**HW 7th sep**

Select \* from locations;

Select \* from countries;

Select \* from regions;

Select \* from departments;

Select \* from employees;

Select \* from job\_history;

Select \* from jobs;

select first\_name, phone\_number, hire\_date from employees ;

select start\_date, end\_date, city, state\_province from job\_history;

select location\_id, street\_address, city, state\_province from locations;

select salary, (salary+1000)\*2 from employees;

select first\_name as Capital\_name, last\_name as Surname from employees;

select first\_name || last\_name Full\_name from employees;

select street\_address as street, postal\_code as pincode, state\_province as state from locations;

select street\_address || postal\_code || state\_province as Full\_Address from locations;

select region\_id, region\_id\*10 from regions;

**8th Sep**

1.select first\_name, last\_name, job\_id, salary\*12 "Yearly salary" from employees ; //in “ ” blank spaces is allowed

2.select first\_name, last\_name, job\_id, salary\*12 as Yearly salary from employees ; //error cz after ‘as’ in yearly sal blank space has been introduced, instead use \_

3.select first\_name + last\_name, job\_id, salary "Yearly salary" from employees ; //error cz + is canot be used anywhere

4.Where clause –

select \*

from employees

where department\_id = 90 ;

5. select first\_name, last\_name, department\_id

from employees

where first\_name = 'Ellen' ;

6. Between … and… -

select first\_name, last\_name, department\_id

from employees

where first\_name = 'Ellen' ;

7. in (set) –

select employee\_id, last\_name, manager\_id

from employees

where manager\_id in (100, 101, 201) ;

8. Like

a. first index char, remaining anything

select first\_name

from employees

where first\_name LIKE 'A%' ;

select first\_name

from employees

where first\_name LIKE 'P%' ;

select first\_name

from employees

where first\_name LIKE 'R%' ;

select first\_name

from employees

where first\_name LIKE 'T%' ;

select first\_name

from employees

where first\_name LIKE 'O%' ;

b. starting anything, end with char

select first\_name

from employees

where first\_name LIKE '%l' ;

select first\_name

from employees

where first\_name LIKE '%k' ;

select first\_name

from employees

where first\_name LIKE '%e' ;

select first\_name

from employees

where first\_name LIKE '%y' ;

select first\_name

from employees

where first\_name LIKE '%d' ;

c. anything , char, anything

select first\_name

from employees

where first\_name LIKE '%z%' ;

select first\_name

from employees

where first\_name LIKE '%p%' ;

select first\_name

from employees

where first\_name LIKE '%u%' ;

select first\_name

from employees

where first\_name LIKE '%A%' ;

select first\_name

from employees

where first\_name LIKE '%d%' ;

d. 1st index anything , 2nd index char, next anything.

select first\_name

from employees

where first\_name LIKE '\_o%' ;

select first\_name

from employees

where first\_name LIKE '\_a%' ;

select first\_name

from employees

where first\_name LIKE '\_r%' ;

select first\_name

from employees

where first\_name LIKE '\_e%' ;

select first\_name

from employees

where first\_name LIKE '\_t%' ;

e. start anything, 2nd last index char, last char anything

select first\_name

from employees

where first\_name LIKE '%s\_' ;

select first\_name

from employees

where first\_name LIKE '%o\_' ;

select first\_name

from employees

where first\_name LIKE '%i\_' ;

select first\_name

from employees

where first\_name LIKE '%t\_' ;

select first\_name

from employees

where first\_name LIKE '%h\_' ;

9. NULL condition

select first\_name,manager\_id

from employees

where manager\_id is NULL ;

12th Sep

1. Logical Operators And

select employee\_id, last\_name, job\_id, salary

from employees

where salary >= 10000

and job\_id like ' %MAN% "'

select employee\_id, last\_name, job\_id, salary

from employees

where salary >= 1000

and last\_name like '%e'

select employee\_id, last\_name, job\_id, salary

from employees

where last\_name like '%e%'

and job\_id LIKE 'SA\_REP' ;

select department\_id, department\_name, manager\_id

from departments

where manager\_id >= 150

and department\_name like '%a%'

select department\_id, department\_name, manager\_id

from departments

where department\_id < 50

and manager\_id > 110

1. Logical Operators OR

select employee\_id, first\_name, job\_id, salary

from employees

where first\_name like '%es'

or job\_id like ' %MAN% '

select employee\_id, last\_name, job\_id, salary

from employees

where salary >= 10000

or employee\_id <150 ;

select employee\_id, first\_name, commission\_pct

from employees

where first\_name like '%s%'

or commission\_pct >0.2

select street\_address, city, state\_province, country\_id

from locations

where street\_address > '5000'

or city LIKE '%e'

select street\_address, city, state\_province, country\_id

from locations

where street\_address > '5000'

or country\_id like '%a%'

1. Logical Operators NOT IN

select start\_date, end\_date, job\_id

from job\_history

where job\_id LIKE 'A%'

or start\_date not in '17-SEP-90';

select start\_date, end\_date, job\_id

from job\_history

where job\_id not in 'A%';

select first\_name, last\_name, job\_id

from employees

where job\_id not in ('IT\_PROG','SA\_REP');

select start\_date, end\_date, job\_id

from job\_history

where end\_date > '24-Jul-80'

1. Combination of AND, OR, NOT IN

select start\_date, end\_date, job\_id

from job\_history

where start\_date > '24-Jul-80'

and end\_date < '1-JAN-99'

select start\_date, end\_date, job\_id

from job\_history

where start\_date > '24-Jul-80'

and end\_date < '1-JAN-99'

or job\_id like '%R'

select start\_date, end\_date, job\_id, department\_id

from job\_history

where start\_date > '24-Jul-80'

OR end\_date < '1-JAN-99'

and job\_id like '%R'

select start\_date, end\_date, job\_id, department\_id

from job\_history

where start\_date > '24-Jul-80'

OR department\_id > 60

and job\_id like '%A';

select start\_date, end\_date, job\_id, department\_id

from job\_history

where start\_date > '24-Jul-80'

and department\_id > 60

or job\_id like '%A'

1. Order by

select employee\_id, last\_name, job\_id, department\_id, hire\_date

from employees

order by employee\_id;

select employee\_id, last\_name, job\_id, department\_id, hire\_date

from employees

order by employee\_id Desc;

select employee\_id, last\_name, job\_id, department\_id, hire\_date

from employees

order by hire\_date;

select employee\_id, last\_name, job\_id, department\_id, hire\_date

from employees

order by department\_id desc;

**13th Sept 2022**

1. **10 Q of Lower case**

select job\_title, lower (job\_title) from jobs;

select street\_address , lower (street\_address) from locations;

select city, lower (city) from locations;

select country\_name, lower(country\_name) from countries;

select region\_name, lower (region\_name) from regions;

select department\_name, lower (department\_name) from departments;

select first\_name ,lower(first\_name) from EMPLOYEES;

select last\_name,lower(last\_name) from employees;

select email, lower(email) from employees;

select state\_province,lower(state\_province) from locations;

select hire\_date, lower(hire\_date) from employees;

1. **10 Q of Upper case**

select job\_title, upper (job\_title) from jobs;

select street\_address , upper (street\_address) from locations;

select city, upper (city) from locations;

select country\_name, upper(country\_name) from countries;

select region\_name, upper (region\_name) from regions;

select department\_name, upper (department\_name) from departments;

select first\_name ,upper(first\_name) from EMPLOYEES;

select last\_name,upper(last\_name) from employees;

select email, upper(email) from employees;

select state\_province,upper(state\_province) from locations;

1. **10 Q of concat**

select concat (first\_name, last\_name) from employees;

select concat (first\_name, employee\_id) from employees;

select concat (manager\_id, first\_name) from employees;

select concat (street\_address, city) as address from locations;

select concat (job\_title, max\_salary) from jobs;

select concat (region\_id, region\_name) from regions;

select concat (country\_name, region\_id) from countries;

select concat (start\_date, department\_id) from job\_history;

select concat (job\_id, min\_salary) FROM jobs;

select concat (first\_name, commission\_pct) from employees;

1. **5Q of concat – string and column**

select 'The job is for ' || upper (last\_name) from employees;

select 'max salary of' || job\_title || max\_salary from jobs;

select 'Job title of ' || job\_id || ' has got ' || commission\_pct || ' as commission ' from employees;

select 'Manager with ' || manager\_id || ' works at ' || location\_id || ' location ' from departments;

select region\_id || ' region id represents ' || region\_name || ' region' from regions;

1. **5Q of sub-string without range**

select email, SUBSTR(email,3) from employees;

select state\_province, substr(state\_province,2) from locations;

select country\_name, substr (country\_name, 4) from countries;

select job\_title, substr(job\_title,5) from jobs;

select department\_name, substr(department\_name,6) from departments;

1. **5Q of sub-string with range**

select email, SUBSTR(email,2,4) from employees;

select state\_province, substr(state\_province,2,5) from locations;

select country\_name, substr (country\_name, 3,4) from countries;

select job\_title, substr(job\_title,1,5) from jobs;

select department\_name, substr(department\_name,4,6) from departments;

**14th Sept 2022**

1. **5 Q of Replace**

select first\_name, replace(first\_name,'Ste','Oppo') from employees;

select last\_name, replace(last\_name,'e','arara') from employees;

select region\_name, replace(region\_name,'a','bekar') from regions;

select department\_name, replace(department\_name,'n','baba') from departments;

select country\_name, replace(country\_name,region\_id) from countries;

select first\_name,last\_name, replace(first\_name,first\_name,last\_name) from employees;

1. **5 Q of Trim**

select trim ('#' from '###Steven##') as n from employees;

select first\_name, trim ('S' from 'Steven') as first\_name from employees;

select region\_name, trim('A' from region\_name) from regions;

select max\_salary, trim('1' from max\_salary) as salary from jobs;

select state\_province, trim('o' from state\_province) from locations;

select first\_name, trim ('a' from first\_name) as first\_name from employees where first\_name like ‘%a%’;

1. **5 Q of Round**

select max\_salary,(max\_salary/9865), round((max\_salary/9865),3) from jobs;

select commission\_pct, round(commission\_pct,1) from employees;

select min\_salary, (min\_salary/3468), round((min\_salary/3468),5) as rounded\_upto\_5 from jobs;

1. **5 Q of trunc**

select max\_salary,(max\_salary/9865), trunc((max\_salary/9865),3) from jobs;

select commission\_pct, trunc(commission\_pct,1) from employees;

select min\_salary, (min\_salary/3468), trunc((min\_salary/3468),5) as Trunc\_upto\_5 from jobs;

1. **10 Q of Mod**

select salary,mod(salary,100) from employees;

select min\_salary,mod(min\_salary,800) from jobs;

select max\_salary,mod(max\_salary,400) from jobs;

SELECT commission\_pct, (commission\_pct\*1000), mod((commission\_pct\*1000),300) as mod from employees;

1. **Dt+2, Dt-2, Dt-Dt**

select hire\_date, hire\_date+2 from employees;

select hire\_date, hire\_date+2 from employees where hire\_date > '01-JAN-90';

select hire\_date, hire\_date-32 from employees where hire\_date > '01-JAN-90';

select last\_name, hire\_date,sysdate,(sysdate - hire\_date)/7 from employees;

select last\_name, hire\_date,sysdate,(sysdate - hire\_date)/24 from employees;

select last\_name, hire\_date,sysdate,(sysdate - hire\_date)/7 from employees where job\_id = 'IT\_PROG';

**15th Sept 2022**

1. **5 Q of To\_Char**

Select salary, to\_char(salary,'$99,999,00' ) from employees;

select hire\_date, to\_char(hire\_date,'dd-mm-yyyy') from employees;

select end\_date, to\_char(end\_date, 'mm-yy') from job\_history;

select start\_date, to\_char(start\_date, 'dd-mm') from job\_history;

select hire\_date, to\_char(hire\_date,'dd-mm-yyyy') from employees where first\_name = 'Steven';

select hire\_date, to\_char(hire\_date, 'dd-mon-yy') from employees;

1. **2 Q of To\_Date**

select hire\_date, to\_date('17-88-Jan', 'dd-yy-mon') from employees;

1. **22 Q of nested**

select upper(concat(first\_name,last\_name)) from employees;

select concat(upper(first\_name), lower(last\_name)) from employees;

select job\_id, initCap( lower(job\_id)) from employees;

select department\_name,location\_id,concat(department\_name,location\_id), instr (concat(department\_name,location\_id),'i') from departments;

select last\_name, hire\_date, to\_date('17-JUN-87','dd-mon-yy') from employees where first\_name = 'Steven';

select min\_salary as password,

as password\_encrpted ,

trim('@' from lpad(rpad(min\_salary,8,'@'),14,'@')) as password\_decrypted

from jobs;

select max\_salary,concat(lpad(max\_salary,7,'\*'),rpad(max\_salary,8,'\*')) from jobs;

select department\_id, replace from departments;

select first\_name, replace(first\_name,'e','rrr') as Name\_Encryption,

replace(replace(first\_name,'e','rrr'),'rrr','e') as Name\_Decryption from employees;

**16th Sept 2022**

1. **10 Q of Min**

select min(min\_salary) from jobs;

select min(max\_salary) from jobs;

select min(end\_date) from job\_history;

select min(start\_date) from job\_history;

select min(street\_address) from locations;

select min(commission\_pct) from employees;

select min(phone\_number) from employees;

select min(first\_name) from employees;

select min(region\_id) from countries;

select min(salary) from employees;

1. **10 Q of Max**

select max(min\_salary) from jobs;

select max(max\_salary) from jobs;

select max(end\_date) from job\_history;

select max(start\_date) from job\_history;

select max(street\_address) from locations;

select max(commission\_pct) from employees;

select max(phone\_number) from employees;

select max(first\_name) from employees;

select max(region\_id) from countries;

select max(salary) from employees;

**Note - Min and max can be performed on char and int col**

1. **10 Q of Sum**

select sum(min\_salary) from jobs;

select sum(max\_salary) from jobs;

select sum(commission\_pct) from employees;

select sum(region\_id) from countries;

select sum(salary) from employees;

select sum(employee\_id) from employees;

select sum(manager\_id) from employees;

select sum(manager\_id) from departments;

select sum(region\_id) FROM regions;

select sum(location\_id) from departments;

1. **10 Q of Avg**

select avg(min\_salary), round(avg(min\_salary),3) from jobs;

select avg(max\_salary) from jobs;

select avg(commission\_pct) from employees;

select avg(region\_id) from countries;

select avg(salary) from employees;

select avg(employee\_id) from employees;

select avg(manager\_id) from employees;

select avg(manager\_id) from departments;

select avg(region\_id) FROM regions;

select avg(location\_id) from departments;

1. **10 Q of Count**

select count(min\_salary) from jobs;

select count(max\_salary) from jobs;

select count(commission\_pct) from employees;

select count(region\_id) from countries;

select count(salary) from employees;

select count(employee\_id) from employees;

select count(manager\_id) from employees;

select count(manager\_id) from departments;

select count(region\_id) FROM regions;

select count(location\_id) from departments;

1. **10 Q of Combination**

select avg(salary),count(salary) from employees;

select min(LAST\_NAME), count(last\_name) from employees;

select max(region\_name), sum(region\_id) from regions;

select max(city), sum(location\_id), min(country\_id) from locations;

1. **2 Q of Count(\*)**

select count(\*) from employees;

select count(\*) from job\_history;

1. **2 Q of Count(exp)**

select count( job\_id ) from job\_history ;

and

select count( job\_id ) from job\_history where start\_date > '01-Jan-95' ;

**19th Sept 2022**

1. **10 Q of Nested Group by**

select max(avg(salary))

from employees

group by department\_id;

select count(max(end\_date))

from job\_history

group by job\_id;

select min(sum(location\_id))

from locations

group by country\_id;

select sum(avg( min\_salary))

from jobs

group by job\_id;

select length(avg( count(manager\_id)))

from departments

group by location\_id;

1. **10 Q of Having**
2. **10 Q Combination Having, Group by, Group, Order**

select department\_id, max(salary)

from employees

group by department\_id

having max(salary)>10000;

select department\_id, max(first\_name) /\* 2. \*/

from employees

group by department\_id /\* 1. \*/

having max(first\_name) like '%a%'; /\* 3. \*/

select job\_id, sum(employee\_id)

from job\_history

group by job\_id

having sum(employee\_id) > 200;

select country\_id, max(location\_id)

from locations

group by country\_id

having country\_id like 'C%'

order by max(location\_id) desc;

1. **25 Q Natural Join**

select department\_id, department\_name, location\_id, city

from departments

natural join locations;

select department\_id, department\_name, first\_name

from departments

natural join employees;

select country\_name,department\_name

from countries

natural join departments;

select max\_salary, department\_id

from jobs

natural join job\_history

where (job\_history.department\_id)> 80

order by (job\_history.department\_id);

**20th Sept 2022**

1. **15 Q of Natural + Where**

select department\_id, department\_name, location\_id, city

from departments

natural join locations where departments.department\_id in (20,50);

select first\_name, department\_id

from employees

natural join departments where employees.first\_name = 'Lex';

select first\_name, max\_salary

from employees

natural join jobs

where max\_salary > 25000 ;

select department\_name, country\_id

from departments

natural join countries

where department\_name like '%Human%';

select region\_name, country\_name

from regions

natural join countries

where country\_name = 'India';

1. **15 Q of Natural join + USING clause**

select l.city, d.department\_name, location\_id

from locations l

join departments d

using (location\_id);

select h.job\_id, d.manager\_id, department\_id

from job\_history h

join departments d

using (department\_id);

select j.job\_title, h.employee\_id, job\_id

from jobs j

join job\_history h

using (job\_id);

1. select c.country\_id, r.region\_name,region\_id
2. from countries c
3. join regions r
4. using (region\_id)

**15 Q of Natural join +Using cl + Where cl**

**21th Sept 2022**

1. **10 Q of Natural+Using + Where**

select employees.employee\_id, employees.last\_name, departments.location\_id,department\_id

from employees join departments

using(department\_id)

where last\_name like '%en%';

select l.city, l.street\_address, d.department\_name, location\_id

from locations l join departments d

using(location\_id)

where location\_id between 1600 and 2000;

1. **10 Q of ON**

select e.employee\_id, e.last\_name, e.department\_id,d.department\_id, d.location\_id

from employees e join departments d

on (e.department\_id = d.department\_id);

select e.employee\_id, e.last\_name, e.manager\_id, d.manager\_id, d.location\_id

from employees e join departments d

on (e.manager\_id = d.manager\_id)

where employee\_id BETWEEN 120 and 180 ;

select j.job\_title, j.job\_id, h.end\_date, h.job\_id

from jobs j join job\_history h

on (j.job\_id = h.job\_id);

select c.country\_name, l.city,c.country\_id, l.country\_id

from countries c join locations l

on(c.country\_id=l.country\_id);

select d.department\_name, j.start\_date, d.department\_id, j.department\_id

from departments d join job\_history j

on(d.department\_id = j.department\_id);

1. **10 Q of Self**

**22th Sept 2022**

1. **10 Q of Non Equi Join**

select e.last\_name, e.salary, j.grade\_level

from employees e join job\_grades j

on e.salary between 1500 and 5000;

select e.last\_name, e.salary, j.grade\_level

from employees e join job\_grades j

on e.salary > 5000;

select d.department\_name, c.country\_name, c.region\_id

from departments d join countries c

on c.country\_name like '%India%';

select j.job\_title, c.country\_id, c.region\_id

from jobs j join countries c

on j.min\_salary = 2000;

1. **10 Q of 3way Join**

select employee\_id, city, department\_name, d.department\_id, l.location\_id

from employees e join departments d

on(e.department\_id = d.department\_id)

join locations l

on (d.location\_id = l.location\_id);

select r.region\_name, r.region\_id, c.country\_name,c.region\_id

from regions r join countries c

on(r.region\_id=c.region\_id)

join locations l

on (l.country\_id = c.country\_id);

1. **10Q Where & AND**

select r.region\_name, r.region\_id, c.country\_name,c.region\_id

from regions r join countries c

on(r.region\_id=c.region\_id)

join locations l

on (l.country\_id = c.country\_id)

where c.country\_name like '%a'

and r.region\_id = 3;

1. **10 Q Left Outer**
2. **10Q Right Outer**
3. **Full Outer**

**23th Sept 2022**

1. **Sub Q with all operations - <, > , <= , >= , =**

select last\_name, salary

from employees

where salary >

(select salary from employees

where last\_name = 'Abel');

select last\_name, salary

from employees

where first\_name = (select distinct first\_name from employees

where first\_name = 'Steven');

select job\_id, max\_salary

from jobs

where max\_salary >=

(select min(max\_salary) from jobs);

select start\_date, employee\_id

from job\_history

where employee\_id <

(select employee\_id from job\_history where employee\_id = 122);

1. **Use Having Clause and Group by and group functions – Min, Max, Count, Sum, Avg**

select department\_id, min(salary)

from employees

group by department\_id

having MIN(salary)>

(select min(salary) from employees where department\_id = 50);

select job\_id, max(max\_salary)

from jobs

group by job\_id

having max(max\_salary) <

(select distinct max(max\_salary) from jobs);

1. **Null**

select job\_id, max(max\_salary)

from jobs

group by job\_id

having max(max\_salary) >

(select distinct max(max\_salary) from jobs);

**24th Sept 2022**

select last\_name, salary, department\_id

from employees

where department\_id in (50,80,110);

select last\_name, salary, department\_id

from employees

where salary in (select min(salary) from employees group by department\_id);

select employee\_id, job\_id

from employees

union

select employee\_id, job\_id

from job\_history;

select employee\_id, job\_id

from employees

union all

select employee\_id, job\_id

from job\_history;

select employee\_id, job\_id

from employees

intersect

select employee\_id, job\_id

from job\_history;

select employee\_id, job\_id

from employees

minus

select employee\_id, job\_id

from job\_history;

select employee\_id, job\_id

from job\_history

minus

select employee\_id, job\_id

from employees;

select employee\_id, job\_id from employees

intersect

select employee\_id,job\_id from job\_history;

select employee\_id, job\_id from job\_history

intersect

select employee\_id,job\_id from employees;

select employee\_id, job\_id from employees

minus

select employee\_id,job\_id from job\_history;

select employee\_id, job\_id from job\_history

minus

select employee\_id,job\_id from employees;

select employee\_id, department\_id from employees

where (employee\_id, department\_id)

in (select employee\_id, department\_id from employees

union

select employee\_id, department\_id from departments);