**DAY 1 Assignments(11-01-2021)**

1. Select employee\_id, concat(first\_name,last\_name) as full\_name, salary as basic\_salary,(Salary\*0.1) as HRA, (salary\*0.05) as DA, (salary\*0.07) as PF, (salary+ (Salary\*0.1)+ (salary\*0.05)-( salary\*0.07)) as gross\_salary from employees;
2. Select employee\_name, salary, hire\_date from employees where hire\_date between ‘1990-01-01’ to ‘1995-05-05’.
3. **Using Where clause:**

select emp.first\_name, dept.department\_name, loc.city from employees emp, departments dept, locations loc where emp.department\_id=dept.department\_id and dept.location\_id=loc.location\_id;

**Using on clause:**

select emp.first\_name, dept.department\_name, loc.city from (employees emp join departments dept on emp.department\_id=dept.department\_id) join locations loc on dept.location\_id=loc.location\_id;

1. Display details of jobs where the minimum salary is greater than 10000.

select first\_name, hire\_date from employees where hire\_date between 2002 and 2005;

1. Display first name and join date of the employees who is either IT Programmer or Sales Man.

select first\_name, hire\_date from employees where job\_id in('IT\_PROG','SA\_MAN');

1. Display first name, salary, commission pct, and hire date for employees with salary less than 10000.

select first\_name, hire\_date,salary,commission\_pct from employees where salary<10000;

1. Display employees where the first name or last name starts with S.

select first\_name,last\_name from employees where first\_name like's%' or last\_name like 's%';

1. Display details of the employees where commission percentage is null and salary in the range 5000 to 10000 and department is 30.

select \* from employees where commission\_pct is null and salary between 5000 and 10000 and department\_id=30;

1. Display job title, employee ID, number of days between ending date and starting date for all jobs in department 30 from job history.

select j1.job\_title, jh.employee\_id, datediff(jh.end\_date, jh.start\_date) from jobs j1, job\_history jh where j1.job\_id= jh.job\_id;

1. Display country name, city, and department name.

select con.country\_name, loc.city, dept.department\_name from countries con, locations loc, departments dept where con.country\_id=loc.country\_id and loc.location\_id=dept.location\_id;

1. Display employee name and country in which he is working.

select concat(first\_name,' ', last\_name) as employee\_name, country\_name from employees join departments using(department\_id) join locations using(location\_id) join countries using(country\_id);

1. Display details of jobs where the minimum salary is greater than 10000.

select job\_id, job\_title from jobs where min\_salary>10000;

1. Display department name and manager first name.

select department\_name,first\_name from departments d join employees e on(d.manager\_id=e.employee\_id);

1. Display department name, manager name, and city.

SELECT DEPARTMENT\_NAME, FIRST\_NAME, CITY FROM DEPARTMENTS D JOIN EMPLOYEES E ON (D.MANAGER\_ID=E.EMPLOYEE\_ID) JOIN LOCATIONS L USING (LOCATION\_ID);

1. Display job Title, the difference between minimum and maximum salaries for jobs with max salary in the range 10000 to 20000.

select job\_id,(max\_salary-min\_salary) from jobs where max\_salary between 10000 and 20000;

1. Display details of jobs in the descending order of the title.

select job\_id, job\_title from jobs order by job\_title desc;

1. Display employees who joined in the month of May.

select concat(first\_name,' ',last\_name) as employee\_name from employees where hire\_date like '\_\_\_\_-05-\_\_%';

1. Display first name, salary, and round the salary to thousands.

select first\_name,round(salary,-3) from employees;

1. Display first name and date of first salary of the employees.

select first\_name,last\_day(hire\_date) from employees;

1. Display first name and experience of the employees.

select first\_name, datediff(sysdate(),hire\_date)/365 as experience from employees;

1. Display the length of first name for employees where last name contain character ‘b’ after 3rd position.

select length(first\_name) from employees where last\_name like '\_\_\_b%';

1. Display first name in upper case and email address in lower case for employees where the first name and email address are same irrespective of the case.

select upper(first\_name),lower(email) from employees where first\_name=email;

1. Display the number of days between system date and 1st January 1995.

select datediff(sysdate(),'1995-01-01');

1. Display employee ID and the date on which he ended his previous job.

select employee\_id,max(end\_date) from job\_history where employee\_id in(select employee\_id from job\_history group by 1 having count(employee\_id)>1) group by 1;

1. Display the country ID and number of cities we have in the country.

select country\_id, count(\*) from locations group by country\_id;

1. Display average salary of employees in each department who have commission percentage.

select department\_id,avg(salary) from employees where commission\_pct is not null group by department\_id;

1. Display job ID, number of employees, sum of salary, and difference between highest salary and lowest salary of the employees of the job.

select job\_id, count(\*), sum(salary),max(salary)-min(salary) from employees group by job\_id;

1. Display job ID for jobs with average salary more than 10000.

select job\_id from employees group by job\_id having avg(salary)>10000;

1. Display years in which more than 10 employees joined.

select date\_format(hire\_date,'%y') from employees group by date\_format(hire\_date,'%y') having count(employee\_id)>10;

1. Display departments in which more than five employees have commission percentage.

select department\_name from departments where department\_id=(select department\_id from employees group by department\_id having count(commission\_pct)>5);

1. Display department name and number of employees in the department.

select department\_name, count(\*) from departments inner join employees on employees.department\_id=departments.department\_id group by departments.department\_id, department\_name order by department\_name;

1. Display employee ID for employees who did more than one job in the past.

select employee\_id from employees where employee\_id not in(select employee\_id from job\_history);

**Day 2 Assignments(21/01/2021):**

1. Change salary of employee 115 to 8000 if the existing salary is less than 6000.

update employees set salary=8000 where employee\_id=115 and salary<6000;

1. Insert a new employee into employees with all the required details.

insert into employees(employee\_id,first\_name,last\_name,email,phone\_int,hire\_date,job\_id,salary,department\_id) values(207,'sam','levis','sam','216 235 1234',sysdate(),'sa\_man',15000,50);

1. Change job ID of employee 110 to IT\_PROG if the employee belongs to department 10 and the existing job ID does not start with IT.

update employees set job\_id='IT\_PROG' where employee\_id=110 and department\_id=10 and not job\_id like 'IT%';

1. Insert a row into departments table with manager ID 120 and location ID in any location ID for city Tokyo.

insert into departments values(280,'sports',120,1200);

1. Display job title, employee ID, number of days between ending date and starting date for all jobs in department 30 from job history.

select job\_title,employee\_id,end\_date-start\_date from job\_history join jobs where department\_id=30;

1. Table ---> Customer

custId, firstName,lastName,age,city, mobileNumber, dob

Add the Constraints

custId is Primary Key

firstName not null

age must be greater than 21

mobile must be unique .

create table customer(custid int primary key,firstname varchar(10) not null,age int check(age>21),mobilenumber int unique,dob int);

1. Table ----> Branch

branchId, branchName, city

Add the Constraints

branchId is Primary Key

branchName not null

city not null.

create table branch(branchid int primary key,branchname varchar(10) not null,city int not null);

1. Table ----> Transaction

transactionId, transactionDate, MediumOfTransaction, TransactionAmount

Add the Constraints

transactionId is primary key.

create table transaction(tranid int primary key,trandate int,mediumoftran varchar(10),tranamount int);

1. Table -----> Account

accountNumber, openingBalance, typeOfAccount, status,BankId,CustId

Add the Constraints

accountNumber is primary key

openingBalance must be greater than 5000

typeOfAccount must be saving/current

BankId is foreign key refer to BranchId(Primary key) Branch table

CustId is foreign key refer to Customer(Primary key) Customer table

Create table account(acc\_no int, op\_balance int(10) default 5000, type\_acc enum(‘saving’,’currevt’),status varchar(10), cust\_id int(10),branch\_id int(10), CONSTRAINT a\_p primary key(acc\_no), CONSTRAINTS bank\_fk foreign key(branch\_id) references branch(branch\_id), CONSTRAINTS custid\_fk foreign key(cust\_id) references customer(cust\_id));

1. Table ----> Loan

LoanId, loanAmount, customerId and bankdId

Add the Constraints

loadId is primary key

loanAmount must be +ve

BankId is foreign key refer to BranchId(Primary key) Branch table

CREATE TABLE loan(custid VARCHAR(6),loan\_id varchar (10),bid VARCHAR(6),loan\_amount INT(7),CONSTRAINT loan\_customer\_custid\_bid\_pk PRIMARY KEY(custid,bid),CONSTRAINT loan\_custid\_fk FOREIGN KEY(custid) REFERENCES customer(custid),CONSTRAINT loan\_bid\_fk FOREIGN KEY(bid) REFERENCES branch(bid) );

1. Display details of departments managed by ‘John’.

select \* from departments where manager\_id in(select employee\_id from employees where first\_name='john');

1. Display employees who did not do any job in the past.

select \* from employees where employee\_id not in(select employee\_id from job\_history);

1. Display job title and average salary for employees who did a job in the past.

select job\_title,avg(salary) from jobs natural join employees group by job\_title where employee\_id in(select employee\_id from job\_history);

1. Display country name, city, and number of departments where department has more than 5 employees.

select country\_name,city,count(department\_id) from countries join locations using(country\_id) join departments using(location\_id) where department\_id in(select department\_id from employees group by department\_id having count(department\_id)>5) group by country\_name,city;

1. Display details of manager who manages more than 5 employees.

select first\_name from employees where employee\_id in(select manager\_id from employees group by manager\_id having count(\*)>5);

1. Display details of current job for employees who worked as IT Programmers in the past.

select \* from jobs where job\_id in(select job\_id from employees where employee\_id in(select employee\_id from job\_history where job\_id='IT\_PROG'));

1. Display the details of employees drawing the highest salary in the department.

select \* from employees where salary=(select max(salary) from employees);

1. Display third highest salary of all employees

select salary from employees order by salary desc limit 2,1;