**CYPRUS INTERNATIONAL UNIVERSITY**

**CMPE344 Database Management Systems II**

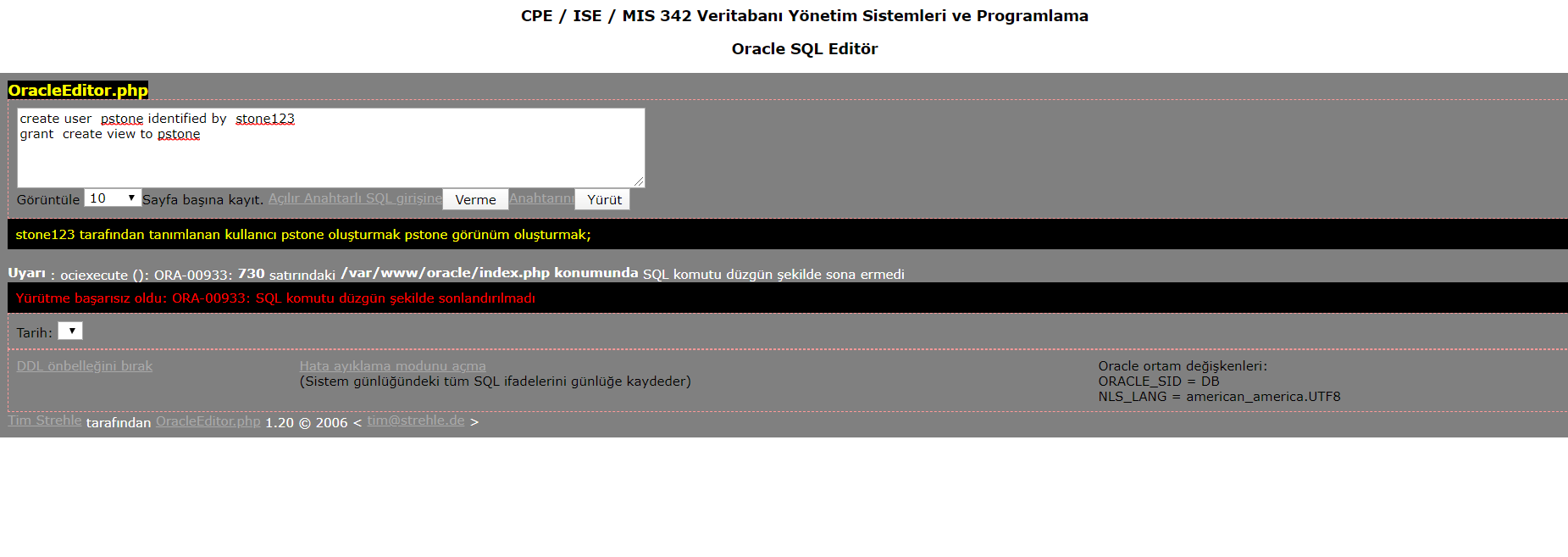
**HW3 (Due Date: 13/05/2020) Barış Karapelit 21707346**

Q1- There is a new employee called Peter Stone hired to the company. Please create an account for him with username “pstone” and password “stone123” and give him a privilege to create “view”.

**Answer :**

CREATE USER pstone IDENTIFIED BY stone123

GRANT CREATE view TO pstone



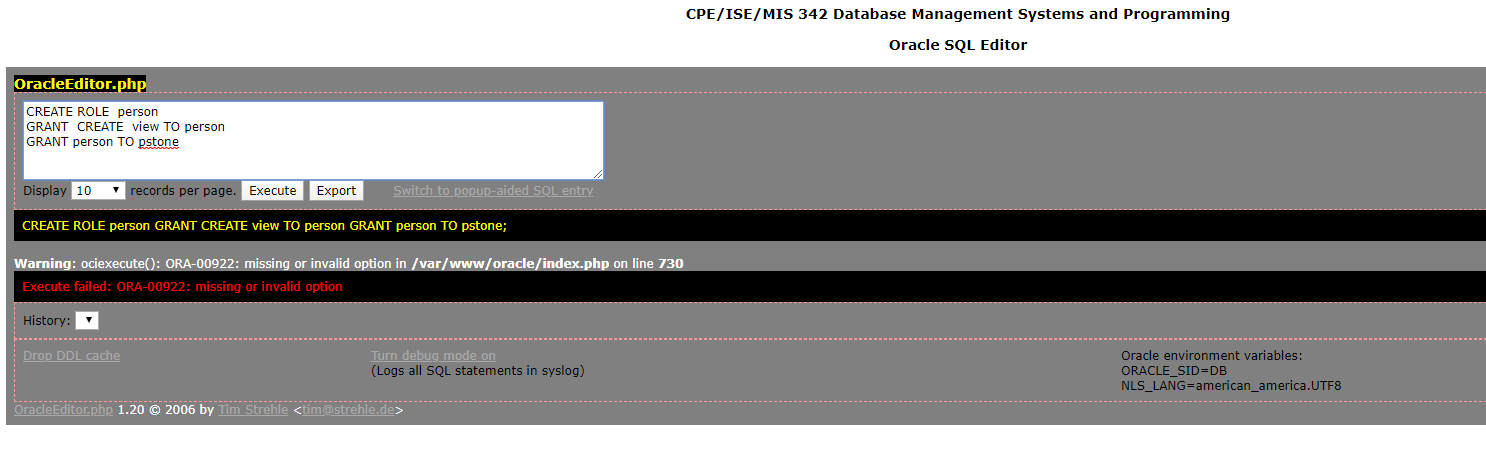
Q2- Explain the purpose of creating a role and assigning a role to a person instead of assigning privileges to that person.

**Answer :**

**CREATE ROLE person**

**GRANT CREATE view TO person**

**GRANT person TO pstone**



**If we assign privileges to the person, we need to log in to address all of their features one by one, and it's impossible to assign privileges to each one if we think databases are thousands of users. When a new privilege is added, it takes a lot of time for all users to assign, but roles are defined only by a role assignment. So the role is more useful and practical.**

Q3- Write an SQL statement to set “state\_province” attribute of Locations table as UNUSED.

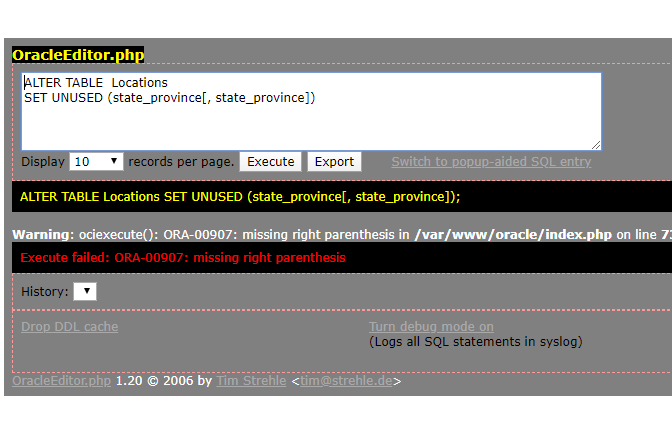
**ALTER TABLE system.locations**

**SET UNUSED (state\_province)**

**OR**

**ALTER TABLE *system.locations***

**SET UNUSED COLUMN system.*state\_provience***



Q4- Write an SQL statement to update the salary attribute in employees table. Add a DEFAULT constraint with system date.

**ALTER TABLE system.employees MODIFY salary SET DEFAULT CONSTRAINT**

**CURRENT\_DATE**

Q5- Explain the purpose of ON DELETE CASCADE and the difference with ON DELETE SET NULL.

**ON GELETE CASCADE also deletes the record in the primary table and automatically deletes records in the sub table where the foreign key is defined, but ON DELL SET NULL is automatically null in the records in the sub table in which the foreign key is defined when you delete the record in the primary table.**

**OR**

**ON DELETE CASCADE -> If a parent table is deleted, its child table will be deleted.**

**ON DELETE SET NULL -> If a parent table is deleted, its child table’s foreign key**

**referenced this parent table will be deleted.**

Q6- What is INDEX. Explain how it works.

**Answer:**

**Index is a method for performance. An index creates entries for values of indexed**

**columns. By default Oracle uses B-tree indexes.**

**Lowercase characters in the data can translate them into capitalized columns. In the more active way, we use index in data rankings by calling separately. Data is used to sort from small to large, from old to new date.**

**-------------------------------------Index use in table--------------------------------------------**

**CREATE TABLE NEW\_EMP**

**(employee\_id NUMBER(6)  
 PRIMARY KEY USING INDEX  
 (CREATE INDEX emp\_id\_idx ON  
 NEW\_EMP(employee\_id)),**

**first\_name VARCHAR2(20),  
last\_name VARCHAR2(25))**

**----------------------------------Index use in out of table----------------------------------------------------------**

**CREATE INDEX upper\_dept\_name\_idx**

**ON dept2(UPPER(department\_name))**

Q7- Write an SQL statement to insert a new record to Employees table with the following details. Use WITH CHECK OPTION to make sure manager\_id=100 is the manager of department\_id 60 from Departments table.

employee\_id= 141

first\_name= Lily

second\_name= Bush

manager\_id= 100

department\_id= 60

**Answer:**

**INSERT INTO (SELECT employee\_id,first\_name, second\_name, manager\_id, department\_id**

**FROM system.employees**

**WHERE employee\_id=100 and department\_id**

**IN( SELECT employee\_id**

**FROM employees**

**NATURAL JOIN departments**

**WHERE department\_id=60)**

**WITH CHECK OPTION )**

**VALUES(141,'Lily','Bush',100,60)**

Q8- Write an SQL statement to copy (use INSERT ALL) employee\_id, first\_name, last\_name and commission\_pct of all employees into EMP\_COMM table and employee\_id, first\_name, last\_name and salary into EMP\_SAL table who works in Sales Department.

Answer :

**INSERT ALL**

**WHEN DEPARTMENT =80 THEN**

**INTO emp\_sal VALUES(EMPID,FIRST,LAST,SAL)**

**WHEN DEPARTMENT != 80 THEN**

**INTO emp\_comm VALUES(EMPID,FIRST,LAST,COMM)**

**SELECT employee\_id EMPID, first\_name FIRST,last\_name LAST**

**salary SAL, commission\_pct COMM,department\_id DEPARTMENT**

**FROM employees**

**OR**

**CREATE VIEW EMP\_SAL AS SELECT employee\_id, first\_name, last\_name, salary FROM system.employees**

**CREATE VIEW EMP\_COMM AS SELECT employee\_id, first\_name, last\_name, commission\_pct FROM system.employees**

**INSERT ALL**

**WHEN DEPARTMENT\_ID != 80 INTO EMP\_COMM VALUES (employee\_id, first\_name, last\_name, email, phone\_number, hire\_date, job\_id, salary, commision\_pct, manager\_id, department\_id)**

**WHEN DEPARTMENT\_ID = 80 INTO EMP\_SAL VALUES(employee\_id, first\_name, last\_name, salary)**

**SELECT employee\_id, first\_name, last\_name, email, phone\_number, hire\_date, job\_id, salary, commision\_pct, manager\_id, department\_id FROM system.employees**

Q9- Write an SQL statement to copy (use INSERT ALL) employee\_id, first\_name, last\_name and job\_id of all employees into EMP\_REP or EMP\_ASST tables based on their job\_id. If job\_id contains “REP” then insert into EMP\_REP otherwise if it contains ASST into EMP\_ASST.

**Answer :**

**INSERT ALL**

**WHEN JOBID like ‘%REP%’ THEN**

**INTO system.emp\_rep VALUES(EMPID,FIRST,LAST,JOBID)**

**WHEN JOBID like ‘%ASST%’ THEN**

**INTO system.emp\_asst VALUES(EMPID,FIRST,LAST,JOBID)**

**SELECT system.employee\_id EMPID, system.first\_name FIRST, system.last\_name LAST, system.job\_id JOBID**

**OR**

**CREATE VIEW EMP\_REP AS SELECT employee\_id, first\_name, last\_name, job\_id FROM system.employees CREATE VIEW EMP\_ASST AS SELECT employee\_id, first\_name, last\_name, job\_id FROM system.employees INSERT ALL**

**WHEN JOB\_ID LIKE '%REP' THEN INTO EMP\_REP VALUES (employee\_id, first\_name, last\_name, job\_id)**

**WHEN JOB\_ID LIKE '%ASST' THEN INTO EMP\_ASST VALUES(employee\_id, first\_name, last\_name, job\_id)**

**SELECT employee\_id, first\_name,last\_name,job\_id FROM system.employees**

**OR**

**INSERT ALL**

**INTO EMP\_REP (employee\_id, first\_name, last\_name, job\_id) SELECT job\_id FROM**

**System.employees VALUES job\_id=”REP”**

**INTO EMP\_ASST (employee\_id, first\_name, last\_name, job\_id) SELECT job\_id FROM**

**Employees VALUES job\_id=”ASST”**

**SELECT \* FROM system.employees;**

Q10- Explain how FLASHBACK works.

**Flashback: returns the data as it existed at some time in the past . It works by undoing all the changes that were made since that time.**

**FLASHBACK provides recovering database objects from past without media recovering.**

**--------------------------------------------------------------------------------------------------------------------------------**

**With the FLASHBACK command system, the operations performed in the database can also be undone within the specified time. For example, when data is accidentally deleted from a table, we can restore it with the FLASHBACK command. If there are complete database distortions, we can restore all of them with the FLASHBACK command.**