Assignment 3 (7%)

Total : 60 marks.

Please work in **groups** of max 3 and min 2 to complete this Assignment. This Assignment is worth 7% of the total course grade and will be evaluated through your written submission, as well as the Assignment demo in the class worth 3%. During the Assignment demo, group members are randomly selected to present the answers to each of the lab questions. Group members not present during the Assignment demo will lose the demo mark. Individual submission will have penalty of 10%.

1. Add this declaration on the top of your file.

We, ------------(mention your names), declare that the attached assignment is our own work in accordance with the Seneca Academic Policy. No part of this assignment has been copied manually or electronically from any other source (including web sites) **or distributed to other students.**

1. Specify what each member has done towards the completion of this work:

|  |  |  |
| --- | --- | --- |
|  | Name | Task(s) |
| 1 | Abdul Rehman |  |
| 2 | Imran Qureshi |  |
| 3 |  |  |
| 4 |  |  |

Solve the following using tables provided for labs like employees, departments, etc. Copy the commands under each question and also the screen shots of the result. For instance, if you create a view the result will be view is created. Take the screen shot and copy under the command. One member in the group upload the document on BlackBoard.

1. Display department number, department name, and the number of employees working in each department that has the highest number of employees. Use subquery only. (5 marks)

Ans:

select d.department\_id, d.department\_name, count(e.employee\_id)

from departments d join employees e

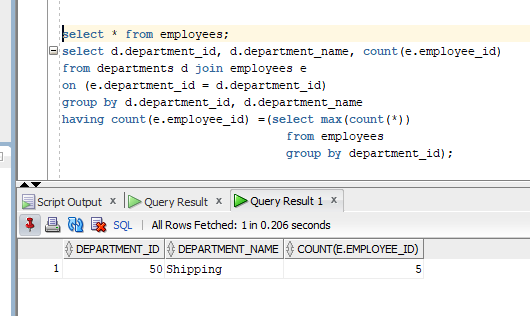
on (e.department\_id = d.department\_id)

group by d.department\_id, d.department\_name

having count(e.employee\_id) =(select max(count(\*))

                                from employees

                                group by department\_id);



1. Display all the employees who were hired on the day of the week on which the highest number of employees were hired. List the first name and last name columns together with a space in between. Label the column as Full Name and label day as day of the week. Use subquery only. (5 marks)

Answer:

Select first\_name ||' '|| last\_name "Full Name", to\_char(hire\_date, 'Day') "Day of the Week"

from employees

where to\_char(hire\_date, 'Day') =

(select to\_char(hire\_date, 'Day')

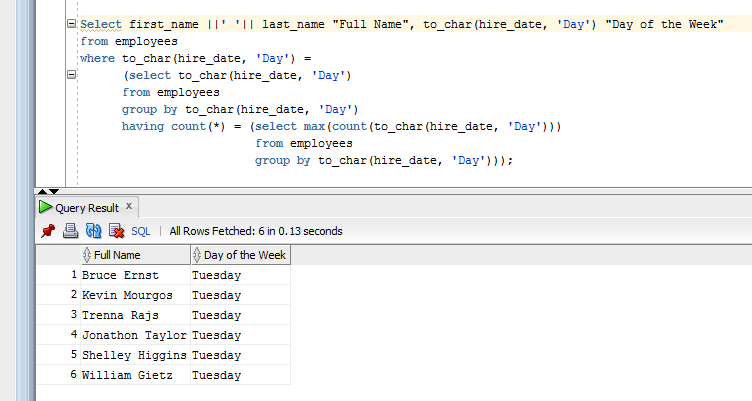
from employees

group by to\_char(hire\_date, 'Day')

having count(\*) = (select max(count(to\_char(hire\_date, 'Day')))

from employees

group by to\_char(hire\_date, 'Day')));



1. Department 50 needs access to its employee data. Create a view named DEPT50 that contains the employee numbers, employee last names, and department numbers for all employees in department 50. They have requested that you label the view columns EMPNO, EMPLOYEE, and DEPTNO. For security purposes, do not allow an employee to be reassigned to another department through the view. (5 marks)

ANS:

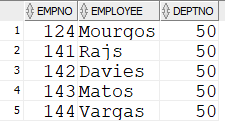
create view DEPT50 as

select employee\_id "EMPNO", last\_name "EMPLOYEE", department\_id "DEPTNO"

from employees

where department\_id = 50

WITH CHECK OPTION CONSTRAINT DEPT50\_ck ;



1. Create a view named emp\_hired that has the names and hire dates for all employees who were hired before their managers, along with their manager’s names and hire dates. Label the columns Employee, Emp Hired, Manager, and Mgr Hired, respectively. (5 marks)

ANS:

create view emp\_hired as

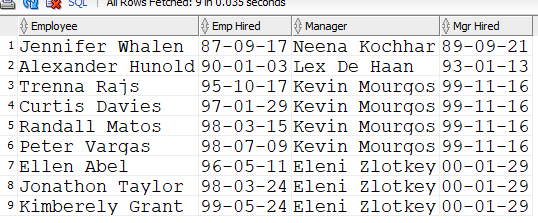
select trim(w.first\_name) || ' ' || trim(w.last\_name) "Employee", w.hire\_date "Emp Hired",

trim(m.first\_name) || ' ' || trim(m.last\_name) "Manager", m.hire\_date "Mgr Hired"

from employees w, employees m

where m.employee\_id = w.manager\_id

AND w.hire\_date < m.hire\_date;



1. The Date base Administrator needs you to create a table, which has a primary key constraint, but she wants to name the index to have a different name than the constraint. Create the Locations\_Index table based on the following table instance chart. Name the index for the PRIMARY KEY column as LOCATIONS\_PK\_IDX. (5 marks)

|  |  |  |
| --- | --- | --- |
| Column Name | Deptno | Dname |
| Primary key | Yes |  |
| Data Type | Number | VARCHAR2 |
| Length | 4 | 30 |

ANS:

NOTES:

create table Location\_Index

(

Deptno Numeric (4) primary key using index

(create index locations\_pk\_idx on locations\_index(deptno)),

Dname varchar2 (30) );

1. Create a report of a list of employees who are up for review in March; so you are requested to do the following: (5 marks)

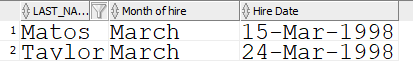
Write a query to display the last names, **month of the date of hire**, and **hire date** of those employees who have been hired in the month of March, irrespective of the year of hire.

ANS:

select last\_name, to\_char(hire\_date,'Month') "Month of hire", to\_char(hire\_date,'DD-Mon-YYYY') "Hire Date"

from employees

where to\_char(hire\_date,'Month') like '%March%';



1. The Accounting department requires an analysis on maximum and minimum salaries by job, manager, and department. They have asked you to do the following: (5 marks)

Write a query to display the following groupings:

Department\_id, job\_id

Job\_id, manager\_id

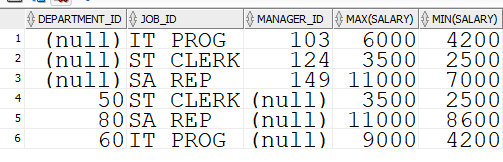
ANS:

select department\_id, job\_id, manager\_id, max(salary), min(salary)

from employees

GROUP BY GROUPING SETS((department\_id,job\_id),(job\_id,manager\_id))

having max(salary) != min(salary);



1. Create the EMP table based on the structure of the EMPLOYEES table. Include only the EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, SALARY, and JOB\_ID columns for departments 90,80,60, and 50. Name the columns in your new table NO, FIRST\_NAME, LAST\_NAME, SALARY, and JOB\_TITLE, respectively. (5 marks)

ANS:

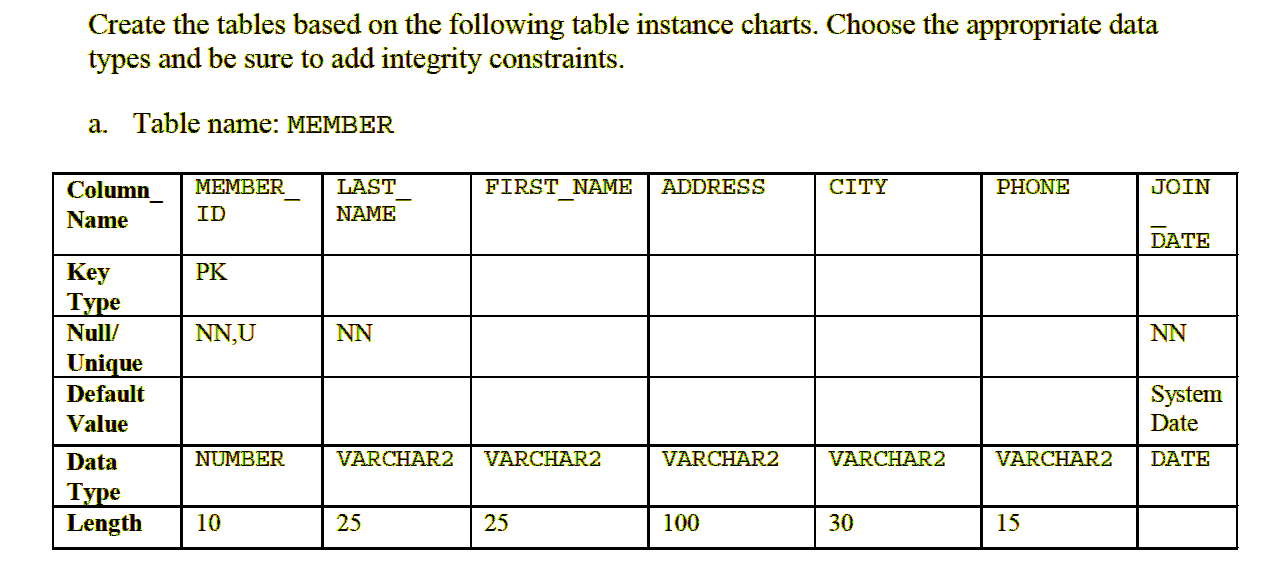
create table EMP as

(select employee\_id "NO", FIRST\_NAME, LAST\_NAME, SALARY, job\_id "JOB\_TITLE"

from employees

where department\_id IN (90,80,60,50));

1. (15 marks)



ANS 9A:

create table member

(

MEMBER\_ID NUMBER(10) not null, --UQ auto when we make PK

LAST\_NAME VARCHAR2(25) not null,

FIRST\_NAME VARCHAR2(25),

ADDRESS VARCHAR2(100),

CITY VARCHAR2(30),

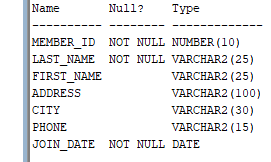
PHONE VARCHAR2(15),

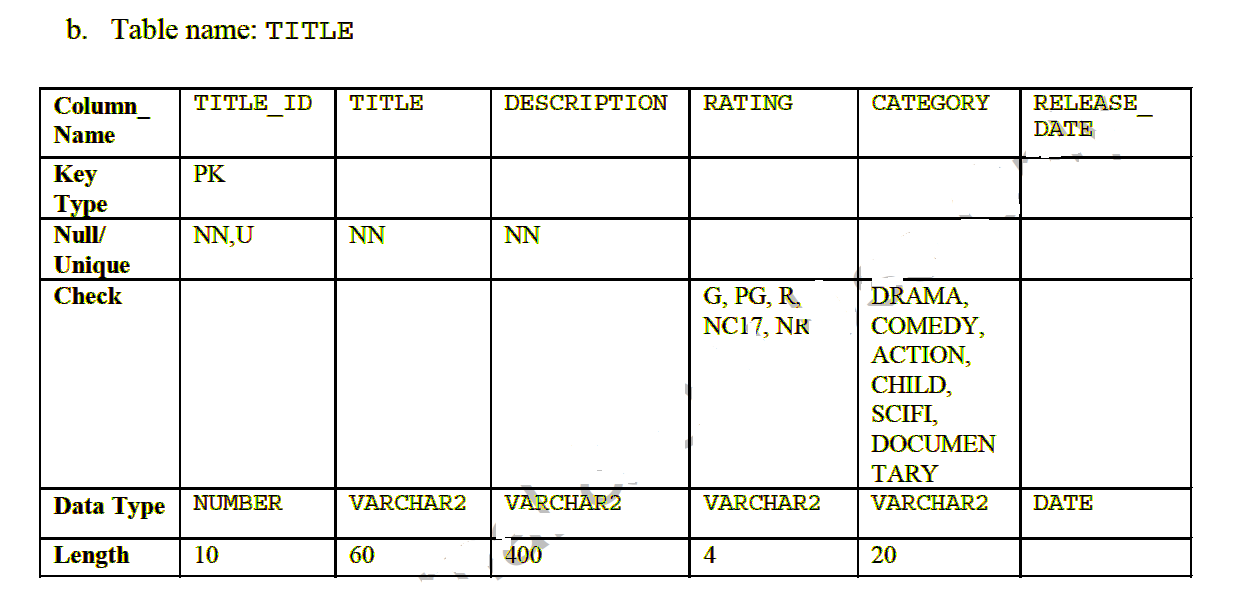
JOIN\_DATE DATE DEFAULT sysdate NOT NULL,

CONSTRAINT MEMBER\_ID\_PK

PRIMARY KEY(MEMBER\_ID)

);





ANS 9B:

create table TITLE

(

TITLE\_ID NUMBER(10) CONSTRAINT TITLE\_ID\_PK PRIMARY KEY,

TITLE VARCHAR2(60) NOT NULL,

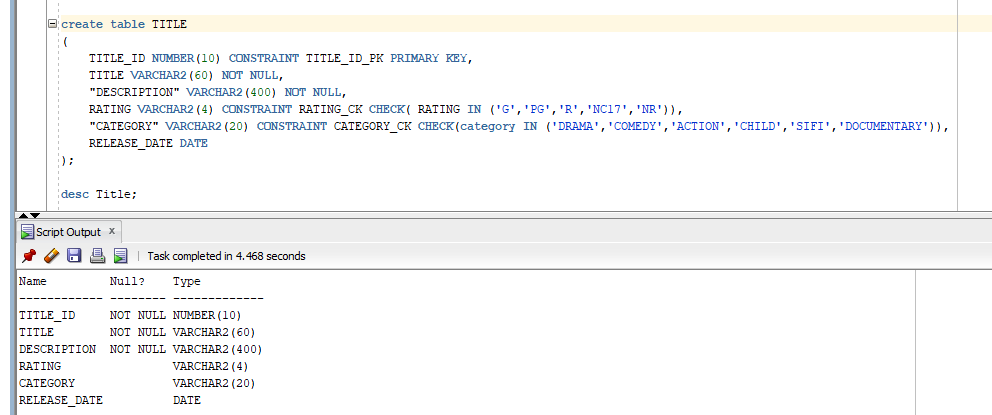
"DESCRIPTION" VARCHAR2(400) NOT NULL,

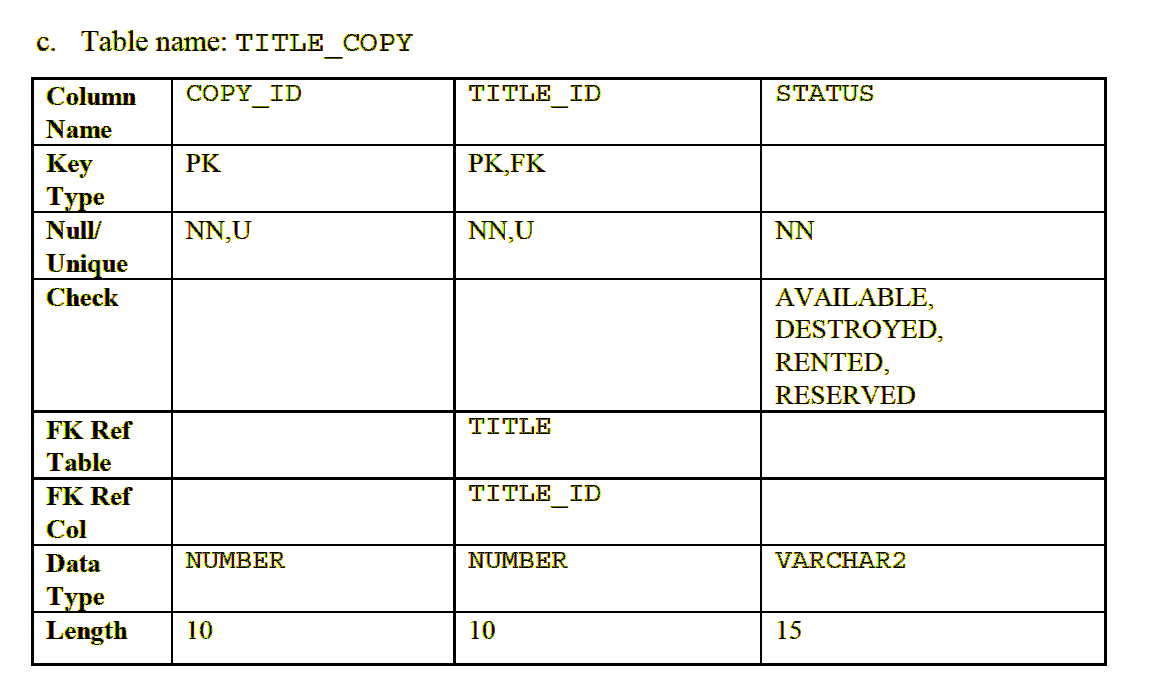
RATING VARCHAR2(4) CONSTRAINT RATING\_CK CHECK( RATING IN ('G','PG','R','NC17','NR')),

"CATEGORY" VARCHAR2(20) CONSTRAINT CATEGORY\_CK CHECK(category IN ('DRAMA','COMEDY','ACTION','CHILD','SIFI','DOCUMENTARY')),

RELEASE\_DATE DATE

);





ANS 9C:

create table title\_copy

(

copy\_id number(10),

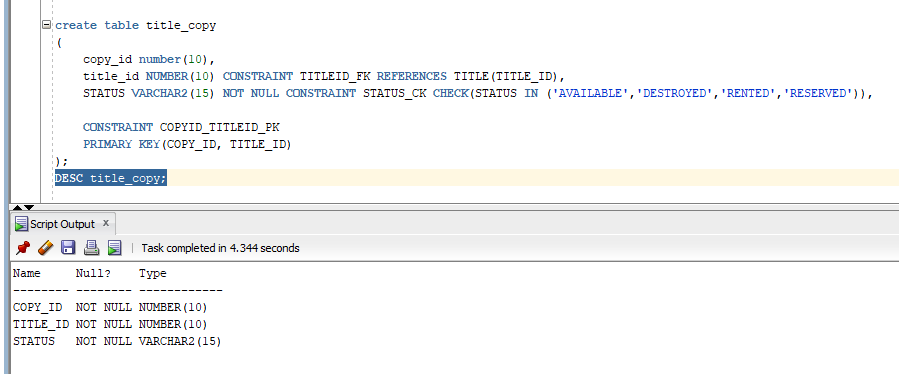
title\_id NUMBER(10) CONSTRAINT TITLEID\_FK REFERENCES TITLE(TITLE\_ID),

STATUS VARCHAR2(15) NOT NULL CONSTRAINT STATUS\_CK CHECK(STATUS IN ('AVAILABLE','DESTROYED','RENTED','RESERVED')),

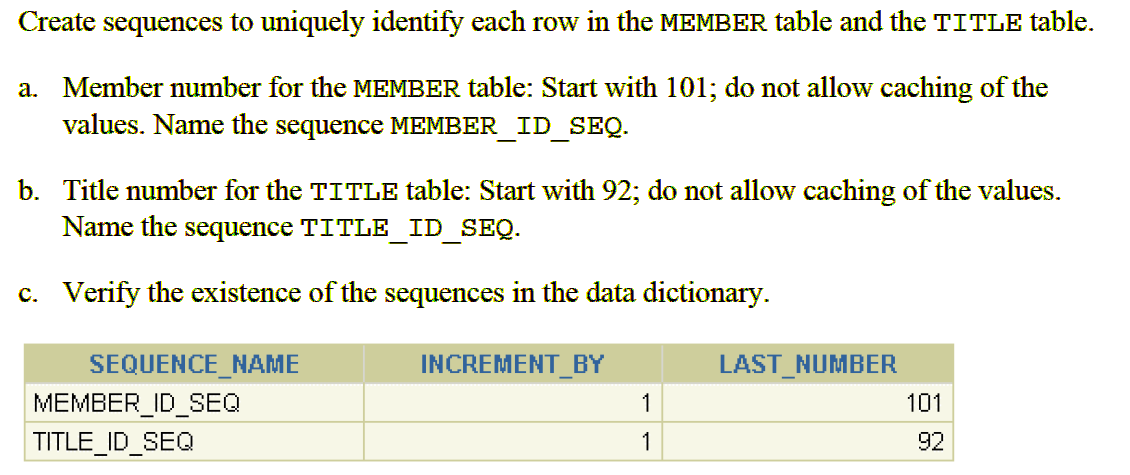
CONSTRAINT COPYID\_TITLEID\_PK

PRIMARY KEY(COPY\_ID, TITLE\_ID)

);



1. (5 marks)



ANS:

CREATE SEQUENCE MEMBER\_ID\_SEQ

INCREMENT BY 1

START WITH 101

MAXVALUE 9999

NOCACHE

NOCYCLE;

CREATE SEQUENCE TITLE\_ID\_SEQ

INCREMENT BY 1

START WITH 92

MAXVALUE 9999

NOCACHE

NOCYCLE;

select sequence\_name, increment\_by, last\_number

from user\_sequences

where sequence\_name IN ('MEMBER\_ID\_SEQ','TITLE\_ID\_SEQ');

