

Restricciones y Ordenación

Filtrado horizontal

La cláusula WHERE

Los operadores de comparación

Operadores booleanos

Reglas de precedencia

Restricciones y Ordenación

Filtrado Cláusula WHERE

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

...

```
SELECT country_name  
FROM countries  
WHERE region_id=3;
```

...

```
SELECT last_name, first_name  
FROM employees  
WHERE job_id='SA_REP';
```

Restricciones y Ordenación

Filtrado Cláusula WHERE

```
SELECT last_name, salary  
FROM employees  
WHERE salary = 10000;
```

```
SELECT last_name, salary  
FROM employees  
WHERE salary = '10000';
```

Restricciones y Ordenación

Filtrado Cláusula WHERE

```
SELECT last_name, salary, department_id  
FROM employees  
WHERE salary = department_id;
```

...

```
SELECT last_name, salary, department_id  
FROM employees  
WHERE salary/10 = department_id*10;
```

...

```
SELECT last_name  
FROM employees  
WHERE job_id='SA_REP';
```

Restricciones y Ordenación

Filtrado Cláusula WHERE

Cláusula 1: WHERE job_id=SA_REP

Cláusula 2: WHERE job_id='Sa_Rep'

Cláusula 3: WHERE job_id='sa_rep'

Restricciones y Ordenación

Filtrado Cláusula WHERE

```
SELECT employee_id, job_id, last_name, first_name  
FROM employees  
WHERE last_name=first_name;
```

Cláusula 1: WHERE 'A ' || last_name || first_name = 'A King'

Cláusula 2: WHERE first_name || ' ' || last_name = last_name || ' ' || first_name

Cláusula 3: WHERE 'SA_REP' || 'King' = job_id || last_name

Cláusula 4: WHERE job_id || last_name ='SA_REP' || 'King'

Restricciones y Ordenación

Filtrado Cláusula WHERE

```
SELECT employee_id  
FROM job_history  
WHERE start_date = end_date;
```

...

```
SELECT employee_id  
FROM job_history  
WHERE start_date = '01-JAN-2001';
```

...

```
SELECT employee_id  
FROM job_history  
WHERE start_date = '01-JAN-01';
```

...

```
SELECT employee_id  
FROM job_history  
WHERE start_date = '01-JAN-99';
```


Restricciones y Ordenación

Filtrado Cláusula WHERE

```
SELECT employee_id  
FROM job_history  
WHERE start_date = end_date;
```

...

```
SELECT employee_id  
FROM job_history  
WHERE start_date = '01-JAN-2001';
```

...

```
SELECT employee_id  
FROM job_history  
WHERE start_date = '01-JAN-01';
```

...

```
SELECT employee_id  
FROM job_history  
WHERE start_date = '01-JAN-99';
```

...

```
SELECT start_date, employee_id  
FROM job_history  
WHERE start_date + 1 = '25-MAR-06';
```

Restricciones y Ordenación

OPERADORES

OPERADOR	DESCRIPCIÓN
<	Menor que
>	Mayor que
<=	Menor o igual que
>=	Mayor o igual que
<>	Distinto que
!=	Distinto que

Restricciones y Ordenación

OPERADORES

```
SELECT last_name, salary  
FROM employees  
WHERE salary > 5000;
```

...

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

...

```
WHERE salary <= 3000;  
WHERE salary >= 5000;  
WHERE salary <> department_id;  
WHERE salary != 4000+department_id;
```

Restricciones y Ordenación

OPERADORES

```
SELECT last_name  
FROM employees  
WHERE last_name < 'King';
```

...

```
SELECT last_name, hire_date  
FROM employees  
WHERE hire_date < '01-JAN-2003';
```

Restricciones y Ordenación

BETWEEN

```
SELECT last_name, salary  
FROM employees  
WHERE salary BETWEEN 3400 AND 4000;
```

...

```
SELECT last_name  
FROM employees  
WHERE salary >= 3400 AND salary <= 4000;
```

...

```
SELECT first_name, hire_date  
FROM employees  
WHERE hire_date BETWEEN '24-JUL-2004' AND '07-JUN-2007';
```

...

```
SELECT first_name, hire_date  
FROM employees  
WHERE '24-JUL-2004' BETWEEN hire_date+30 AND '07-JUN-2007';
```

Restricciones y Ordenación

IN

```
SELECT last_name, salary  
FROM employees  
WHERE salary IN (3000,4000,6000);
```

...

```
SELECT last_name, salary  
FROM employees  
WHERE salary = 3000 OR salary = 4000 OR salary = 6000;
```

Restricciones y Ordenación

IN

```
SELECT last_name  
FROM employees  
WHERE last_name IN ('King','Garbharran','Ramklass');
```

...

```
SELECT last_name  
FROM employees  
WHERE hire_date IN ('01-JAN-1998','01-DEC-1999');
```

Restricciones y Ordenación

LIKE

```
SELECT first_name  
FROM employees  
WHERE first_name LIKE 'A%';
```

...

```
WHERE first_name LIKE '%';  
WHERE last_name LIKE 'K_ng';
```


Restricciones y Ordenación

LIKE

```
WHERE last_name LIKE 'King';
```

```
WHERE last_name = 'King';
```

...

```
WHERE    last_name = 'Kang' OR  
         last_name = 'Kbng' OR  
         last_name = 'Kcng' ... OR  
         last_name = 'Kzng'
```

...

```
SELECT * FROM jobs  
WHERE job_id LIKE 'SA\_%' ESCAPE '\';
```

```
SELECT job_id FROM jobs  
WHERE job_id LIKE 'SA$_%' ESCAPE '$';
```

Restricciones y Ordenación

IS NULL

```
SELECT last_name, commission_pct  
FROM employees  
WHERE commission_pct IS NULL;
```

Restricciones y Ordenación

AND

Condition X	Condition Y	Result
FALSE	FALSE	FALSE
TRUE	FALSE	FALSE
FALSE	TRUE	FALSE
TRUE	TRUE	TRUE
TRUE	NULL	NULL
NULL	TRUE	NULL
FALSE	NULL	FALSE
NULL	FALSE	FALSE
NULL	NULL	NULL

Restricciones y Ordenación

AND

```
SELECT first_name, last_name, commission_pct, hire_date
FROM employees
WHERE      first_name LIKE 'J%'
          AND commission_pct > 0.1;
```

Restricciones y Ordenación

OR

Condition X	Condition Y	Result
FALSE	FALSE	FALSE
TRUE	FALSE	TRUE
FALSE	TRUE	TRUE
TRUE	TRUE	TRUE
TRUE	NULL	TRUE
NULL	TRUE	TRUE
FALSE	NULL	NULL
NULL	FALSE	NULL
NULL	NULL	NULL

Restricciones y Ordenación

OR

```
SELECT first_name, last_name, commission_pct, hire_date  
FROM employees  
WHERE      first_name LIKE 'B%'  
          OR commission_pct > 0.35;
```

Restricciones y Ordenación

NOT

Condition X

FALSE

TRUE

NULL

Condition Y

TRUE

FALSE

NULL

WHERE last_name = 'King'
WHERE first_name LIKE 'R%'
WHERE department_id IN (10,20,30)
WHERE salary BETWEEN 1 and 3000
WHERE commission_pet IS NULL

WHERE NOT (last_name = 'King')
WHERE first_name NOT LIKE 'R%'
WHERE department_id NOT in (10, 20, 30)
WHERE salary NOT BETWEEN 1 AND 3000
WHERE commission_pet IS NOT NULL

Restricciones y Ordenación

NOT

```
SELECT first_name, last_name, commission_pct, hire_date
FROM employees
WHERE first_name NOT LIKE 'B%'
      OR NOT (commission_pct > 0.35);
```


Restricciones y Ordenación

PRIORIDAD

01	()	Paréntesis o llaves
02	/,*	División y multiplicación
03	+,-	Suma y resta
04		Concatenación
05	=,<,>,<=,>=	Comparadores de igualdad y desigualdad
06	[NOT] LIKE, IS [NOT] NULL, [NOT] IN	Comparador de patrón, nulo y conjunto
07	[NOT] BETWEEN	Comparador de rango
08	!=,<>	No igual a
09	NOT	Condición lógica NOT
10	AND	Condición lógica AND
11	OR	Condición lógica OR

Restricciones y Ordenación

PRIORIDADES

```
SELECT last_name,salary,department_id,job_id,commission_pct
FROM employees
WHERE      last_name LIKE '%a%'
          AND salary > department_id * 200
          OR  job_id IN ('MK_REP','MK_MAN')
          AND commission_pct IS NOT NULL;
```

```
SELECT last_name,salary,department_id,job_id,commission_pct
FROM employees
WHERE      last_name LIKE '%a%'
          AND salary > department_id * 100
          AND commission_pct IS NOT NULL
          OR  job_id = 'MK_MAN';
```

Restricciones y Ordenación

ORDER BY

```
SELECT * | { [DISTINCT] column | expression [alias], ...}  
FROM table  
[WHERE condition(s)]  
[ORDER BY {col(s) | expr | numeric_pos} [ASC|DESC] [NULLS FIRST | LAST]];
```

Restricciones y Ordenación

ORDER BY

```
SELECT last_name, salary, hire_date, hire_date-(salary/10) emp_value  
FROM employees  
WHERE job_id IN ('SA_REP','MK_MAN')  
ORDER BY emp_value;
```

...

```
SELECT last_name, hire_date, salary  
FROM employees  
WHERE job_id IN ('SA_REP','MK_MAN')  
ORDER BY 2;
```

...

```
SELECT job_id, last_name, salary, hire_date  
FROM employees  
WHERE job_id IN ('SA_REP','MK_MAN')  
ORDER BY job_id DESC, last_name, 3 DESC;
```

Restricciones y Ordenación

&

```
SELECT employee_id, last_name, phone_number
FROM employees
WHERE      last_name = &LASTNAME
          OR employee_id = &EMPNO;
```

```
SELECT employee_id, last_name, phone_number, email
FROM employees
WHERE      last_name = '&LASTNAME'
          OR employee_id = &EMPNO;
```

Restricciones y Ordenación

&&

```
SELECT first_name, last_name
FROM employees
WHERE      last_name LIKE '%&SEARCH%'
          AND first_name LIKE '%&SEARCH%';
```

```
SELECT first_name, last_name
FROM employees
WHERE      last_name LIKE '%&&SEARCH%'
          AND first_name LIKE '%&&SEARCH%';
```

Restricciones y Ordenación

&& - &

```
SELECT first_name, job_id, &&col  
FROM employees  
WHERE job_id IN ('MK_MAN','SA_MAN')  
ORDER BY &col;
```

Restricciones y Ordenación

EXPRESIONES DE TEXTO

```
SELECT &rest_of_statement;
```

```
SELECT department_name FROM departments;
```

```
...
```

SELECT	&SELECT_CLAUSE
FROM	&FROM_CLAUSE
WHERE	&WHERE_CLAUSE
ORDER BY	&ORDER_BY_CLAUSE;

Restricciones y Ordenación

DEFINE - UNDEFINE

```
SELECT last_name, &COLNAME  
FROM employees  
WHERE department_id=30  
ORDER BY &COLNAME;
```

...

```
UNDEFINE COLNAME
```

Restricciones y Ordenación

DEFINE - UNDEFINE

DEFINE;
DEFINE variable=value

...

SET DEFINE ON|OFF
SET VERIFY ON|OFF