CST8276 Lab Exam Submission   Spring 2021

Lab Section or Time: **Monday 6:00 PM**_____

Student ID#:   **040991363**_____

Student Name: **Abdullah Zeki Ilgun (Apo)**_____
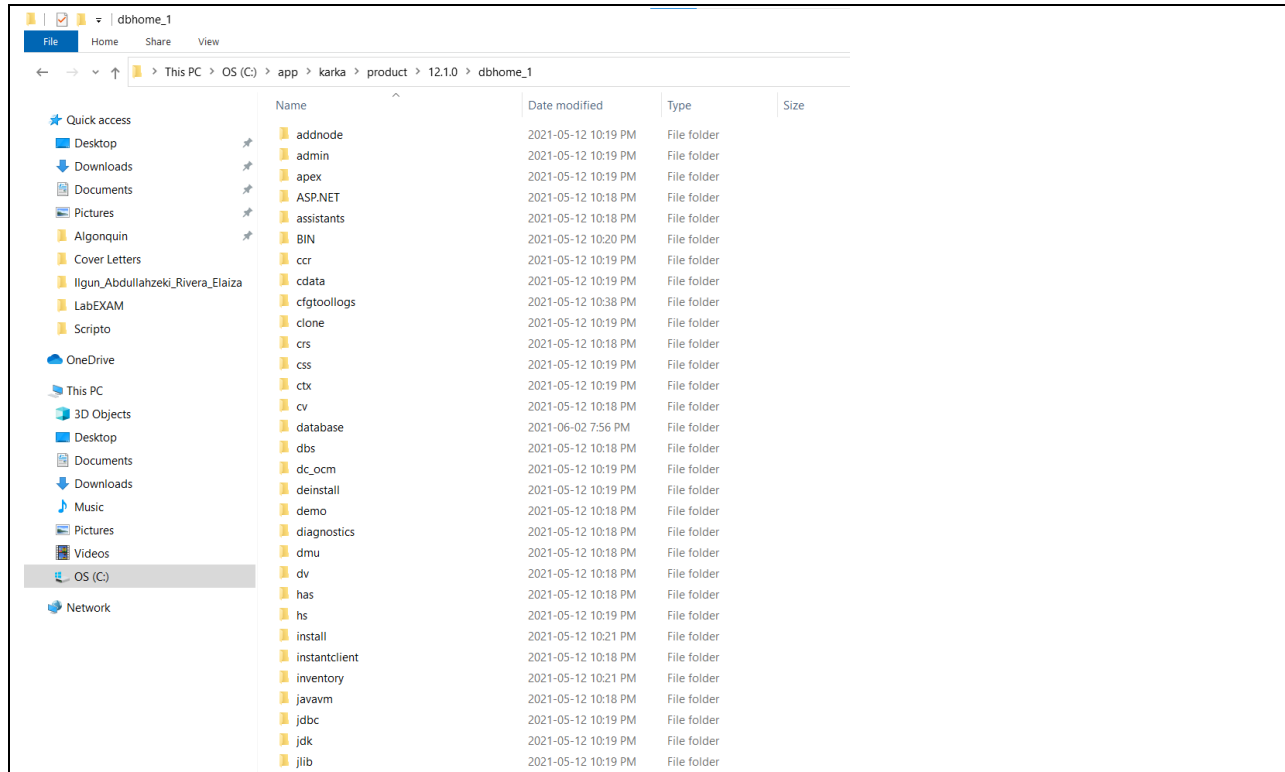
NOTE:

The test is 90 minutes duration.

- No talking.
- Each student will use their own laptop computer, with Oracle, MongoDB, and Neo4j installed as per the laboratory assignments.
- Each student has a personalized version of the test, available online in Brightspace under "Lab Exam – Quiz" which must be handed-in online to record your set of required tasks.
- There are a sequence of 20 required tasks, with screen shots or short answer responses required to be provided using the submission document provided on BrightSpace (under Content > Lab Exam). *You must show your work (using screen shots) for each of the required tasks.*
- Submit your submission document through BrightSpace. This must be done during the allotted time period. Manage your time carefully.
- Access to the Internet, including the use of Oracle online documentation, using the Google search engine, and access to online resources, IS PERMITTED.
- Collaboration with other students (or anyone else) through any means IS NOT PERMITTED.

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Submission for Requirements: (0.5 points each)

1.

2.

```
SQL> CREATE TABLE sales02
  2      (prod_id      NUMBER(4)
  3      , quantity_sold NUMBER(3)
  4      )
  5      PARTITION BY RANGE (quantity_sold)
  6      ( PARTITION sales_p1 VALUES LESS THAN (36)
  7      , PARTITION sales_p3 VALUES LESS THAN (MAXVALUE)
  8  );

Table created.
```

3.

```
SQL> DESC SCOTT.DEPT;
 Name                                     Null?    Type
 ---------------------------------------- -------- -----------------------------
 DEPTNO                                   NOT NULL NUMBER(2)
 DNAME                                             VARCHAR2(14)
 LOC                                               VARCHAR2(13)

SQL> SELECT COUNT(*) FROM SCOTT.EMP;

  COUNT(*)
----------
        14
```

4.

```
SQL> SELECT V$TABLESPACE.NAME, V$DATAFILE.NAME FROM V$DATAFILE JOIN V$TABLESPACE ON V$DATAFILE.TS# = V$TABLESPACE.TS# WHERE V$TABLESPACE.NAME = 'TEMP';
NAME
----------------------------
NAME
----------------------------------------------------------------
TEMP
C:\APP\KARKA\ORADATA\ORCL\TEMP01.DBF
```

5.

Administrator: Command Prompt - RMAN TARGET SYSBACKUP NOCATALOG;   — □ ✕

```
RMAN> BACKUP DATABASE;

Starting backup at 09-AUG-21
using channel ORA_DISK_1
channel ORA_DISK_1: starting full datafile backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
input datafile file number=00007 name=C:\APP\KARKA\ORADATA\ORCL\EXAMPLE01.DBF
input datafile file number=00003 name=C:\APP\KARKA\ORADATA\ORCL\SYSAUX01.DBF
input datafile file number=00001 name=C:\APP\KARKA\ORADATA\ORCL\SYSTEM01.DBF
input datafile file number=00005 name=C:\APP\KARKA\ORADATA\ORCL\UNDOTBS01.DBF
input datafile file number=00006 name=C:\APP\KARKA\ORADATA\ORCL\USERS01.DBF
channel ORA_DISK_1: starting piece 1 at 09-AUG-21
channel ORA_DISK_1: finished piece 1 at 09-AUG-21
piece handle=C:\APP\KARKA\FAST_RECOVERY_AREA\ORCL\ORCL\BACKUPSET\2021_08_09\O1_MF_NNNDF_TAG20210809T190958_JK3FG6FO_.BKP
 tag=TAG20210809T190958 comment=NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:15
channel ORA_DISK_1: starting full datafile backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
including current control file in backup set
including current SPFILE in backup set
channel ORA_DISK_1: starting piece 1 at 09-AUG-21
channel ORA_DISK_1: finished piece 1 at 09-AUG-21
piece handle=C:\APP\KARKA\FAST_RECOVERY_AREA\ORCL\ORCL\BACKUPSET\2021_08_09\O1_MF_NCSNF_TAG20210809T190958_JK3FGPK7_.BKP
 tag=TAG20210809T190958 comment=NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:01
Finished backup at 09-AUG-21
```

Administrator: Command Prompt - RMAN TARGET SYSBACKUP NOCATALOG;   — □ ✕

```
RMAN> LIST BACKUP;


List of Backup Sets
===================


BS Key  Type LV Size       Device Type Elapsed Time Completion Time
------- ---- -- ---------- ----------- ------------ ---------------
10      Full   1.54G       DISK        00:00:07     09-AUG-21
        BP Key: 10   Status: AVAILABLE  Compressed: NO  Tag: TAG20210809T190958
        Piece Name: C:\APP\KARKA\FAST_RECOVERY_AREA\ORCL\ORCL\BACKUPSET\2021_08_09\O1_MF_NNNDF_TAG20210809T190958_JK3FG6
FO_.BKP
  List of Datafiles in backup set 10
  File LV Type Ckp SCN    Ckp Time  Name
  ---- -- ---- ---------- --------- ----
  1       Full 6398008    09-AUG-21 C:\APP\KARKA\ORADATA\ORCL\SYSTEM01.DBF
  3       Full 6398008    09-AUG-21 C:\APP\KARKA\ORADATA\ORCL\SYSAUX01.DBF
  5       Full 6398008    09-AUG-21 C:\APP\KARKA\ORADATA\ORCL\UNDOTBS01.DBF
  6       Full 6398008    09-AUG-21 C:\APP\KARKA\ORADATA\ORCL\USERS01.DBF
  7       Full 6398008    09-AUG-21 C:\APP\KARKA\ORADATA\ORCL\EXAMPLE01.DBF

BS Key  Type LV Size       Device Type Elapsed Time Completion Time
------- ---- -- ---------- ----------- ------------ ---------------
11      Full   9.86M       DISK        00:00:01     09-AUG-21
        BP Key: 11   Status: AVAILABLE  Compressed: NO  Tag: TAG20210809T190958
        Piece Name: C:\APP\KARKA\FAST_RECOVERY_AREA\ORCL\ORCL\BACKUPSET\2021_08_09\O1_MF_NCSNF_TAG20210809T190958_JK3FGP
```

6.

7.


```
SQL> ALTER USER SCOTT IDENTIFIED BY TIGER;

User altered.
```

8.

```
SQL> SELECT TABLESPACE_NAME, BYTES, MAX_BYTES, (100*(BYTES/MAX_BYTES)) AS PERCENT FROM DBA_TS_QUOTAS;

TABLESPACE_NAME                     BYTES  MAX_BYTES     PERCENT
------------------------------ ---------- ---------- ----------
SYSAUX                            1441792  104857600       1.375
SYSAUX                                  0         -1          0
SYSAUX                                  0         -1          0
USERS                                   0         -1          0
SYSAUX                            1572864         -1 -157286400
EXAMPLE                          10420224         -1 -1.042E+09
USERS                               65536         -1    -6553600
SYSAUX                                  0         -1          0

8 rows selected.
```

9.

```
SQL> CREATE USER LABEXAMABDULLAHZEKI IDENTIFIED BY apoOracle123;

User created.

SQL> GRANT CONNECT TO LABEXAMABDULLAHZEKI;

Grant succeeded.

SQL> CREATE ROLE TESTROLE;

Role created.

SQL> GRANT TESTROLE TO LABEXAMABDULLAHZEKI;

Grant succeeded.
```

```
Enter user-name: SCOTT
Enter password:
Last Successful login time: Mon Aug 09 2021 16:04:51 -04:00

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> GRANT INSERT ON EMP TO TESTROLE;

Grant succeeded.

SQL> GRANT INSERT ON DEPT TO TESTROLE;

Grant succeeded.
```

10.

```
Copyright (c) 1982, 2014, Oracle.  All rights reserved.

Enter user-name: LABEXAMABDULLAHZEKI
Enter password:

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> INSERT INTO SCOTT.DEPT VALUES(50, 'A', 'A');

1 row created.
```

11.

```
Enter user-name: SYS AS SYSDBA
Enter password:

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> ALTER SYSTEM SET UNDO_RETENTION=1200 SCOPE=BOTH;

System altered.

SQL> CREATE PFILE FROM SPFILE;

File created.

SQL> SHOW PARAMETER UNDO_RETENTION;

NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
undo_retention                       integer     1200
SQL>
```

12.

```
SQL> SET TIMING ON;
SQL> CREATE TABLE LAB_USER(NAME VARCHAR(10), LASTNAME VARCHAR(10));

Table created.

Elapsed: 00:00:00.00
SQL> DECLARE
  2  i  NUMBER := 1;
  3   BEGIN
  4      LOOP
  5       INSERT INTO LAB_USER
  6       VALUES ( 'Apo', 'Ilgun');
  7       Commit;
  8       i := i+1;
  9     EXIT WHEN i>15000;
 10    END LOOP;
 11   END;
 12  /

PL/SQL procedure successfully completed.

Elapsed: 00:00:00.72
SQL>
```

13.

```
SQL*Plus: Release 12.1.0.2.0 Production on Mon Aug 9 18:21:46 2021

Copyright (c) 1982, 2014, Oracle.  All rights reserved.

Enter user-name: SCOTT
Enter password:
Last Successful login time: Mon Aug 09 2021 18:11:42 -04:00

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> EXPLAIN PLAN FOR SELECT EMP.EMPNO, EMP.ENAME, DEPT.DEPTNO, DEPT.DNAME FROM EMP, DEPT WHERE EMP.EMPNO > 25;

Explained.

SQL> SELECT PLAN_TABLE_OUTPUT FROM TABLE(DBMS_XPLAN.DISPLAY());

PLAN_TABLE_OUTPUT
--------------------------------------------------------------------------
Plan hash value: 2034389985
```

```
SQL> SELECT PLAN_TABLE_OUTPUT FROM TABLE(DBMS_XPLAN.DISPLAY());

PLAN_TABLE_OUTPUT
---------------------------------------------------------------------------
Plan hash value: 2034389985


---------------------------------------------------------------------------
| Id  | Operation            | Name | Rows  | Bytes | Cost (%CPU)| Time     |
---------------------------------------------------------------------------
|   0 | SELECT STATEMENT     |      |    56 |  1288 |    10   (0)| 00:00:01 |
|   1 |  MERGE JOIN CARTESIAN|      |    56 |  1288 |    10   (0)| 00:00:01 |
|   2 |   TABLE ACCESS FULL  | DEPT |     4 |    52 |     3   (0)| 00:00:01 |
|   3 |   BUFFER SORT        |      |    14 |   140 |     7   (0)| 00:00:01 |
|*  4 |    TABLE ACCESS FULL | EMP  |    14 |   140 |     2   (0)| 00:00:01 |
---------------------------------------------------------------------------


PLAN_TABLE_OUTPUT
---------------------------------------------------------------------------

Predicate Information (identified by operation id):
---------------------------------------------------

   4 - filter("EMP"."EMPNO">25)

16 rows selected.
```

14.

```
SQL> CREATE MATERIALIZED VIEW LABEXAM_VIEW AS
  2  SELECT EMP.EMPNO, DNAME FROM EMP NATURAL JOIN DEPT WHERE ENAME='SMITH';

Materialized view created.
```

15.

```
SQL> CREATE USER NEWEXAMUSER IDENTIFIED BY NEWTIGER;

User created.

SQL> GRANT PLUSTRACE TO NEWEXAMUSER;

Grant succeeded.
```

```
Enter user-name: NEWEXAMUSER
Enter password:
Last Successful login time: Mon Aug 09 2021 18:25:51 -04:00

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> SET AUTOTRACE ON;
SQL>
```

16.

```
SQL> SET AUTOTRACE ON;
SQL> SELECT ENAME, DNAME from EMP NATURAL JOIN DEPT WHERE ENAME='SMITH';

ENAME       DNAME
---------- --------------
SMITH       RESEARCH


Execution Plan
----------------------------------------------------------
Plan hash value: 3625962092

----------------------------------------------------------------------------
--------
| Id  | Operation                   | Name     | Rows  | Bytes | Cost (%CPU)| Ti
me     |

----------------------------------------------------------------------------
--------
|   0 | SELECT STATEMENT            |          |     1 |    22 |     4   (0)| 00
:00:01 |

|   1 |  NESTED LOOPS               |          |     1 |    22 |     4   (0)| 00
:00:01 |

|   2 |   NESTED LOOPS              |          |     1 |    22 |     4   (0)| 00
:00:01 |

|*  3 |    TABLE ACCESS FULL        | EMP      |     1 |     9 |     3   (0)| 00
:00:01 |

|*  4 |    INDEX UNIQUE SCAN        | PK_DEPT  |     1 |       |     0   (0)| 00
:00:01 |

|   5 |   TABLE ACCESS BY INDEX ROWID| DEPT    |     1 |    13 |     1   (0)| 00
:00:01 |

----------------------------------------------------------------------------
```

```
|   5 |    TABLE ACCESS BY INDEX ROWID| DEPT    |    1 |    13 |     1   (0)| 00
:00:01 |

----------------------------------------------------------------------------
--------


Predicate Information (identified by operation id):
------------------------------------------------------

   3 - filter("EMP"."ENAME"='SMITH')
   4 - access("EMP"."DEPTNO"="DEPT"."DEPTNO")

Note
-----
   - this is an adaptive plan


Statistics
------------------------------------------------------------
           1  recursive calls
           0  db block gets
           9  consistent gets
           0  physical reads
           0  redo size
         618  bytes sent via SQL*Net to client
         552  bytes received via SQL*Net from client
           2  SQL*Net roundtrips to/from client
           0  sorts (memory)
           0  sorts (disk)
           1  rows processed
```

17.

```
Command Prompt - mongo
> db.apoFirstExample.insertMany([
... {firstname: 'Apo', lastname: 'Ilgun', email: 'apo@apo.com'},
... {firstname: 'Mickey', lastname: 'Mouse', email: 'mouse@apo.com'},
... {firstname: 'Donald', lastname: 'Duck', email: 'duck@apo.com'}
... ]);
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("6110940f89bf2edf87ee1ad2"),
                ObjectId("6110940f89bf2edf87ee1ad3"),
                ObjectId("6110940f89bf2edf87ee1ad4")
        ]
}
> _
```
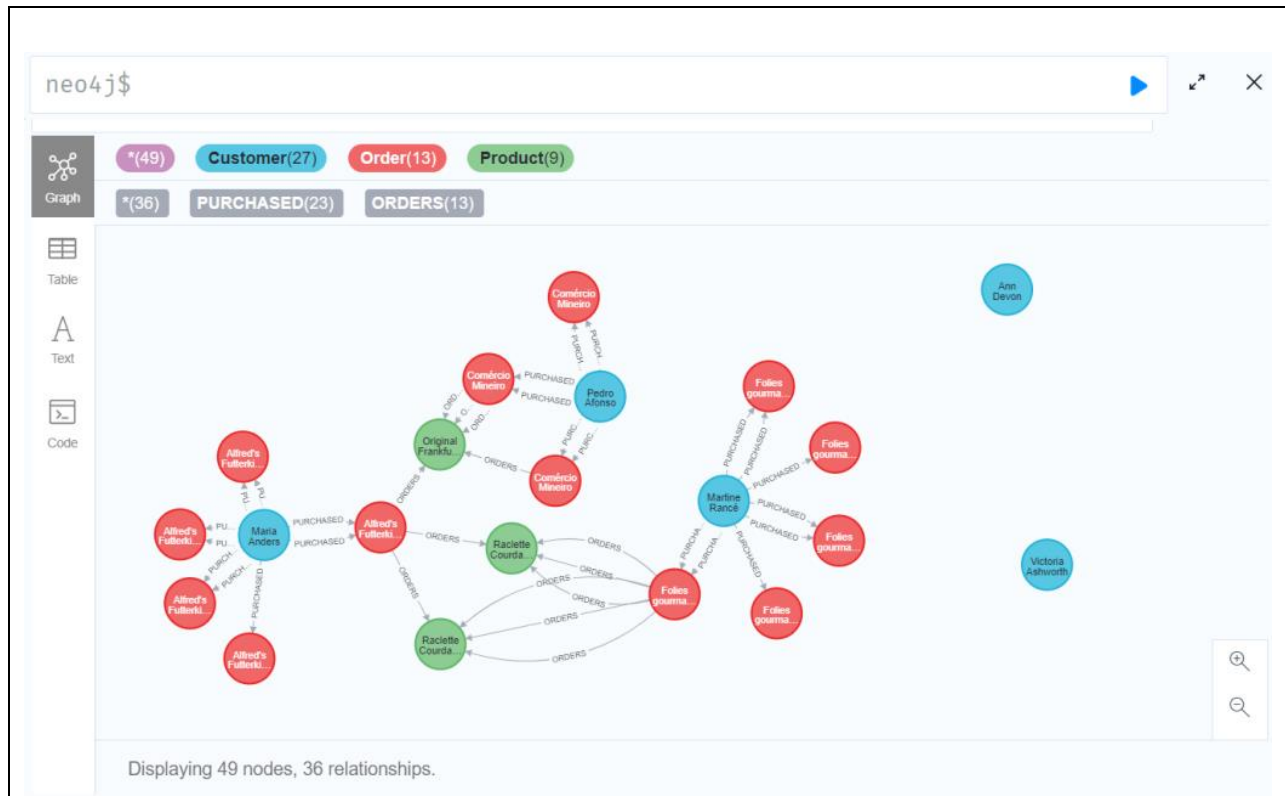
18.

19.

20.

That's it! You're done!