use hr;

-- 1. Display all information in the tables EMP and DEPT;

select\*

from employees, departments;

-- 2. Display only the hire date and employee name for each employee;

select first\_name, last\_name, hire\_date

from employees;

-- 3. Display the ename concatenated with the job ID, separated by a comma and space, and name the column Employee and Title

SELECT first\_name , last\_name||', '||job\_id, "Employee and Title"

from employees;

SELECT concat(first\_name," ", job\_id)

from employees;

-- 4. Display the hire date, name and department number for all clerks.

SELECT first\_name, last\_name, hire\_date , job\_id , department\_id

from employees

where job\_id like "%\_clerk" ;

-- 5. Create a query to display all the data from the EMP table. Separate each column by a comma. Name the column THE OUTPUT.

select employee\_id||" , "||manager\_id||" "||phone\_number

from employees;

select concat(employee\_id," ",manager\_id," ",phone\_number)" the output "

from employees;

-- 6. Display the names and salaries of all employees with a salary greater than 2000.

select\*

from employees

where salary > 20000 ;

-- 7. Display the names and dates of employees with the column headers "Name" and "Start Date.

select concat(first\_name," ",last\_name) as "Name", start\_date

from employees join job\_history using (job\_id);

-- 8. Display the names and hire dates of all employees in the order they were hired.

select first\_name , last\_name, hire\_date

from employees

order by hire\_date;

-- 9. Display the names and salaries of all employees in reverse salary order.

select first\_name, last\_name, salary

from employees

where reverse(salary);

-- 10. Display 'ename" and "deptno" who are all earned commission and display salary in reverse order.

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

from employees

where reverse(salary)

and commission\_pct is not null;

-- 11. Display the last name and job title of all employees who do not have a manager.

select last\_name, job\_title

from employees join jobs using (job\_id)

where manager\_id is null;

-- 12. Display the last name, job, and salary for all employees whose job is sales representative or

-- stock clerk and whose salary is not equal to $2,500, $3,500, or $5,000Module 4 (SQL)

select job\_title, last\_name, salary

from jobs join employees using (job\_id)

where job\_title like "%stock\_clerk"

and salary not in (2500,3500,5000);

-- 13.Display the maximum, minimum and average salary and commission earned.

select max(salary), min(salary), avg(salary),max(commission\_pct), min(commission\_pct), avg(commission\_pct)

from employees;

-- 14.Display the department number, total salary payout and total commission payout for each department.

select department\_id, sum(salary), sum(commission\_pct)

from employees

group by department\_id ;

-- 15.Display the department number and number of employees in each department.

select department\_id, count(\*)

from employees

group by department\_id having count(\*);

--16. Display the department number and total salary of employees in each department

select department\_id, count(\*), sum(salary)

from employees

group by department\_id;

--17. Display the employee's name who doesn't earn a commission. Order the result set without using the column name

select first\_name, last\_name, commission\_pct

from employees

where commission\_pct is null

order by first\_name;

--18.Display the employees name, department id and commission. If an Employee doesn't

-- earn the commission, then display as 'No commission'. Name the columns appropriately

select concat(first\_name," ",last\_name)"Name", department\_id, commission\_pct,

case

when commission\_pct is NULL then "No Commission"

else commission\_pct

end

"Appropriately"

from employees;

-- 19.Display the employee's name, salary and commission multiplied by 2. If an Employee

-- doesn't earn the commission, then display as 'No commission. Name the columns appropriately

select first\_name, salary, commission\_pct,

case

when commission\_pct is NULL then "no commission"

else commission\_pct\*2

end

"Appropriately"

from employees;

--20.Display the employee's name, department id who have the first name same as another employee in the same department

select first\_name, department\_id

from employees

group by department\_id, first\_name having count(first\_name)>1;

-- 21.Display the sum of salaries of the employees working under each Manager.

select manager\_id, sum(salary)

from employees

group by manager\_id;

-- 22. Select the Managers name, the count of employees working under and the department ID of the manager.

select m.employee\_id,m.first\_name, m.last\_name, count(e.employee\_id)

from employees as e join employees as m

on e.manager\_id=m.employee\_id

group by m.employee\_id;

-- 23. Select the employee name, department id, and the salary. Group the result with the

-- manager name and the employee last name should have second letter 'a!

select m.last\_name "Manager name", e.last\_name"Employee name", m.department\_id, m.salary

from employees as e join employees as m on e.manager\_id=m.employee\_id

where m.last\_name like "\_a%" and e.last\_name like "\_a%";

-- 24. Display the average of sum of the salaries and group the result with the department id. Order the result with the department id.

select sum(salary), avg(salary), department\_id

from employees

group by department\_id

order by department\_id;

-- 25. Select the maximum salary of each department along with the department id.

select max(salary) , department\_id

from employees

where department\_id

group by department\_id;

--26. Display the commission, if not null display 10% of salary, if null display a default value 1

select commission\_pct,

case

when commission\_pct>0 then "10%"\*salary

when commission\_pct IS NULL then "1"

end

""

from employees;

-- 27. Write a query that displays the employee's last names only from the string's 2-5th

-- position with the first letter capitalized and all other letters lowercase, Give each column an

-- appropriate label.

select concat(upper(substring(last\_name,2,1)), substring(last\_name , 3,3))"appropriate "

from employees;

--28. Write a query that displays the employee's first name and last name along with a " in

-- between for e.g.: first name : Ram; last name : Kumar then Ram-Kumar. Also displays the

-- month on which the employee has joined.

select concat( first\_name ," - ", last\_name) "full name", monthname(start\_date) "month"

from employees join job\_history using (employee\_id);

--29. Write a query to display the employee's last name and if half of the salary is greater than

-- ten thousand then increase the salary by 10% else by 11.5% along with the bonus amount of

-- 1500 each. Provide each column an appropriate label

select last\_name,salary,

case

when salary/2>10000 then salary\*"10%"

when salary\*"11.5%" then salary+"1500"

end

"increase"

from employees;

-- 30. Display the employee ID by Appending two zeros after 2nd digit and 'E' in the end,

-- department id, salary and the manager name all in Upper case, if the Manager name

-- consists of 'z' replace it with '$!

SELECT CONCAT(SUBSTRING(employee\_id, 1, 2), "00",SUBSTRING(employee\_id, 3), "E")

AS modified\_employee\_id, department\_id ,salary

FROM employees;

select concat(substring(e.employee\_id,1,2), "00" ,substring(e.employee\_id,3),"E")

as "New\_EMP\_id", e.department\_id,e.salary,REPLACE(m.last\_name,"Z","$")"Replace Name"

from employees as e join employees as m on e.manager\_id=m.employee\_id;

-- 31. Write a query that displays the employee's last names with the first letter capitalized and

-- all other letters lowercase, and the length of the names, for all employees whose name

-- starts with J, A, or M. Give each column an appropriate label. Sort the results by the

-- employees' last names

SELECT CONCAT(UPPER(LEFT(last\_name, 1)), LOWER(RIGHT(last\_name, LENGTH(last\_name) - 1))) AS "Formatted Last Name",

LENGTH(last\_name) AS "Name Length"

FROM employees

WHERE last\_name LIKE 'J%' OR last\_name LIKE 'A%' OR last\_name LIKE 'M%'

ORDER BY last\_name;

--32. Create a query to display the last name and salary for all employees. Format the salary to

-- be 15 characters long, left-padded with $. Label the column SALARY

SELECT last\_name,lpad(CONCAT('$', salary), 15, '$') AS SALARY

FROM employees;

--33. Display the employee's name if it is a palindrome

select first\_name,

case

when first\_name = reverse(first\_name) then "palindrome"

else "not palindrone"

end

" "

from employees;

-- 34. Display First names of all employees with initcaps

select concat(upper( substring(first\_name,1,1)), lower(substring(first\_name,2))) as "Name"

from employees;

--35. From LOCATIONS table, extract the word between first and second space from the STREET ADDRESS column

select substring\_index(substring\_index(street\_address," ",2)," ",-1) as "street"

from locations;

-- 36. Extract first letter from First Name column and append it with the Last Name. Also add

-- "@systechusa.com" at the end. Name the column as e-mail address. All characters should

-- be in lower case. Display this along with their First Name.

select concat(Upper(substring(first\_name,1,1)), lower(last\_name), "@systechusa.com")

as "email address", first\_name

from employees;

-- 37. Display the names and job titles of all employees with the same job as Trenna

select first\_name, job\_title

from employees join jobs using (job\_id)

where first\_name like "%Trenna";

-- Display the names and department name of all employees working in the same city as Trenna.

select first\_name, city from employees join departments using (department\_id) join locations using (location\_id)

where city=

(select distinct city from employees join departments using (department\_id) join locations using (location\_id)

where first\_name like "%Trenna");

-- 38. Display the name of the employee whose salary is the lowest

select first\_name, salary

from employees

where salary = (select min(salary) from employees);

SELECT first\_name, salary

FROM employees

ORDER BY salary

LIMIT 1;

-- 39. Display the names of all employees except the lowest paid

select first\_name, salary

from employees

where salary <> (select min(salary) from employees);

-- 40. Write a query to display the last name, department number, department name for all employees

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

from employees join departments using (department\_id);

-- 41. Create a unique list of all jobs that are in department 40. Include the location of the department in the output

select distinct(job\_id), department\_id, location\_id

from departments join locations using (location\_id) join jobs

where department\_id= 40;

-- 42. Write a query to display the employee last name,department name,location id and city of all employees who earn commission.

select last\_name, department\_name, location\_id, city, commission\_pct

from employees join departments using (department\_id) join locations using (location\_id)

where commission\_pct is not null;

-- 43. Display the employee last name and department name of all employees who have an 'a' in their last name

select last\_name, department\_name

from employees join departments using (department\_id)

where last\_name like "%a%";

-- 44. Write a query to display the last name,job,department number and department name for all employees who work in india.

select last\_name, job\_id, department\_name, country\_name

from employees join departments using (department\_id) join locations using (location\_id) join countries

where country\_name like "%india";

-- 45. Display the employee last name and employee number along with their manager's last name and manager number

select e.employee\_id, e.last\_name, m.employee\_id, m.last\_name "manager last name"

from employees as e join employees as m on e.manager\_id=m.employee\_id;

-- 46. Display the employee last name and employee number along with their manager's last name and manager number

-- (including the employees who have no manager).

select e.employee\_id, e.last\_name , m.employee\_id, m.last\_name as "manager last name"

from employees as e left join employees as m on e.manager\_id=m.employee\_id;

-- 47. Create a query that displays employees last name,department number,and all the employees who work in the same

-- department as a given employee "hall".

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

from employees join departments using (department\_id)

where department\_name=(select department\_name from employees join departments using (department\_id) where last\_name like "hall") ;

-- 48. Create a query that displays the name,job,department name,salary,grade for all employees.

-- Derive grade based on salary(>=50000=A, >=30000=B,<30000=C)

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

case

when salary >= 5000 then "A"

when salary >=3000 then "B"

when salary < 3000 then "C"

end

"Grade"

from employees join departments using (department\_id);

-- 49. Display the names and hire date for all employees who were hired before their

-- managers along withe their manager names and hire date. Label the columns as Employee

-- name, emp\_hire\_date,manager name,man\_hire\_date

select E.first\_name as "employee\_name", E.hire\_date , M.first\_name as "manger\_name", M.hire\_date

from employees as E join employees as M on E.manager\_id=M.employee\_id

where E.hire\_date < M.hire\_date;

-- 50. Write a query to display employee numbers and employee name (first name, last name)

-- of all the sales employees who received an amount of 2000 in bonus.

select employee\_id, concat(first\_name," ",last\_name) as "NAME", job\_title, commission\_pct, salary

from employees join jobs using (job\_id)

where job\_title like "sales%" and commission\_pct=0.20;

-- 51. Fetch address details of employees belonging to the state CA. If address is null, provide default value N/A.

select first\_name, department\_id, state\_province, street\_address, country\_id,

case

when street\_address is not null then "N/A"

end

"address "

from employees join departments using (department\_id) join locations using (location\_id)

where country\_id like "CA" ;

-- 52. Write a query that displays all the products along with the Sales OrderID even if an order

-- has never been placed for that product.

-- 53. Find the subcategories that have at least two different prices less than $15.

-- 54. A. Write a query to display employees and their manager details. Fetch employee id,

-- employee first name, and manager id, manager name.

-- B. Display the employee id and employee name of employees who do not have manager

SELECT e1.employee\_id AS "Employee ID",

e1.first\_name AS "Employee First Name",

e1.manager\_id AS "Manager ID",

e2.first\_name AS "Manager First Name"

FROM employees e1

LEFT JOIN employees e2 ON e1.manager\_id = e2.employee\_id;

select employee\_id, first\_name

from employees

where manager\_id is null;

-- 55. A. Display the names of all products of a particular subcategory 15 and the names of their vendors.

-- 56. Find the products that have more than one vendor.

-- 57. Find all the customers who do not belong to any store

-- 58. Find sales prices of product 718 that are less than the list price recommended for that product.

-- 59. Display product number, description and sales of each product in the year 2001.

-- 60. Build the logic on the above question to extract sales for each category by year. Fetch

-- 61. Write a query to display the last name and hire date of any employee in the same department as SALES.

select last\_name, hire\_date, department\_name

from employees join departments using (department\_id)

where department\_name like "SALES";

-- 62. Create a query to display the employee numbers and last names of all employees who

-- earn more than the average salary. Sort the results in ascending order of salary.

select employee\_id, last\_name, avg(salary)

from employees

where salary > (select avg(salary) from employees)

group by employee\_id

order by salary asc;

-- 63. Write a query that displays the employee numbers and last names of all employees who

-- work in a department with any employee whose last name contains a' u

select distinct(department\_id), last\_name, employee\_id

from employees join departments using (department\_id)

where last\_name like "%u%" ;

-- 64. Display the last name, department number, and job ID of all employees whose department location is america

select last\_name, department\_id, job\_id, department\_name, country\_id, country\_name

from employees join departments using (department\_id) join locations using (location\_id) join countries using(country\_id)

where country\_name like "%america";

-- 65. Display the last name and salary of every employee who reports to FILLMORE.

select m.last\_name as "manager name", e.salary, e.last\_name as "employee name"

from employees as e join employees as m on e.manager\_id=m.employee\_id

where m.last\_name like "King"

-- 66. Display the department number, last name, and job ID for every employee in the OPERATIONS department.

select department\_id, last\_name, job\_id, department\_name

from employees join departments using (department\_id)

where department\_name like "Operation%";

-- 67. Modify the above query to display the employee numbers, last names, and salaries of all

-- employees who earn more than the average salary and who work in a department with any

-- employee with a 'u'in their name.

select distinct(department\_id) employee\_id, last\_name ,salary

from employees

where salary < (select avg(salary) from employees) and last\_name like "%u%";

-- 68. Display the names of all employees whose job title is the same as anyone in the sales dept.

select concat( first\_name," ",last\_name) "Name", job\_title

from employees join jobs using (job\_id)

where job\_title like "%sales%";

-- 69. Write a compound query to produce a list of employees showing raise percentages,

-- employee IDs, and salaries. Employees in department 1 and 3 are given a 5% raise,

-- employees in department 2 are given a 10% raise, employees in departments 4 and 5 are

-- given a 15% raise, and employees in department 6 are not given a raise.

select employee\_id, salary, department\_id,

case

when department\_id = 10 then salary\*"5%"

when department\_id = 30 then salary\*"5%"

when department\_id = 20 then salary\*"10%"

when department\_id = 40 then salary\*"15%"

when department\_id = 50 then salary\*"15%"

when department\_id=60 then salary\*1

end

"Raise%"

from employees

where department\_id<=70;

-- 70. Write a query to display the top three earners in the EMPLOYEES table. Display their last names and salaries

select salary, last\_name

from employees

order by salary desc

limit 3;

-- 71. Display the names of all employees with their salary and commission earned. Employees

-- with a null commission should have O in the commission column

select concat(first\_name," ",last\_name)"Name", salary,

case

when commission\_pct is null then "0"

end

" commission"

from employees;

-- 72. Display the Managers (name) with top three salaries along with their salaries and department information

select m.first\_name , m.salary, dense\_rank()over(order by salary desc)"RN", m.department\_id

from employees as e join employees as m on e.manager\_id=m.employee\_id

group by m.employee\_id

limit 3;

-- 73 1) Find the date difference between the hire date and resignation\_date for all the

-- employees. Display in no. of days, months and year(1 year 3 months 5 days).

-- Emp\_ID Hire Date Resignation\_Date

-- 1 1/1/2000 7/10/2013

-- 2 4/12/2003 3/8/2017

-- 3 22/9/2012 21/6/2015

-- 4 13/4/2015 NULL

-- 5 03/06/2016 NULL

-- 6 08/08/2017 NULL

-- 7 13/11/2016 NULL

select\*,

case

when resignation\_date is not null then concat(floor(datediff(resignation\_date,hire\_date )/365), "year",

floor(datediff(resignation\_date,hire\_date )%365 /30), "month", floor(datediff(resignation\_date,hire\_date ) %365%30 ), "days")

when resignation\_date is null then concat(floor(datediff(now(),hire\_date )/365), "year",

floor(datediff(now(),hire\_date )%365 /30), "month", floor(datediff(now(),hire\_date ) %365%30 ), "days")

end

"Duration"

from empdate;

-- 74. Format the hire date as mm/dd/yyyy(09/22/2003) and resignation\_date as mon dd,

-- yyyy(Aug 12th, 2004). Display the null as (DEC, 01th 1900)

SELECT hire\_date, date\_format(hire\_date,"%m/%d/%y") as "formated hird\_date", resignation\_date,

case

when resignation\_date is not null then date\_format(resignation\_date,"%M%D%Y")

else"dec,01th1900"

end

"formated resignation date"

from empdate;