

Day4

Assignments

-----SQL-----

1. Find the data dictionary to be used to show Roles assigned to a user (use google) and write steps [create user with least privileges - role creation – assign privileges – assign role to a user – show data dictionary]

1. In this step I accessed as sysdba and then created new user

```
SQL> conn sys/orcl as sysdba
Connected.
SQL> create user doaa identified by doaa;

User created.
```

2. In this step I grant all privileges to user called doaa

```
SQL> grant all privileges to doaa;

Grant succeeded.
```

3. create role called doaa_reda

```
SQL> create role doaa_role;

Role created.
```

4.grant all privileges to role called doaa_role

```
SQL> grant all privileges to doaa_role;

Grant succeeded.
```

5.grant this role to user called doaa

```
SQL> grant doaa_role to doaa;

Grant succeeded.
```

6.show data dictionary table

```
SQL> conn sys/orcl as sysdba;
Connected.
SQL> SELECT * FROM USER_ROLE_PRIVS;
```

USERNAME	GRANTED_ROLE	ADM	DEF	OS_
SYS	ADM_PARALLEL_EXECUTE_TASK	YES	YES	NO
SYS	APEX_ADMINISTRATOR_ROLE	YES	YES	NO
SYS	AQ_ADMINISTRATOR_ROLE	YES	YES	NO
SYS	AQ_USER_ROLE	YES	YES	NO
SYS	AUTHENTICATEDUSER	YES	YES	NO
SYS	CONNECT	YES	YES	NO
SYS	CTXAPP	YES	YES	NO
SYS	DATAPUMP_EXP_FULL_DATABASE	YES	YES	NO
SYS	DATAPUMP_IMP_FULL_DATABASE	YES	YES	NO
SYS	DBA	YES	YES	NO

2. Create a sequence to be used with the primary key column of the DEPARTMENTS table. The sequence should start at 600 and have a maximum value of 1000. Have your sequence increment by ten numbers. Name the sequence DEPT_ID_SEQ. and use it to insert a new row in departments table

```
create sequence DEPT_ID_SEQ
  start with 600
  increment by 10
  maxvalue 1000
  nocycle;

----
insert into DEPARTMENTS (DEPARTMENT_ID, DEPARTMENT_NAME,
LOCATION_ID)
values (DEPT_ID_SEQ.nextval,'NOC',1700)
```

3. Create public synonyms for the view EMP_VU.

```
create public synonym syn_EMP_VU for hr.EMP_VU
select * from syn_EMP_VU
```

-----PL/SQL-----

1. Create plsql block to calculate the retired salary for the employee no = 105
Retired salary = no of working months * 10 % of his current salary

```
SET SERVEROUTPUT ON;
select SALARY,EMPLOYEE_ID from EMPLOYEES where EMPLOYEE_ID= 105;
declare v_salary number(14,2); v_emp_id number(4); v_retired_salary number(14,2);
v_hire_date date;
begin

select SALARY,EMPLOYEE_ID, HIRE_DATE
into v_salary, v_emp_id, v_hire_date
from EMPLOYEES
where EMPLOYEE_ID=105;
---PL SQL
v_retired_salary := months_between(sysdate,v_hire_date) * (0.10*v_salary);
-- Output
dbms_output.put_line('EMPLOYEE_ID = ' || v_emp_id || ',' || 'SALARY = ' || v_salary || ',' ||
'Retired salary = ' || v_retired_salary);
end;
select SALARY,EMPLOYEE_ID from EMPLOYEES where EMPLOYEE_ID=105;
```

2. Create plsql block to print last name, department name, city, country name for employee whose id = 105 (without using join | sub query)

```
SET SERVEROUTPUT ON;
declare  v_last_name EMPLOYEES.LAST_NAME%type;
         v_dep_name DEPARTMENTS.DEPARTMENT_NAME%type;
         v_dep_id DEPARTMENTS.DEPARTMENT_ID%type;
         v_loc_id LOCATIONS.LOCATION_ID%type;
         v_city LOCATIONS.CITY%type;
         v_country_id LOCATIONS.COUNTRY_ID%type;
         v_country_name COUNTRIES.COUNTRY_NAME%type;
begin

select LAST_NAME, DEPARTMENT_ID
into v_last_name, v_dep_id
from EMPLOYEES
where EMPLOYEE_ID= 105;

select DEPARTMENT_NAME, LOCATION_ID
into v_dep_name, v_loc_id
from DEPARTMENTS
where DEPARTMENT_ID= v_dep_id;
--
select CITY, COUNTRY_ID
into v_city, v_country_id
from LOCATIONS
where LOCATION_ID=v_loc_id;
--
select COUNTRY_NAME
into v_country_name
from COUNTRIES
where COUNTRY_ID=v_country_id;
-- OUTPUT
dbms_output.put_line ('LAST_NAME = ' || v_last_name || ',' || 'DEPARTMENT_NAME = ' ||
v_dep_name || ',' || 'CITY = ' || v_city || ',' || 'COUNTRY_NAME = ' || v_country_name);
end;
```

3. Create a PL/SQL block to calculate the bonus for employee number = 102. Bonus = 5% of current salary.

```
set serveroutput on
select EMPLOYEE_ID, salary from EMPLOYEES where EMPLOYEE_ID=102;
declare v_emp_id number(10); v_salary number(15,2); v_bonus number(15,2);
begin
select EMPLOYEE_ID, salary
into v_emp_id, v_salary
from EMPLOYEES
where EMPLOYEE_ID=102;
--
v_bonus := 0.05* v_salary;
--
dbms_output.put_line('Salary of this Employee is: ' || v_salary || ', and his Updated Bonus is: '
|| v_bonus );
end;
select EMPLOYEE_ID, salary from EMPLOYEES where EMPLOYEE_ID=102;
```

4. Create a PL/SQL block to count the number of employees in the department with ID = 10.

```
set serveroutput on
declare v_dep_id number(5); v_count_emp number(5); v_emp_id number(5);
begin

select count(EMPLOYEE_ID)
into v_emp_id
from EMPLOYEES
where DEPARTMENT_ID=10;
DBMS_OUTPUT.PUT_LINE('Count of Employees in dep No 10 are: ' || v_emp_id);
end;
```

5. Create a PL/SQL block to find the employee id, last name with the maximum salary.

```
set serveroutput on
declare v_emp_id number(5); v_last_name varchar(20); v_salary number;
begin
select employee_id, last_name, salary
into v_emp_id, v_last_name, v_salary
from employees
where salary =(select max(salary) from employees );
--
DBMS_OUTPUT.PUT_LINE('Emp_ID = ' || v_emp_id || ' ,Last_Name = ' || v_last_name || '
,The Max Salary = ' || v_salary );
end;
```

6. Create a PL/SQL block to calculate the total salary of all employees.

```
set serveroutput on
declare v_sum_sal number(12,2);
begin

select sum(salary)
into v_sum_sal
from employees;
--
DBMS_OUTPUT.PUT_LINE('Total Salary of all Emps is : ' ||v_sum_sal);
end;
```