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SQL and PL/SQL Labs

**SQL (Day3):**

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| *1* | *Insert one row in each of the following tables:* ***students****,* ***courses*** *and* ***students\_courses****.* |
|  | *insert into students*  *values(10,'menna abdelhamid','elsyoof',to\_date('01/01/2000','dd,mm,yyyy'),'01281668442')*  *insert into courses*  *values(100,'data base',3)*  *insert into students\_courses values(100,10,90,to\_date('03/03/2024','dd/mm/yyyy'))* |
| *2* | *Mark an intermediate point in the processing of the transaction.* |
|  | ***savepoint a;*** |
| *3* | *In the* ***employees*** *table increase the* ***salary*** *by 10% for employees whose salary is below 3000.* |
|  | *update employees*  *set salary =salary+(10/100 \*salary)*  *where salary < 3000;* |
| *4* | *Empty the* ***students\_courses*** *table. (****use delete not truncate****)* |
|  | *delete students\_courses* |
| *5* | *Discard the most recent* ***DELETE*** *and* ***UPDATE*** *operation without discarding the earlier* ***INSERT*** *operation.* |
|  | *rollback to a;* |
| *6* | *Make the data addition (****INSERT****) permanent.* |
|  | *Commit;* |
| *7* | *Add column* ***'Email'*** *to table* ***students*** *and check that the email contains the @ sign.* |
|  | *alter table students*  *add Email varchar2(20) check (email like '%@%')* |
| *8* | *Rename column* ***tel*** *to* ***phone\_no*** *in the* ***students*** *table.* |
|  | ***alter table students***  ***rename column tel to phone\_no;*** |
| *9* | *Modify the* ***registration date*** *column to have the current date as a default value.* |
|  | ***alter table students\_courses***  ***modify Reg\_date default sysdate*** |
| *10* | *Populate the* ***students*** *table with suitable values from the* ***employees*** *table.* |
|  | *insert into students (student\_id,student\_name,phone\_no)*  *select employee\_id,first\_name,phone\_number*  *from employees* |
| *11* | *Remove the constraint created in 7. Add another one which will assure that the* ***email*** *column in table* ***students*** *has no duplicate values* |
|  | *alter table students*  *drop constraint SYS\_C007011*  *alter table students*  *add constraint std\_email\_uk unique (email)* |
| *12* | *Create the* ***EMPLOYEES2*** *table based on the structure of the* ***EMPLOYEES*** *table.*  *Include only the* ***EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, SALARY****, and* ***DEPARTMENT\_ID*** *columns.*  *Name the columns in your new table ID, FIRST\_NAME, LAST\_NAME, SALARY, and DEPT\_ID, respectively.* |
|  | *create table EMPLOYEES2 ( ID, FIRST\_NAME, LAST\_NAME, SALARY,DEPT\_ID)*  *as select EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, SALARY,DEPARTMENT\_ID*  *from employees;* |
| *13* | *Rename the* ***EMPLOYEES2*** *table as* ***EMP****.* |
|  | *alter table EMPLOYEES2*  *rename to EMP;* |
| *14* | *Create a view called* ***EMP\_VU*** *based on the* ***employee number****,* ***employee name****, and* ***department number*** *from the* ***EMP*** *table.*  *Change the heading for the employee name to* ***EMPLOYEE****.* |
|  | ***create view EMP\_VU***  ***As select id"EMPLOYEE",first\_name,dept\_id***  ***from emp*** |
| *15* | *Select the* ***view name*** *and* ***text*** *from the appropriate data dictionary view.* |
|  | *select view\_name,text*  *from user\_views* |
| *16* | *Modify the* ***EMP\_VU*** *view to display the* ***employees*** *in department 20.*  *Note: the view can't be used to manipulate the* ***employees*** *in departments other than 20.* |
|  | *create or replace view EMP\_VU*  *as select last\_name*  *from emp*  *where dept\_id=20*  *with check option;* |
| *17* | *Attempt to reassign fay to department 80 (using the created view).* |
|  | *update EMP\_VU*  *set dept\_id=80*  *where lower(employee)='fay'*  *SQL> /*  *where lower(employee)='fay'*  *\**  *ERROR at line 3:*  *ORA-00904: "EMPLOYEE": invalid identifier* |
| *18* | *Create a sequence to be used with the primary key column of the COURSES table. The sequence should start at 60 and have a maximum value of 200. have your sequence increment by ten numbers. Name the sequence COURSE\_ID\_SEQ.* |
|  | *create sequence Course\_id\_seq*  *start with 60*  *increment by 10*  *maxvalue 200;* |
| *19* | *Insert one row in the courses table using the created sequence.* |
|  | *insert into courses*  *values(Course\_id\_seq.nextval,'math',4);* |
| *20* | *Display the following information about your sequences: sequence name, maximum value, increment size, and last number.* |
|  | *select sequence\_name, max\_value, increment\_by,last\_number*  *from seq;* |
| *21* | *Create a nonunique index on the foreign key column (DEPT\_ID) in the EMP.* |
|  | *create index emp on emp(dept\_id);* |
| *22* | *Display the index name and uniqueness that exist in the data dictionary for the EMP table.* |
|  | *select index\_name,uniqueness from user\_indexes*  *where lower(table\_name)='emp';* |
| *23* | *Create a user with your name and give him the appropriate* ***system privileges****.* |
|  | *create user menna identified by menna*  *grant create session to menna*  *grant create table,unlimited tablespace to menna* |
| *24* | *Create a role to include the appropriate* ***object privileges*** *the user needs to start properly.* |
|  | *create role myrole;*  *grant select,update,insert,delete on hr.emp to myrole;* |
| *25* | *Give the user the ability to see the contents of the students table. Create a synonym to facilitate the retrieval of the students table' contents.* |
|  | *grant select on hr.students to menna;*  *create synonym students for hr.students;* |