9. Display the last name, salary, and commission for all employees who earn commissions. Sort data in descending order of salary and commissions.(hints: is not null, orderby)

select last-name, salary, commission-pct from employees  
where commission-pct is not null order by salary and  
commission-pct desc;

10. Display the last name of all employees where the third letter of the name is a.(hints: like)

select last-name from employees where last name  
like "--a%";

11. Display the last name of all employees who have an *a* and an *e* in their last name.(hints: like)

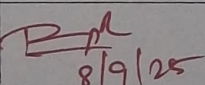
select last-name from employees where last-name like  
"%.a%.e%";

12. Display the last name and job and salary for all employees whose job is sales representative or stock clerk and whose salary is not equal to 2500 ,3500 or 7000.(hints:in,not in)

select last-name, salary, job-id from employees where  
job-id in('sales representative', 'stock clerk') and salary  
not in (2500,3500,7000);

13. Display the last name, salary, and commission for all employees whose commission amount is 20%.(hints:use predicate logic)

~~select last-name, salary, commission-pct~~  
~~from employees where commission-pct = salary\*0.2;~~

Evaluation Procedure	Marks awarded
Query(5)	5
Execution (5)	5
Viva(5)	5
Total (15)	15
Faculty Signature	 8/9/25



## Practice Questions

### Sorting Rows

1. In the example below, assign the employee\_id column the alias of "Number." Complete the SQL statement to order the result set by the column alias.

SELECT employee\_id, first\_name, last\_name FROM employees;

Select employee\_id as 'Number', first\_name, last\_name  
from employees order by 'number';

2. Create a query that will return all the DJs on Demand CD titles ordered by year with titles in alphabetical order by year.

Select title, year from d-cds order by year, title;

3. Order the DJs on Demand songs by descending title. Use the alias "Our Collection" for the song title.

Select song-title as 'Our collection' from d-songs  
order by song title desc;

4. Write a SQL statement using the ORDER BY clause that could retrieve the information needed.

Select id, first-name, last name, salary from  
t-staffs ORDER BY salary DESC, last-name;