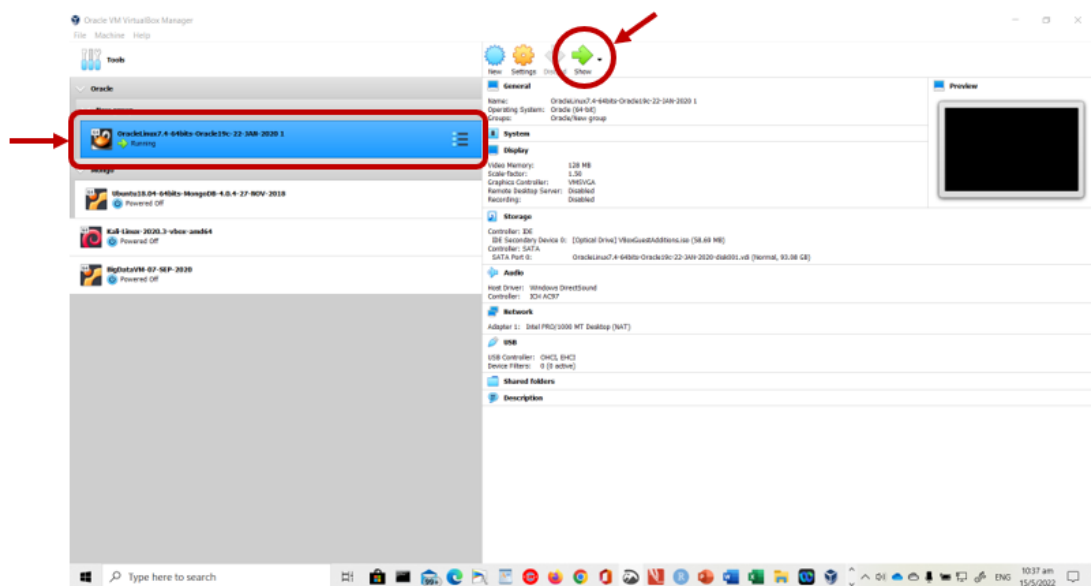
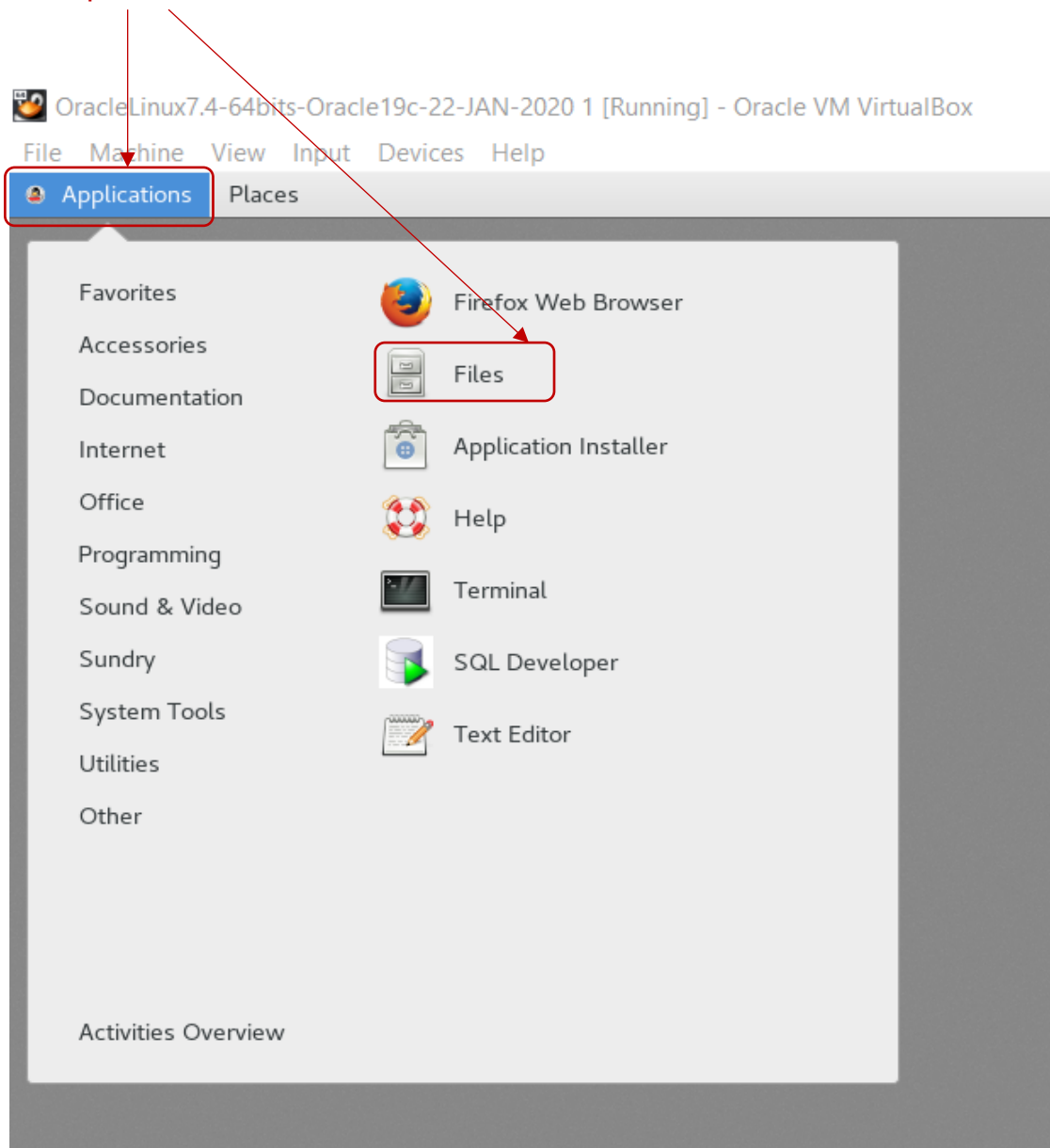


Creating TPCHR sample database

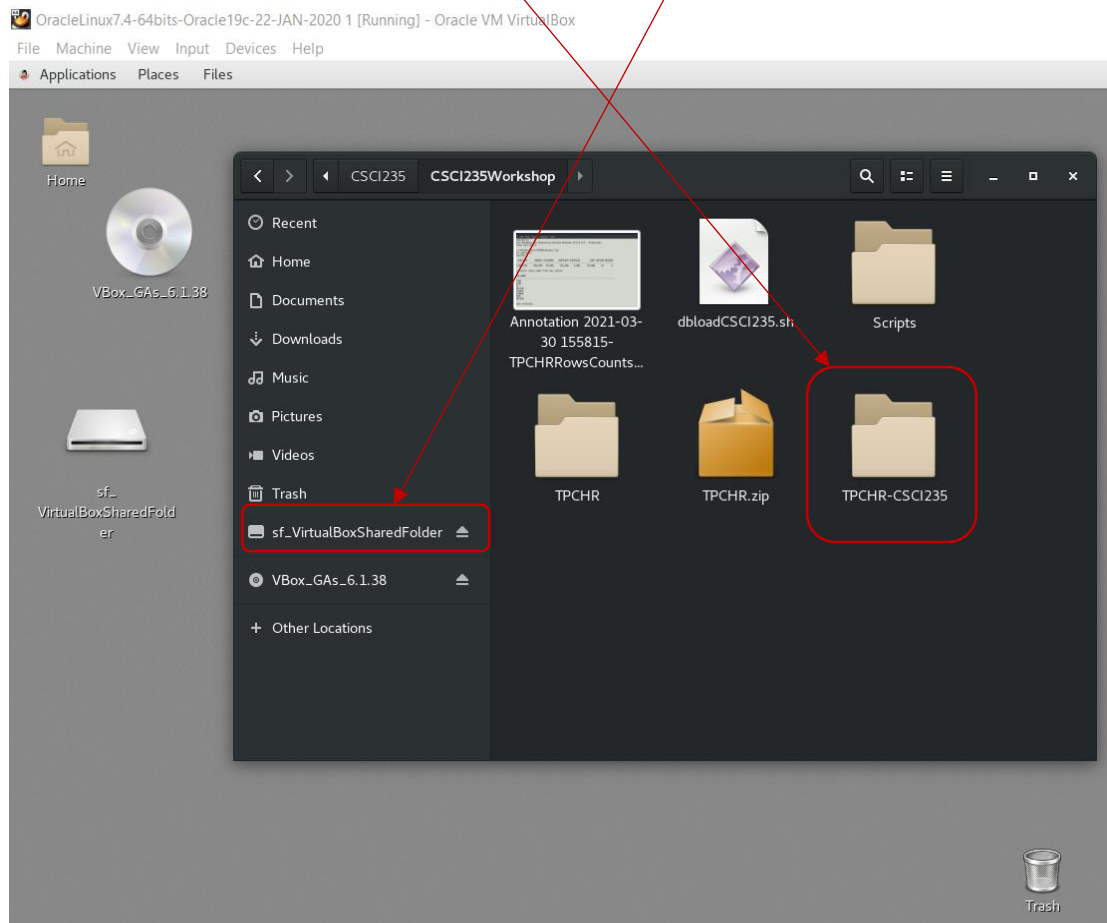
1. Unzip the **TPCHR-CSCI235.zip** file that you have downloaded from the **cloudstor** and save the unzipped file to a shared-folder (if you have created one), otherwise, save the unzipped file to a directory that is convenience to you.
2. If you have not installed the **VirtualBox** and the **Oracle19c virtual machine**, please do so. The instructions to install the VirtualBox and setup the Oracle19c virtual machine are specified in the document **VirtualBoxAndOracleVM-24Sept2022.pdf**.
3. Start the Oracle19c virtual machine on the VirtualBox.



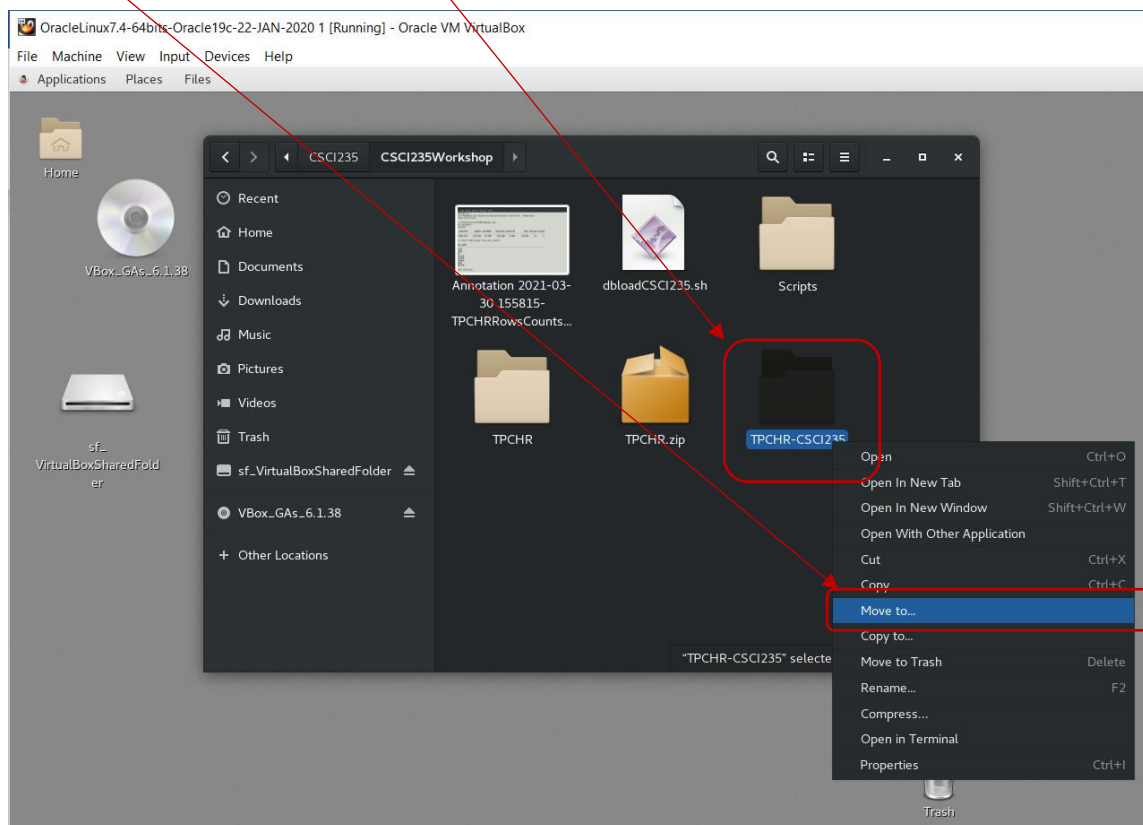
4. Once you have successfully logged in to the Virtual Machine, open the **File explorer**.



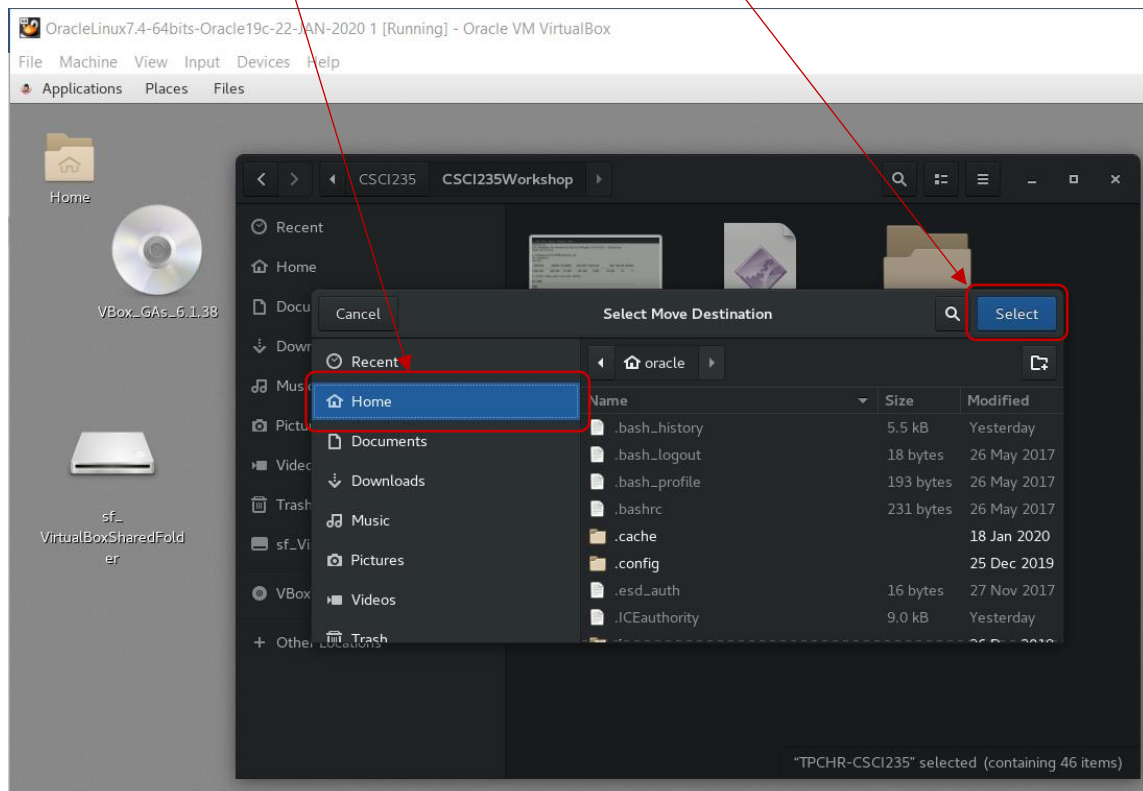
... and navigate to the directory in your **shared-folder** where you have the unzipped file (**TPCHR-CSCI235**) saved.



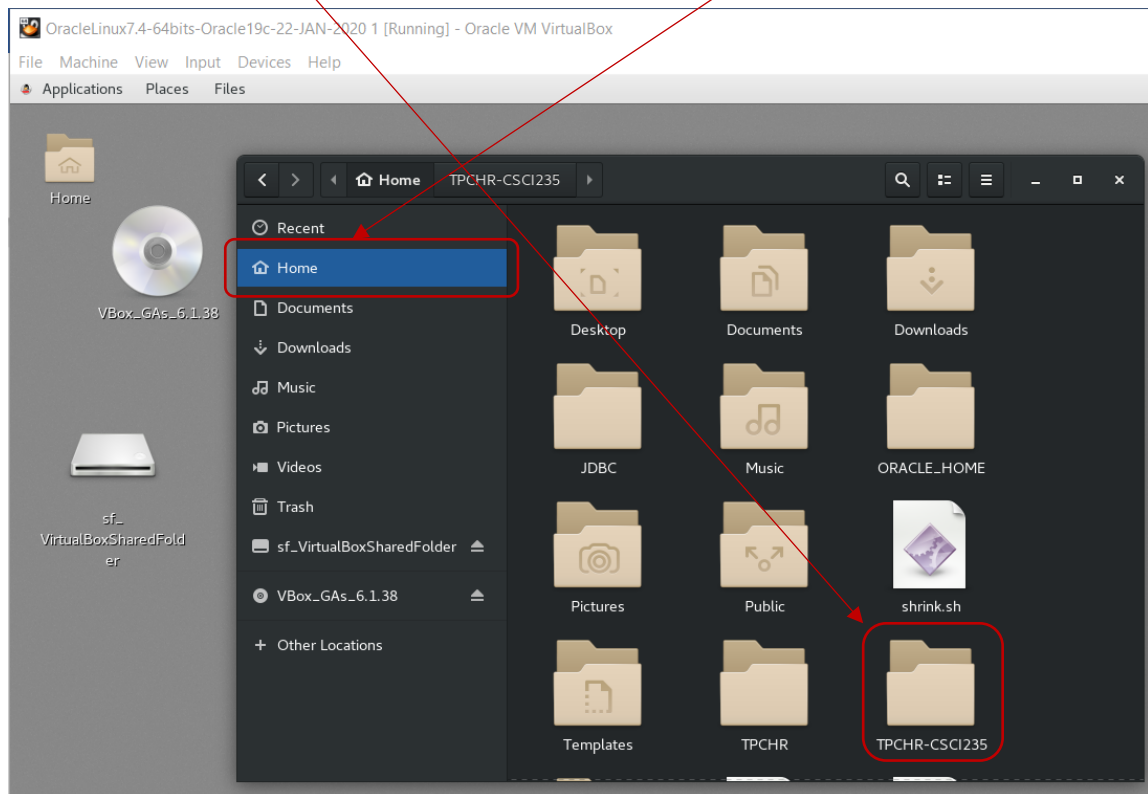
Move the folder TPCHR-CSCI235 to your home directory.



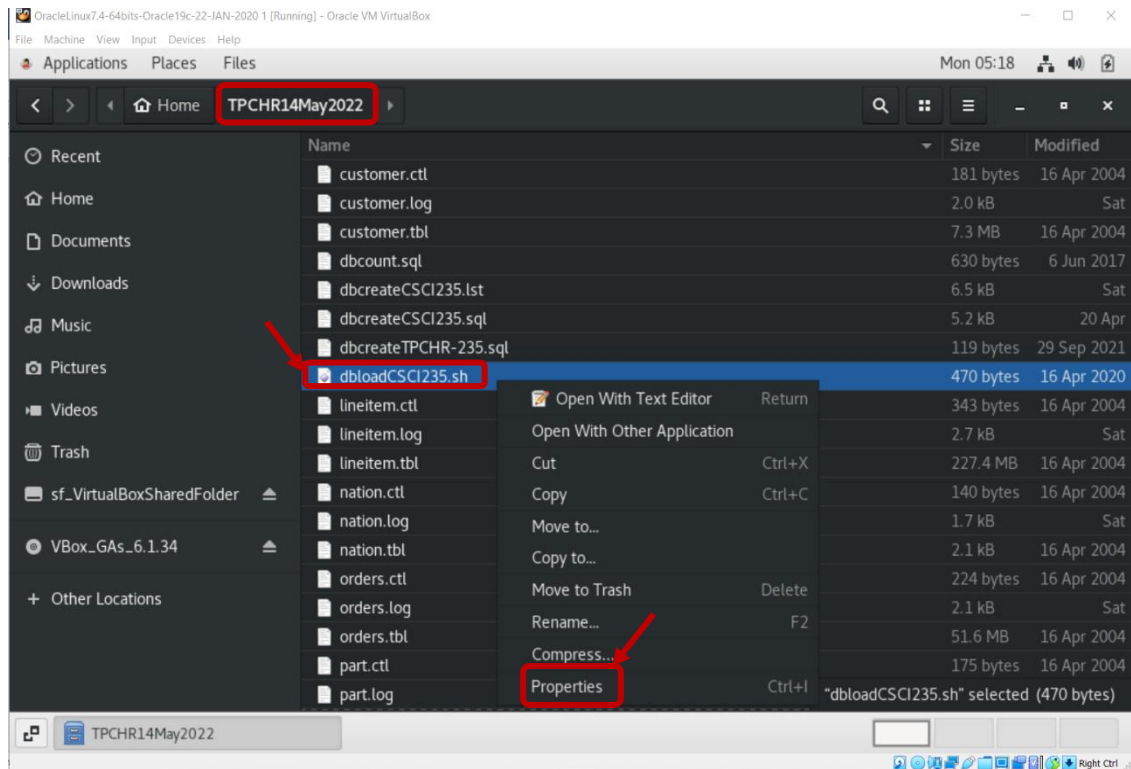
Select the **Home** folder and click on the **Select** button to move the file.



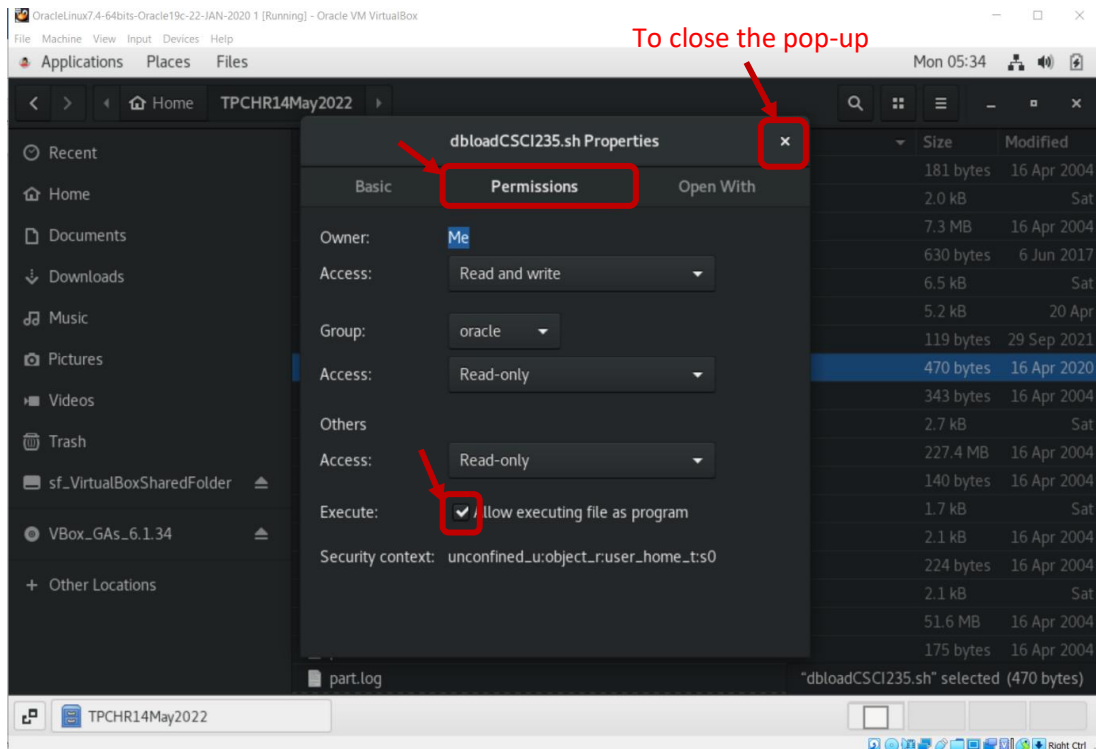
5. The folder **TPCHR-CSCI235** should be in the **Home** directory now.



6. Before we proceed to set up the environment, we need to change the status of the shell script "**dbloadhCSCI235.sh**" to executable. To do that, navigate to the folder "**TPCHR-CSCI235**" and "**Right-click**" on the shell script 'dbloadCSCI235.sh', and in the pop-up window, click on the 'Property'



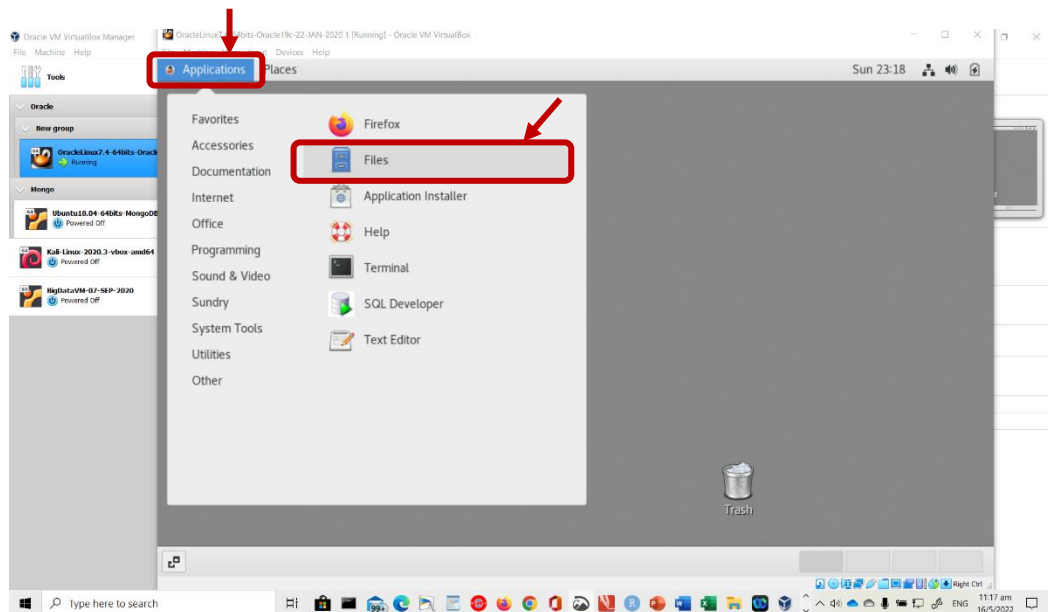
At the next pop-up window, click on the 'Permissions' tab, and check the 'check-box' next to the Execute option.



After changing the property of the shell script 'dbloadCSCI235.sh' you can close the pop-up window.

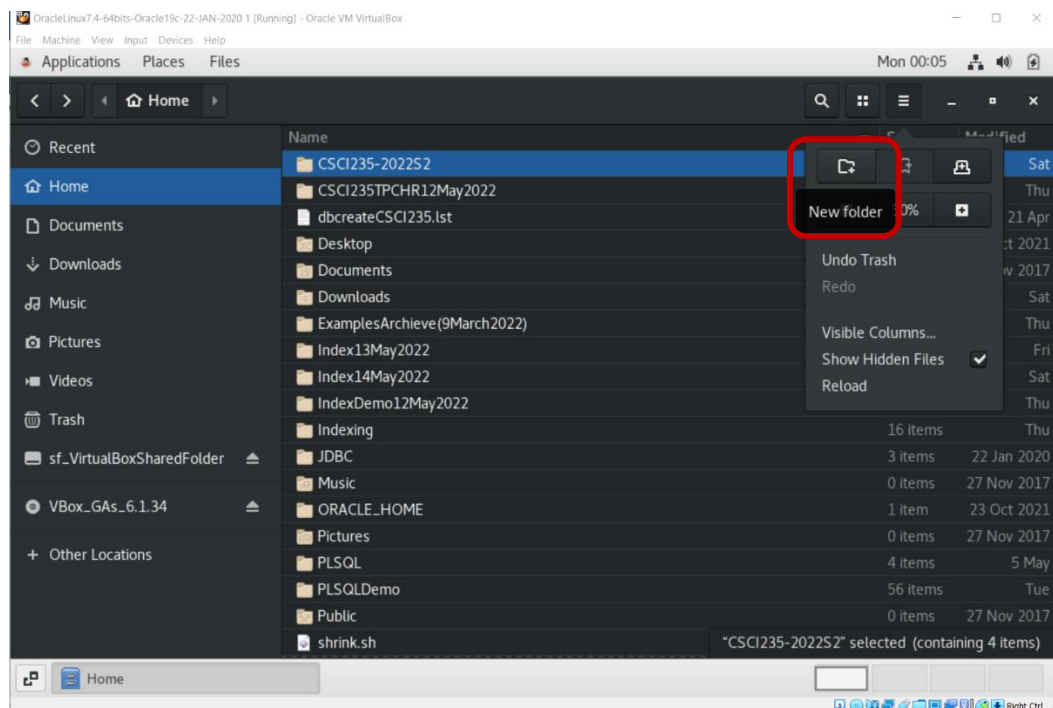
7. We leave the scripts as they are now. Next, we set up the environment for the setting up of a sample database.

i. Open the file explorer.

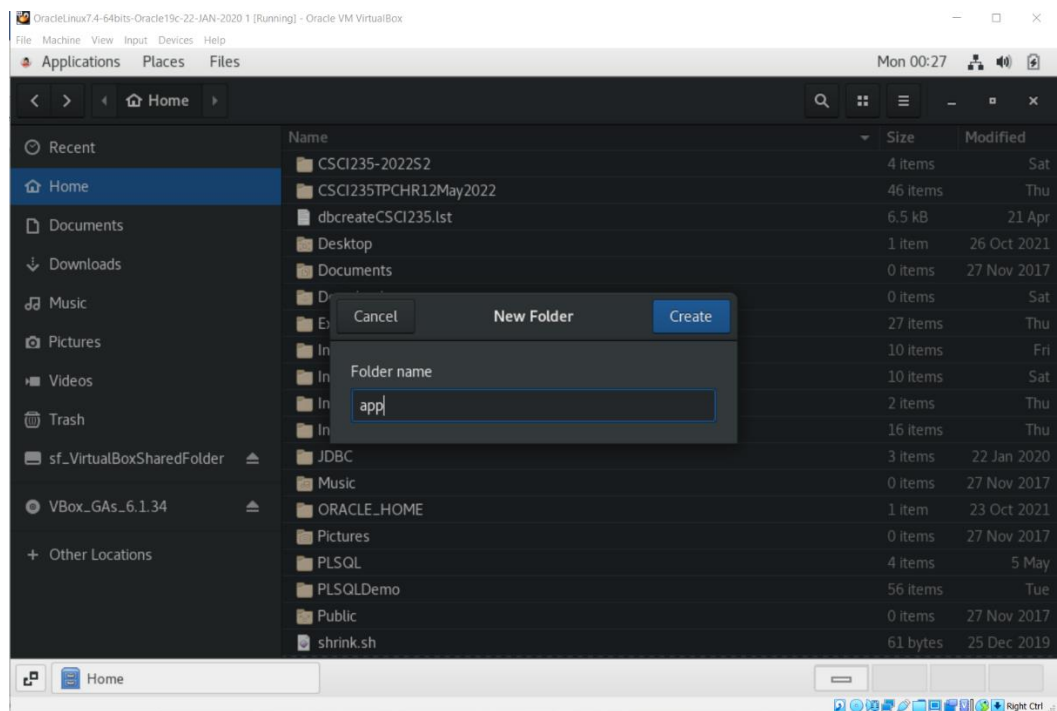


ii. Navigate to the 'HOME' folder (directory) and create the required folders.

Creating the 'app' folder:

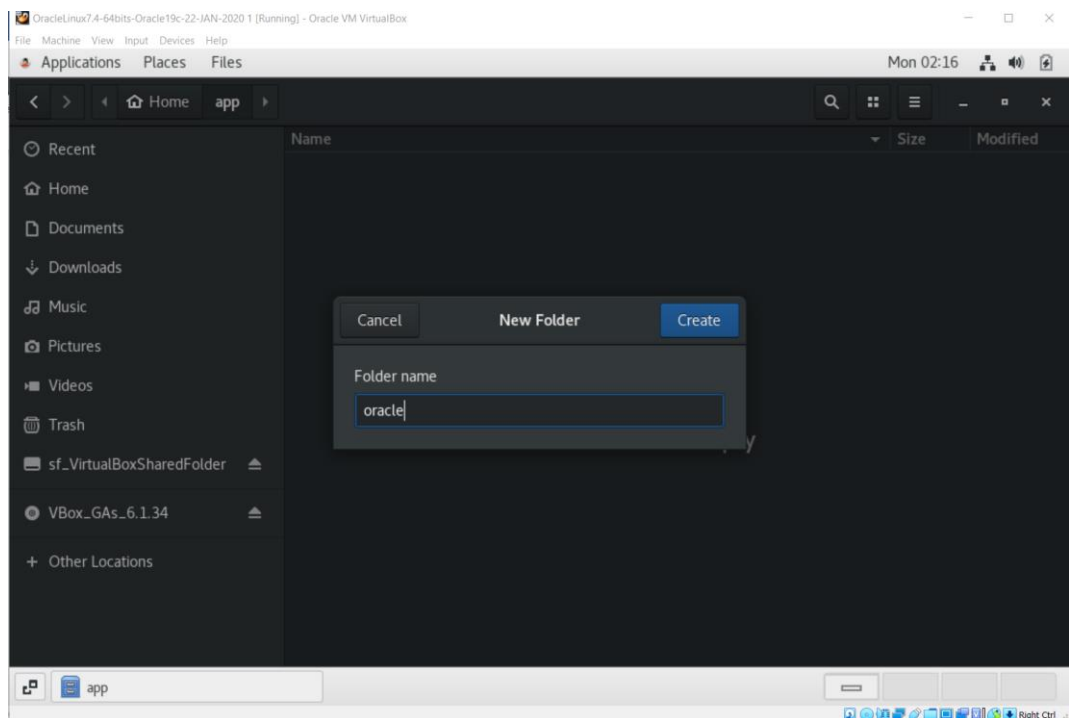


Name the folder 'app':

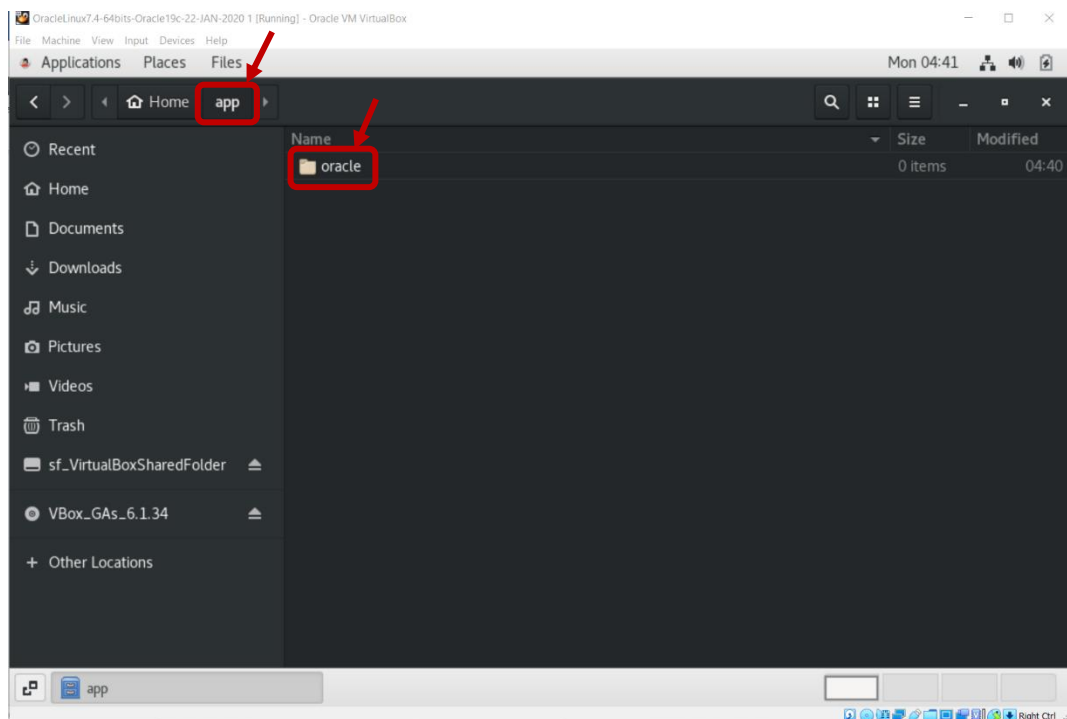


Navigate into the 'app' folder:

Inside the 'app' folder, create another new folder, and named it as 'oracle'.

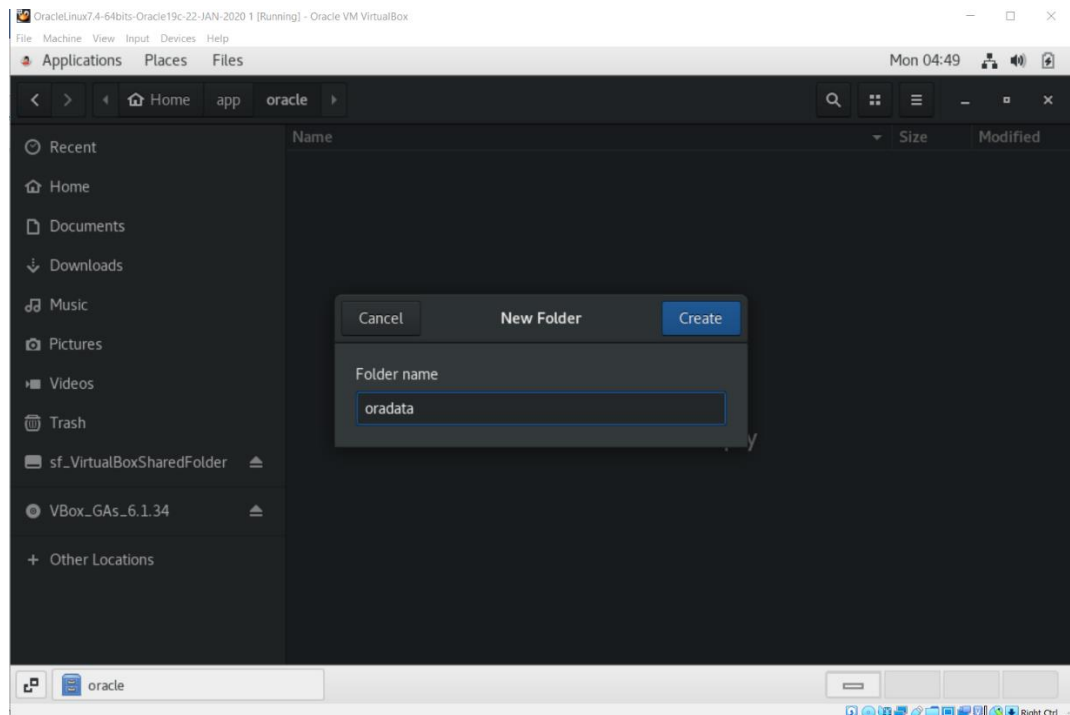


The 'oracle' folder is created.

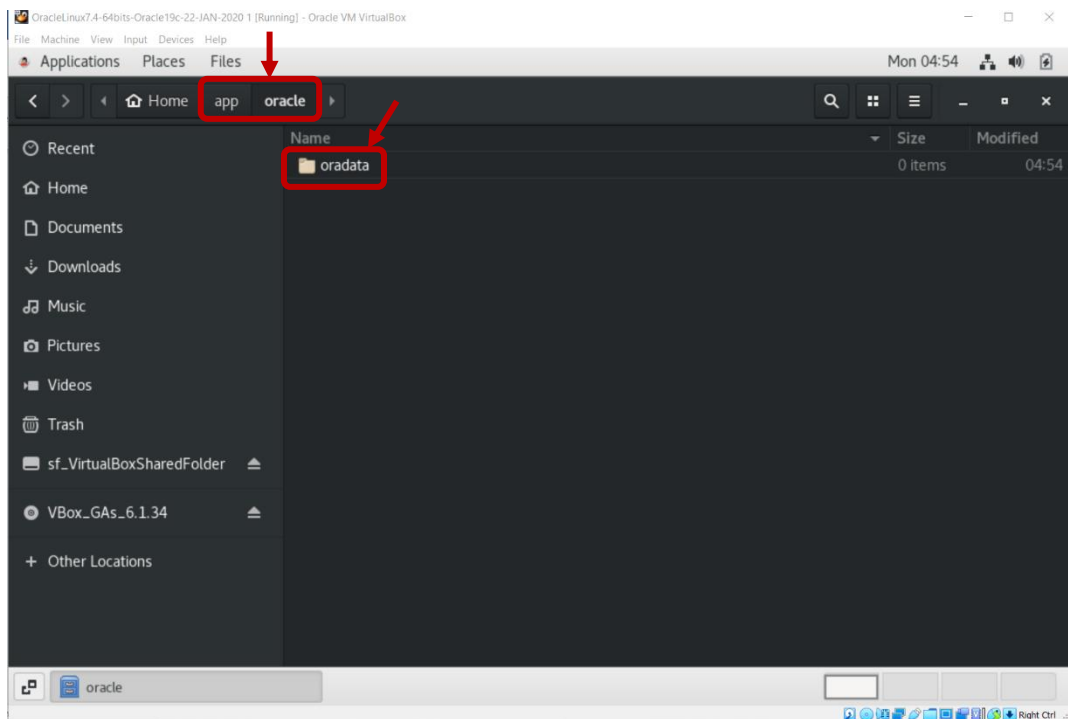


Navigate into the 'oracle' folder:

Inside the 'oracle' folder, create another new folder, and named it as 'oradata'.

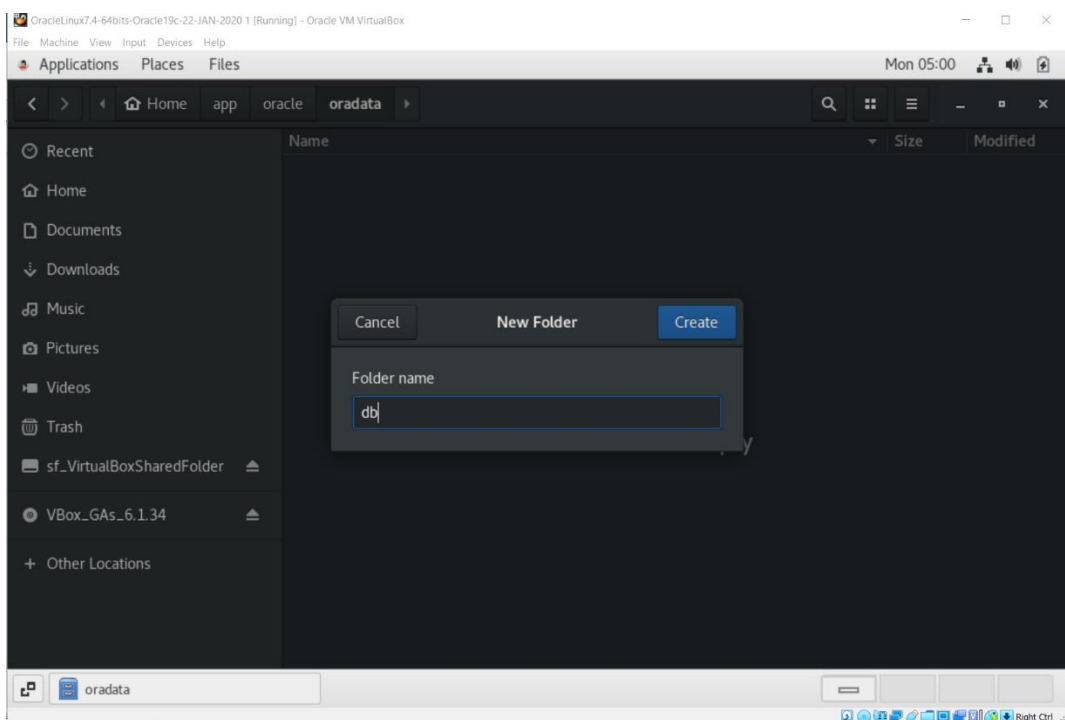


The 'oradata' folder is created.

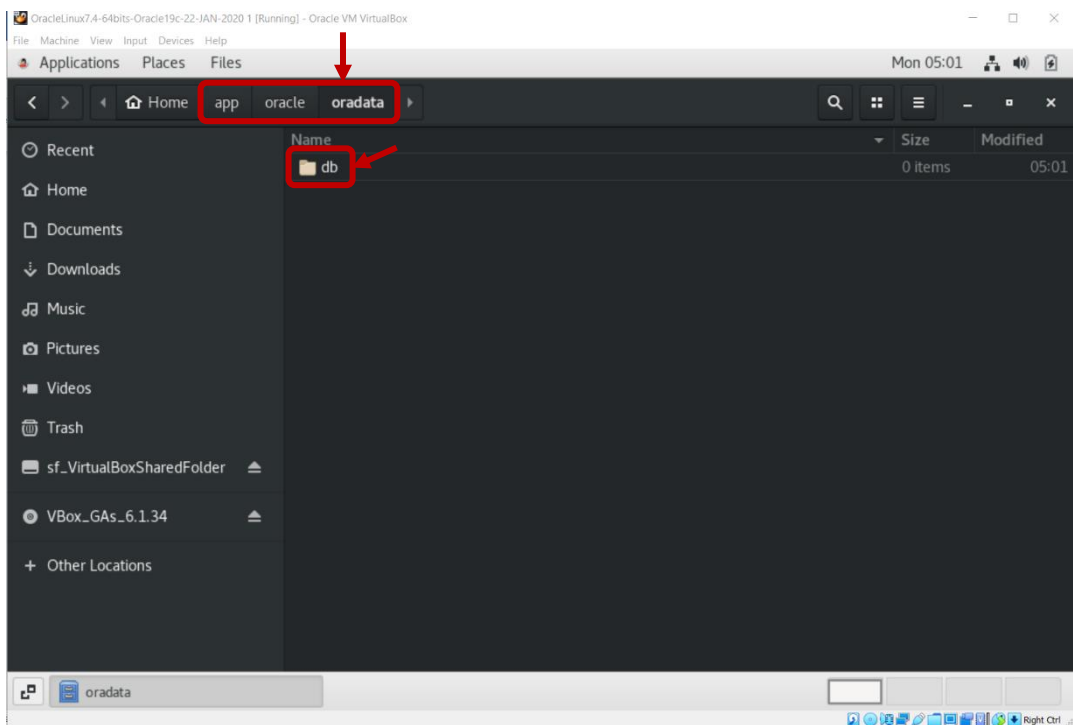


Navigate into the 'oradata' folder:

Inside the 'oradata' folder, create another new folder, and named it as 'db'.



The 'db' folder is created.



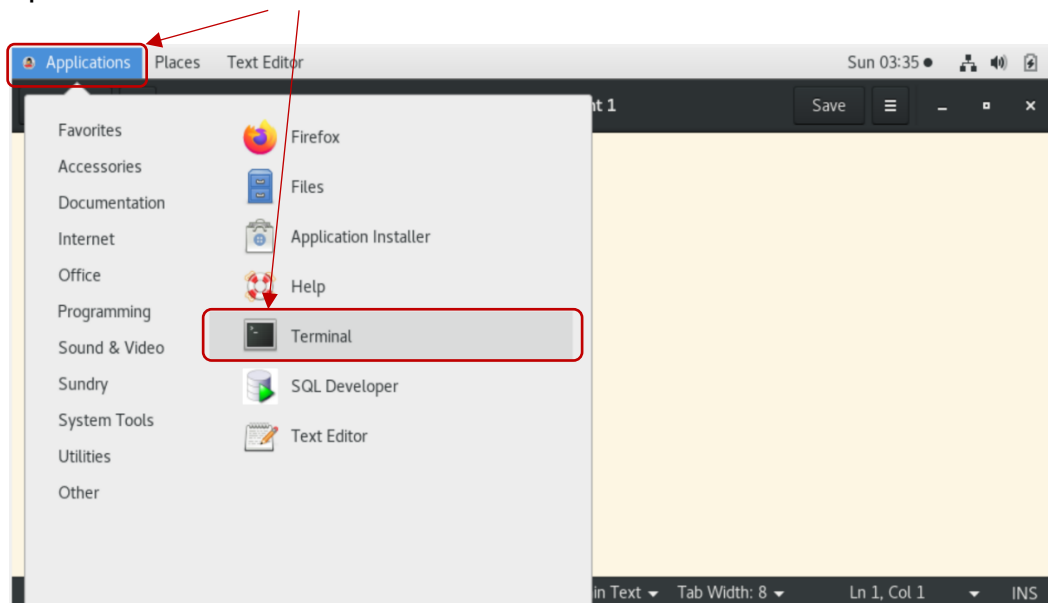
Please make sure that these folders are created correctly, that is, app/oracle/oradata/db.

We have now created the environment properly. We are ready to run the scripts to setup and install the TPCHR sample database.

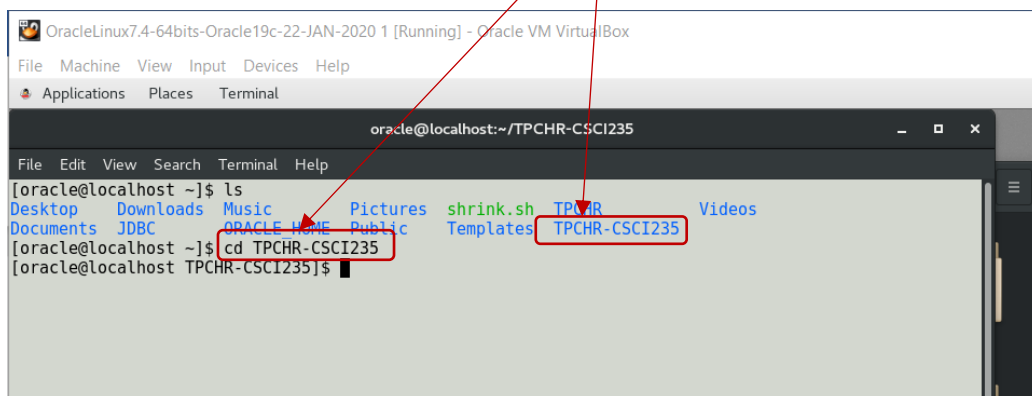
Setting up the TPCHR sample database:

8. Start a new Terminal window and ...

i. Open a new Terminal window.



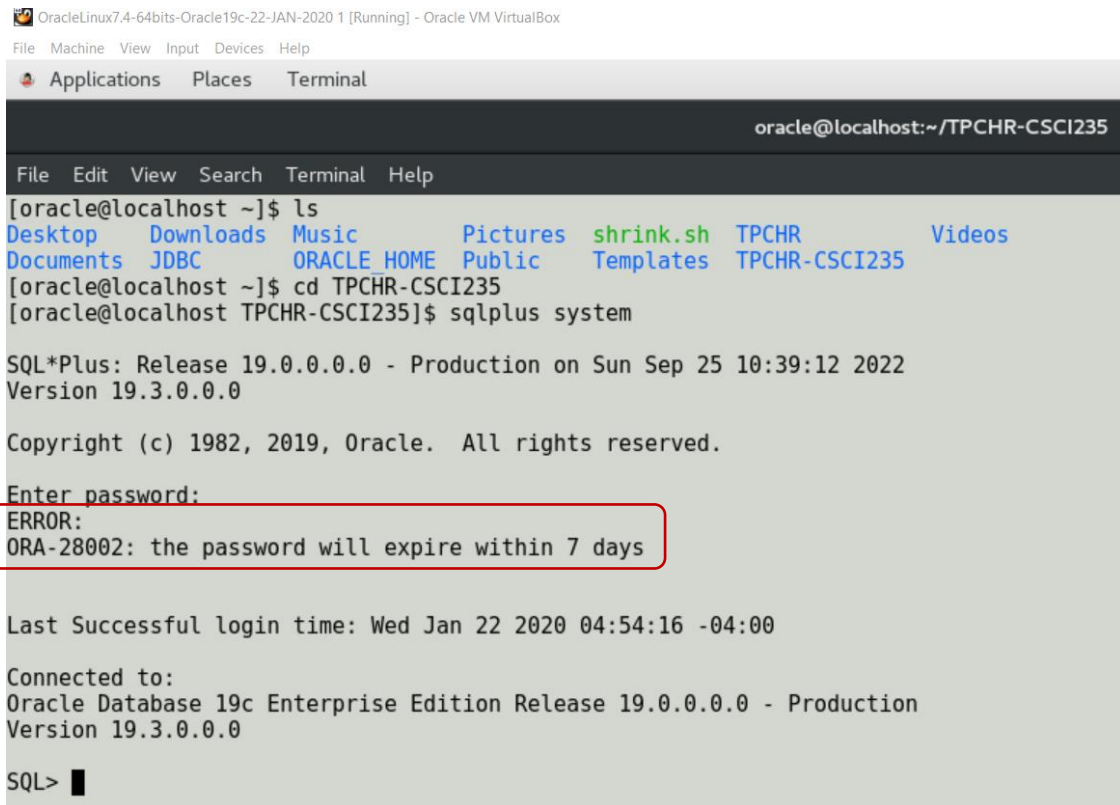
ii. Next change to the directory 'TPCHR-CSCI235'.



- iii. Start SQLPlus, and log in using the userid SYSTEM. At the prompt, type the following:

```
[oracle@localhost TPCHR-CSCI235]$ sqlplus system
```

... and enter the appropriate password. (The password is **oracle**, if you did not change the password.)



```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
oracle@localhost:~/TPCHR-CSCI235
File Edit View Search Terminal Help
[oracle@localhost ~]$ ls
Desktop Downloads Music Pictures shrink.sh TPCHR Videos
Documents JDBC ORACLE_HOME Public Templates TPCHR-CSCI235
[oracle@localhost ~]$ cd TPCHR-CSCI235
[oracle@localhost TPCHR-CSCI235]$ sqlplus system

SQL*Plus: Release 19.0.0.0.0 - Production on Sun Sep 25 10:39:12 2022
Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Enter password:
ERROR:
ORA-28002: the password will expire within 7 days

Last Successful login time: Wed Jan 22 2020 04:54:16 -04:00

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

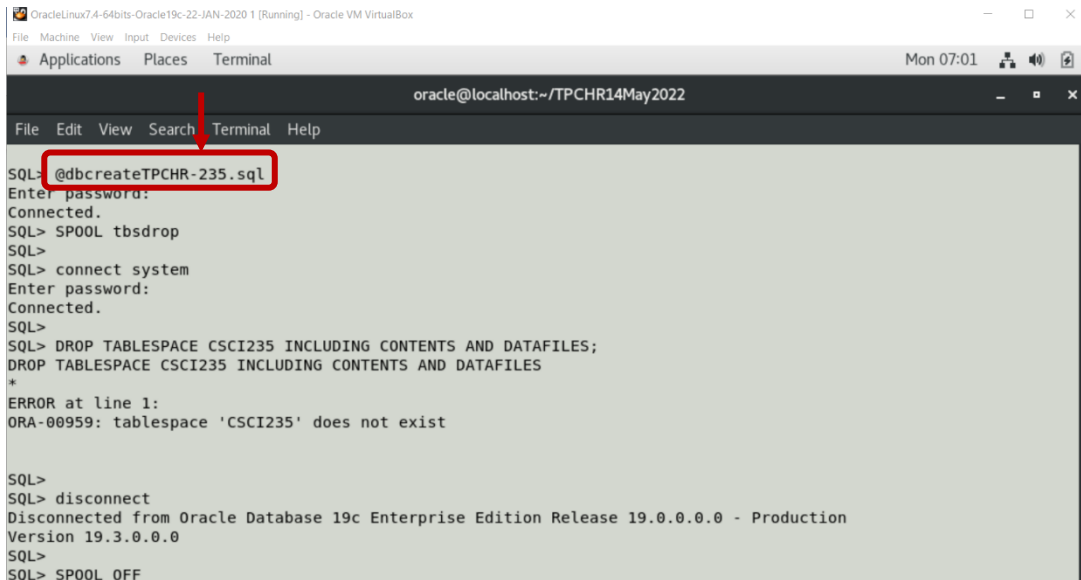
SQL>
```

Note: If this is the first time you login to the Oracle, you will notice you will receive an error message stating:

ORA-28002: the password will expire within 7 days

iv. Run the script '**dbcreateTPCHR-235.sql**'

Note: If you did not change the password for the user account SYSTEM and CSCI235, then the password should be '**oracle**' (without the single quote.)

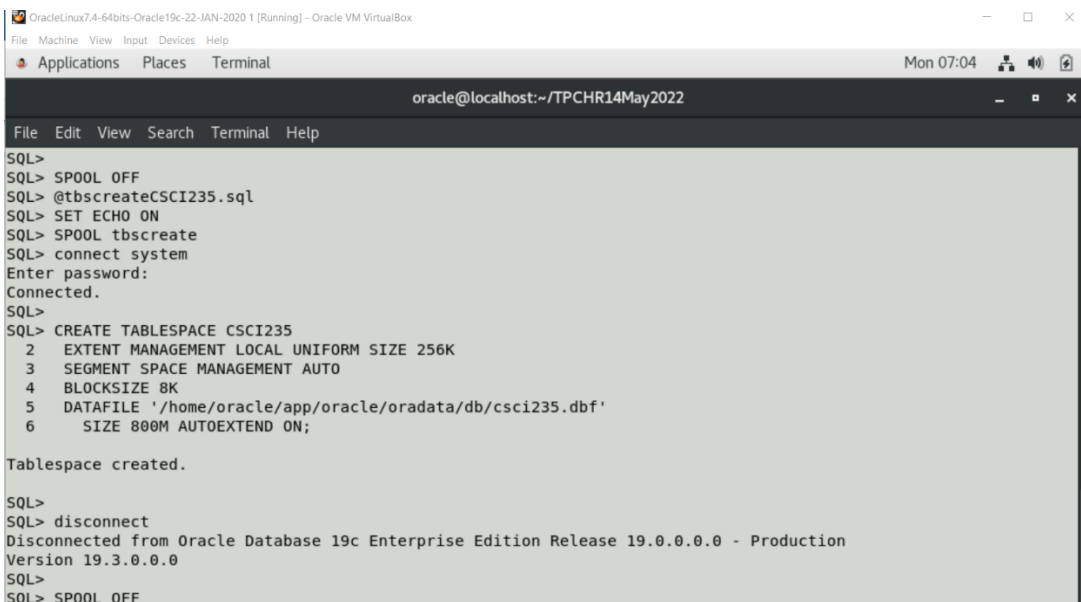


```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
oracle@localhost:~/TPCHR14May2022

SQL> @dbcreateTPCHR-235.sql
Enter password:
Connected.
SQL> SP00L tbsdrop
SQL>
SQL> connect system
Enter password:
Connected.
SQL>
SQL> DROP TABLESPACE CSCI235 INCLUDING CONTENTS AND DATAFILES;
DROP TABLESPACE CSCI235 INCLUDING CONTENTS AND DATAFILES
*
ERROR at line 1:
ORA-00959: tablespace 'CSCI235' does not exist

SQL>
SQL> disconnect
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
SQL>
SQL> SP00L OFF
```

Follow the instructions. When asked to enter the password, please enter '**oracle**' (if you have not changed the passwords for the user account SYSTEM and CSCI235.



```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
oracle@localhost:~/TPCHR14May2022

SQL>
SQL> SP00L OFF
SQL> @tbscreateCSCI235.sql
SQL> SET ECHO ON
SQL> SP00L tbscreate
SQL> connect system
Enter password:
Connected.
SQL>
SQL> CREATE TABLESPACE CSCI235
2 EXTENT MANAGEMENT LOCAL UNIFORM SIZE 256K
3 SEGMENT SPACE MANAGEMENT AUTO
4 BLOCKSIZE 8K
5 DATAFILE '/home/oracle/app/oracle/oradata/db/csci235.dbf'
6 SIZE 800M AUTOEXTEND ON;

Tablespace created.

SQL>
SQL> disconnect
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
SQL>
SQL> SP00L OFF
```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Mon 07:07

oracle@localhost:~/TPCHR14May2022
File Edit View Search Terminal Help

SQL> SP00L OFF
SQL> @usrdropCSCI235.sql
SQL> SET ECHO ON
SQL> SP00L usrdrop
SQL>
SQL> connect system
Enter password:
Connected.
SQL>
SQL> DROP USER CSCI235 CASCADE;

User dropped.

SQL>
SQL> disconnect
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
SQL>
SQL> SP00L OFF
```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Mon 07:09

oracle@localhost:~/TPCHR14May2022
File Edit View Search Terminal Help

SQL> SP00L OFF
SQL> @usrcreateCSCI235.sql
SQL> SET ECHO ON
SQL> SP00L usrcreateCSCI235
SQL>
SQL> connect system
Enter password:
Connected.
SQL>
SQL> CREATE USER CSCI235 IDENTIFIED BY oracle;

User created.

SQL> GRANT RESOURCE, CONNECT TO CSCI235;

Grant succeeded.

SQL> ALTER USER CSCI235 DEFAULT TABLESPACE CSCI235;

User altered.

SQL> ALTER USER CSCI235 TEMPORARY TABLESPACE TEMP;

User altered.

SQL> ALTER USER CSCI235 QUOTA 800M ON CSCI235;

User altered.
```



```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Mon 07:11

oracle@localhost:~/TPCHR14May2022
File Edit View Search Terminal Help

User altered.

SQL> ALTER USER CSCI235 TEMPORARY TABLESPACE TEMP;

User altered.

SQL> ALTER USER CSCI235 QUOTA 800M ON CSCI235;

User altered.

SQL> ALTER USER CSCI235 QUOTA 0M ON SYSTEM;

User altered.

SQL> ALTER USER CSCI235 QUOTA 0M ON USERS;

User altered.

SQL>
SQL> SP00L OFF
SQL> @dbcreateCSCI235.sql
SQL> SET ECHO ON
SQL> SP00L dbcreateCSCI235
SQL>
SQL> connect CSCI235
Enter password: █
```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Mon 07:12

oracle@localhost:~/TPCHR14May2022
File Edit View Search Terminal Help

SQL> SP00L OFF
SQL> @dbcreateCSCI235.sql
SQL> SET ECHO ON
SQL> SP00L dbcreateCSCI235
SQL>
SQL> connect CSCI235
Enter password:
Connected.
SQL>
SQL> /* ~~~~~ */
SQL> /* The relational tables of TPC HR benchmark database */
SQL> /* ~~~~~ */
SQL>
SQL> CREATE TABLE REGION(
  2 R_REGIONKEY          NUMBER(12)          NOT NULL,
  3 R_NAME                CHAR(25)            NOT NULL,
  4 R_COMMENT             VARCHAR(152)        NOT NULL,
  5      CONSTRAINT REGION_PKEY PRIMARY KEY(R_REGIONKEY),
  6      CONSTRAINT REGION_CHECK1 CHECK(R_REGIONKEY >= 0) );

Table created.

SQL>
SQL> CREATE TABLE NATION(
  2 N_NATIONKEY          NUMBER(12)          NOT NULL,
  3 N_NAME                CHAR(25)            NOT NULL,
  4 N_REGIONKEY           NUMBER(12)          NOT NULL,
  5 N_COMMENT             VARCHAR(152)        NOT NULL,
```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Mon 07:14

oracle@localhost:~/TPCHR14May2022

File Edit View Search Terminal Help

SQL> CREATE TABLE NATION(
 2  N_NATIONKEY          NUMBER(12)          NOT NULL,
 3  N_NAME                CHAR(25)           NOT NULL,
 4  N_REGIONKEY          NUMBER(12)          NOT NULL,
 5  N_COMMENT             VARCHAR(152)       NOT NULL,
 6      CONSTRAINT NATION_PKEY PRIMARY KEY (N_NATIONKEY),
 7      CONSTRAINT NATION_FKEY1 FOREIGN KEY (N_REGIONKEY)
 8          REFERENCES REGION(R_REGIONKEY),
 9      CONSTRAINT NATION_CHECK1 CHECK(N_NATIONKEY >= 0) );

Table created.

SQL>
SQL> CREATE TABLE PART(
 2  P_PARTKEY            NUMBER(12)          NOT NULL,
 3  P_NAME                VARCHAR(55)        NOT NULL,
 4  P_MFGR               VARCHAR(25)        NOT NULL,
 5  P_BRAND              CHAR(10)          NOT NULL,
 6  P_TYPE               VARCHAR(25)        NOT NULL,
 7  P_SIZE               NUMBER(12)         NOT NULL,
 8  P_CONTAINER          CHAR(10)          NOT NULL,
 9  P_RETAILPRICE        NUMBER(12,2)       NOT NULL,
10  P_COMMENT            VARCHAR(23)        NOT NULL,
11      CONSTRAINT PART_PEKEY PRIMARY KEY (P_PARTKEY),
12      CONSTRAINT PART_CHECK1 CHECK(P_PARTKEY >= 0),
13      CONSTRAINT PART_CHECK2 CHECK(P_SIZE >= 0),
14      CONSTRAINT PART_CHECK3 CHECK(P_RETAILPRICE >= 0) );

Home oracle@localhost:~/TPCHR14May20...
```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Mon 07:16

oracle@localhost:~/TPCHR14May2022

File Edit View Search Terminal Help

 7  P_SIZE               NUMBER(12)         NOT NULL,
 8  P_CONTAINER          CHAR(10)          NOT NULL,
 9  P_RETAILPRICE        NUMBER(12,2)       NOT NULL,
10  P_COMMENT            VARCHAR(23)        NOT NULL,
11      CONSTRAINT PART_PEKEY PRIMARY KEY (P_PARTKEY),
12      CONSTRAINT PART_CHECK1 CHECK(P_PARTKEY >= 0),
13      CONSTRAINT PART_CHECK2 CHECK(P_SIZE >= 0),
14      CONSTRAINT PART_CHECK3 CHECK(P_RETAILPRICE >= 0) );

Table created.

SQL>
SQL> CREATE TABLE SUPPLIER(
 2  S_SUPPKEY            NUMBER(12)          NOT NULL,
 3  S_NAME                CHAR(25)           NOT NULL,
 4  S_ADDRESS            VARCHAR(40)        NOT NULL,
 5  S_NATIONKEY          NUMBER(12)          NOT NULL,
 6  S_PHONE              CHAR(15)          NOT NULL,
 7  S_ACCTBAL            NUMBER(12,2)       NOT NULL,
 8  S_COMMENT            VARCHAR(101)       NOT NULL,
 9      CONSTRAINT SUPPLIER_PKEY PRIMARY KEY (S_SUPPKEY),
10      CONSTRAINT SUPPLIER_FKEY1 FOREIGN KEY (S_NATIONKEY)
11          REFERENCES NATION(N_NATIONKEY),
12      CONSTRAINT SUPPLIER_CHECK1 CHECK(S_SUPPKEY >= 0) );

Table created.

SQL>
```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Mon 07:18

oracle@localhost:~/TPCHR14May2022

File Edit View Search Terminal Help
SQL> CREATE TABLE PARTSUPP(
2 PS_PARTKEY          NUMBER(12)          NOT NULL,
3 PS_SUPPKEY          NUMBER(12)          NOT NULL,
4 PS_AVAILQTY         NUMBER(12)          NOT NULL,
5 PS_SUPPLYCOST       NUMBER(12,2)        NOT NULL,
6 PS_COMMENT          VARCHAR(199)        NOT NULL,
7     CONSTRAINT PARTSUPP_PKEY PRIMARY KEY (PS_PARTKEY, PS_SUPPKEY),
8     CONSTRAINT PARTSUPP_FKEY1 FOREIGN KEY (PS_PARTKEY)
9         REFERENCES PART(P_PARTKEY),
10    CONSTRAINT PARTSUPP_FKEY2 FOREIGN KEY (PS_SUPPKEY)
11        REFERENCES SUPPLIER(S_SUPPKEY),
12    CONSTRAINT PARTSUPP_CHECK1 CHECK(PS_PARTKEY >= 0),
13    CONSTRAINT PARTSUPP_CHECK2 CHECK(PS_AVAILQTY >= 0),
14    CONSTRAINT PARTSUPP_CHECK3 CHECK(PS_SUPPLYCOST >= 0) );

Table created.

SQL>
SQL> CREATE TABLE CUSTOMER(
2 C_CUSTKEY          NUMBER(12)          NOT NULL,
3 C_NAME             VARCHAR(25)          NOT NULL,
4 C_ADDRESS          VARCHAR(40)          NOT NULL,
5 C_NATIONKEY        NUMBER(12)          NOT NULL,
6 C_PHONE            CHAR(15)             NOT NULL,
7 C_ACCTBAL          NUMBER(12,2)        NOT NULL,
8 C_MKTSEGMENT       CHAR(10)             NOT NULL,
9 C_COMMENT          VARCHAR(117)        NOT NULL,
10    CONSTRAINT CUSTOMER_PKEY PRIMARY KEY(C_CUSTKEY),
11    CONSTRAINT CUSTOMER_FKEY1 FOREIGN KEY (C_NATIONKEY)
12        REFERENCES NATION(N_NATIONKEY),
13    CONSTRAINT CUSTOMER_CHECK1 CHECK(C_CUSTKEY >= 0) );

Table created.
```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Mon 07:20

oracle@localhost:~/TPCHR14May2022

File Edit View Search Terminal Help
7 C_PHONE            CHAR(15)             NOT NULL,
7 C_ACCTBAL          NUMBER(12,2)        NOT NULL,
8 C_MKTSEGMENT       CHAR(10)             NOT NULL,
9 C_COMMENT          VARCHAR(117)        NOT NULL,
10    CONSTRAINT CUSTOMER_PKEY PRIMARY KEY(C_CUSTKEY),
11    CONSTRAINT CUSTOMER_FKEY1 FOREIGN KEY (C_NATIONKEY)
12        REFERENCES NATION(N_NATIONKEY),
13    CONSTRAINT CUSTOMER_CHECK1 CHECK(C_CUSTKEY >= 0) );

Table created.

SQL>
SQL> CREATE TABLE ORDERS(
2 O_ORDERKEY          NUMBER(12)          NOT NULL,
3 O_CUSTKEY           NUMBER(12)          NOT NULL,
4 O_ORDERSTATUS       CHAR(1)             NOT NULL,
5 O_TOTALPRICE        NUMBER(12,2)        NOT NULL,
6 O_ORDERDATE         DATE                NOT NULL,
7 O_ORDERPRIORITY     CHAR(15)            NOT NULL,
8 O_CLERK             CHAR(15)            NOT NULL,
9 O_SHIPPRIORITY       NUMBER(12)          NOT NULL,
10 O_COMMENT           VARCHAR(79)         NOT NULL,
11    CONSTRAINT ORDERS_PKEY PRIMARY KEY (O_ORDERKEY),
12    CONSTRAINT ORDERS_FKEY1 FOREIGN KEY (O_CUSTKEY)
13        REFERENCES CUSTOMER(C_CUSTKEY),
14    CONSTRAINT ORDER_CHECK1 CHECK( O_TOTALPRICE >= 0) );

Table created.
```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
oracle@localhost:~/TPCHR14May2022
File Edit View Search Terminal Help
SQL> CREATE TABLE LINEITEM(
2  L_ORDERKEY          NUMBER(12)          NOT NULL,
3  L_PARTKEY           NUMBER(12)          NOT NULL,
4  L_SUPPKEY            NUMBER(12)          NOT NULL,
5  L_LINENUMBER         NUMBER(12)          NOT NULL,
6  L_QUANTITY           NUMBER(12,2)        NOT NULL,
7  L_EXTENDEDPRICE      NUMBER(12,2)        NOT NULL,
8  L_DISCOUNT          NUMBER(12,2)        NOT NULL,
9  L_TAX                NUMBER(12,2)        NOT NULL,
10 L_RETURNFLAG         CHAR(1)             NOT NULL,
11 L_LINestatus         CHAR(1)             NOT NULL,
12 L_SHIPDATE           DATE                NOT NULL,
13 L_COMMITDATE         DATE                NOT NULL,
14 L_RECEIPTDATE        DATE                NOT NULL,
15 L_SHIPINSTRUCT       CHAR(25)            NOT NULL,
16 L_SHIPMODE           CHAR(10)            NOT NULL,
17 L_COMMENT            VARCHAR(44)         NOT NULL,
18 CONSTRAINT LINEITEM_PKEY PRIMARY KEY (L_ORDERKEY, L_LINENUMBER),
19 CONSTRAINT LINEITEM_FKEY1 FOREIGN KEY (L_ORDERKEY)
20 REFERENCES ORDERS(O_ORDERKEY),
21 CONSTRAINT LINEITEM_FKEY2 FOREIGN KEY (L_PARTKEY)
22 REFERENCES PART(P_PARTKEY),
23 CONSTRAINT LINEITEM_FKEY3 FOREIGN KEY (L_PARTKEY,L_SUPPKEY)
24 REFERENCES PARTSUPP(P_S_PARTKEY, P_S_SUPPKEY),
25 CONSTRAINT LINEITEM_FKEY4 FOREIGN KEY (L_SUPPKEY)
26 REFERENCES SUPPLIER(S_SUPPKEY),
27 CONSTRAINT LINEITEM_CHECK1 CHECK (L_QUANTITY >= 0),
28 CONSTRAINT LINEITEM_CHECK2 CHECK (L_EXTENDEDPRICE >= 0),

```

```
OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
oracle@localhost:~/TPCHR14May2022
File Edit View Search Terminal Help
28 CONSTRAINT LINEITEM_CHECK2 CHECK (L_EXTENDEDPRICE >= 0),
29 CONSTRAINT LINEITEM_CHECK3 CHECK (L_TAX >= 0),
30 CONSTRAINT LINEITEM_CHECK4 CHECK (L_DISCOUNT BETWEEN 0.00 AND 1.00) );

Table created.

SQL>
SQL> /* ~~~~~ */
SQL> /* Multitable constraints */
SQL> /* 1.L_SHIPDATE <= L_RECEIPTDATE */
SQL> /* 2.O_ORDERDATE <= L_SHIPDATE */
SQL> /* 3.O_ORDERDATE <= L_COMMITDATE */
SQL> /* ~~~~~ */
SQL>
SQL> disconnect
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
SQL>
SQL> SPPOOL OFF
SQL>
SQL> /* ~~~~~ */
SQL> /* End of script */
SQL> /* ~~~~~ */
SQL>
SQL>
SQL>
SQL>
```

The screenshot shows a terminal window titled 'OracleLinux7.4-64bits-Oracle19c-22-JAN-2020 1 [Running] - Oracle VM VirtualBox'. The terminal prompt is 'oracle@localhost:~/TPCHR14May2022'. The user has connected to an Oracle database as 'csci235'. They have executed a script '@dbcoun.sql' which sets column formats and then runs a query to count rows in eight tables. The output shows that all eight tables are currently empty.

```
SQL> conn csci235
Enter password:
Connected.
SQL> @dbcoun.sql
SQL> COLUMN LINEITEM FORMAT 99,999,999
SQL> COLUMN ORDERS FORMAT 99,999,999
SQL> COLUMN CUSTOMER FORMAT 999,999
SQL> COLUMN PARTSUPP FORMAT 99,999,999
SQL> COLUMN SUPPLIER FORMAT 999,999
SQL> COLUMN PART FORMAT 99,999,999
SQL> COLUMN NATION FORMAT 999
SQL> COLUMN REGION FORMAT 99
SQL> SELECT (SELECT COUNT(*) FROM LINEITEM )LINEITEM,
2          (SELECT COUNT(*) FROM ORDERS ) ORDERS,
3          (SELECT COUNT(*) FROM CUSTOMER ) CUSTOMER,
4          (SELECT COUNT(*) FROM PARTSUPP ) PARTSUPP,
5          (SELECT COUNT(*) FROM SUPPLIER ) SUPPLIER,
6          (SELECT COUNT(*) FROM PART ) PART,
7          (SELECT COUNT(*) FROM NATION ) NATION,
8          (SELECT COUNT(*) FROM REGION ) REGION
9 FROM DUAL;
```

LINEITEM	ORDERS	CUSTOMER	PARTSUPP	SUPPLIER	PART	NATION	REGION
0	0	0	0	0	0	0	0

SQL> █

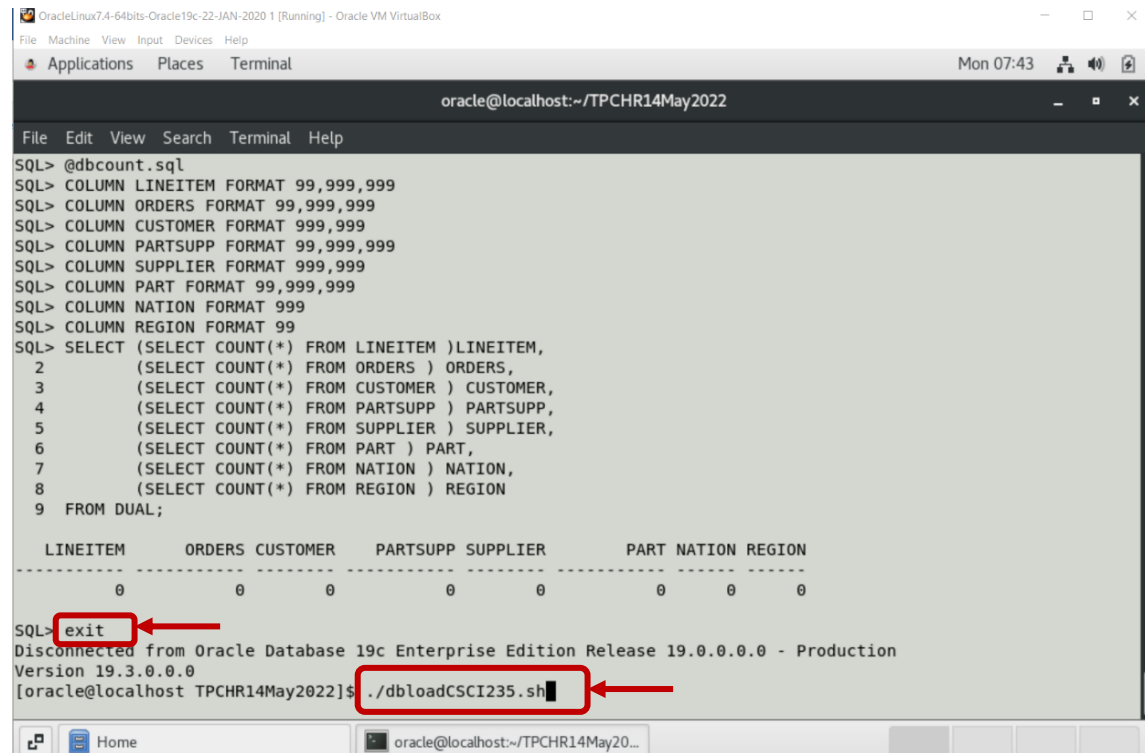
Finally, the scripts finish the processing.

The output has shown that there are eight tables created and currently all the tables are empty.

Populate the sample database TPCHR:

- Next, we need to populate sample data to the sample database TPCHR. We need to execute the shell script 'dbloadCSCI235.sh'.
(Note: Make sure you have changed the property of the shell script to executable. Step 6, page 7.)

Exit the SQLPLUS client interface and at the terminal, execute the shell script 'dbloadTPCHR235.sh'.



The screenshot shows a terminal window titled 'oracle@localhost:~/TPCHR14May2022'. The terminal displays the following SQL*Plus session:

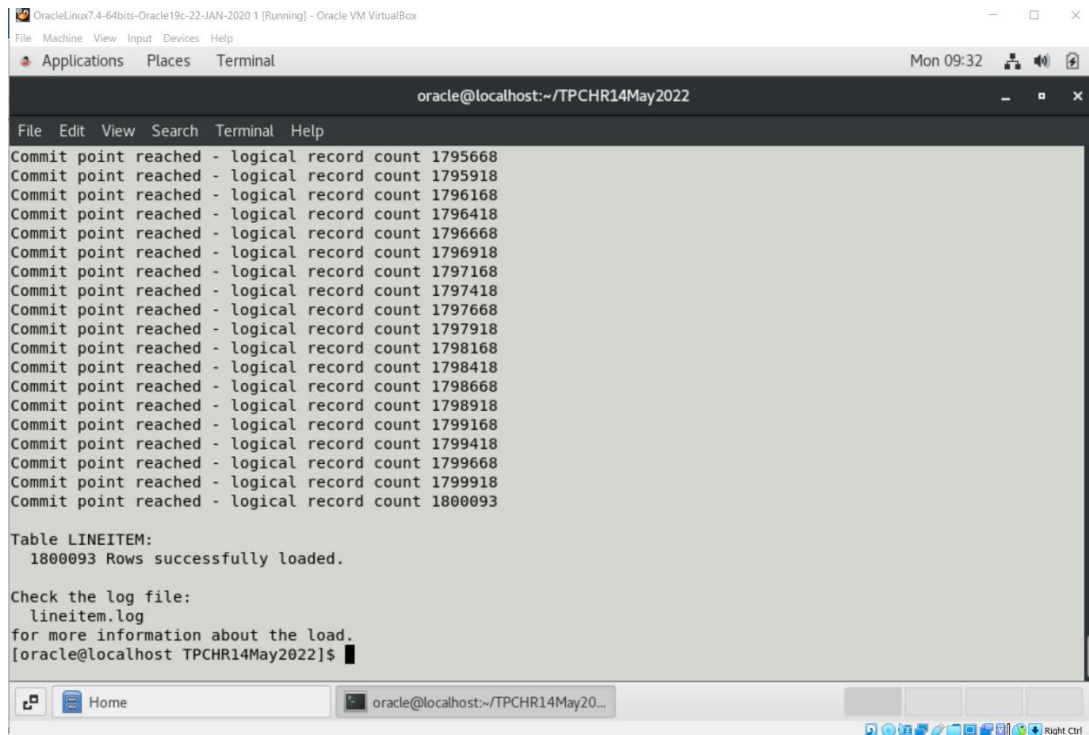
```
SQL> @dbcount.sql
SQL> COLUMN LINEITEM FORMAT 99,999,999
SQL> COLUMN ORDERS FORMAT 99,999,999
SQL> COLUMN CUSTOMER FORMAT 999,999
SQL> COLUMN PARTSUPP FORMAT 99,999,999
SQL> COLUMN SUPPLIER FORMAT 999,999
SQL> COLUMN PART FORMAT 99,999,999
SQL> COLUMN NATION FORMAT 999
SQL> COLUMN REGION FORMAT 99
SQL> SELECT (SELECT COUNT(*) FROM LINEITEM )LINEITEM,
2          (SELECT COUNT(*) FROM ORDERS ) ORDERS,
3          (SELECT COUNT(*) FROM CUSTOMER ) CUSTOMER,
4          (SELECT COUNT(*) FROM PARTSUPP ) PARTSUPP,
5          (SELECT COUNT(*) FROM SUPPLIER ) SUPPLIER,
6          (SELECT COUNT(*) FROM PART ) PART,
7          (SELECT COUNT(*) FROM NATION ) NATION,
8          (SELECT COUNT(*) FROM REGION ) REGION
9 FROM DUAL;

LINEITEM      ORDERS CUSTOMER  PARTSUPP SUPPLIER    PART NATION REGION
-----
0            0        0          0         0          0    0      0

SQL> exit
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
[oracle@localhost TPCHR14May2022]$ ./dbloadCSCI235.sh
```

Red arrows point to the 'exit' command and the shell script execution command './dbloadCSCI235.sh'.

After the completion of the loading process, ...

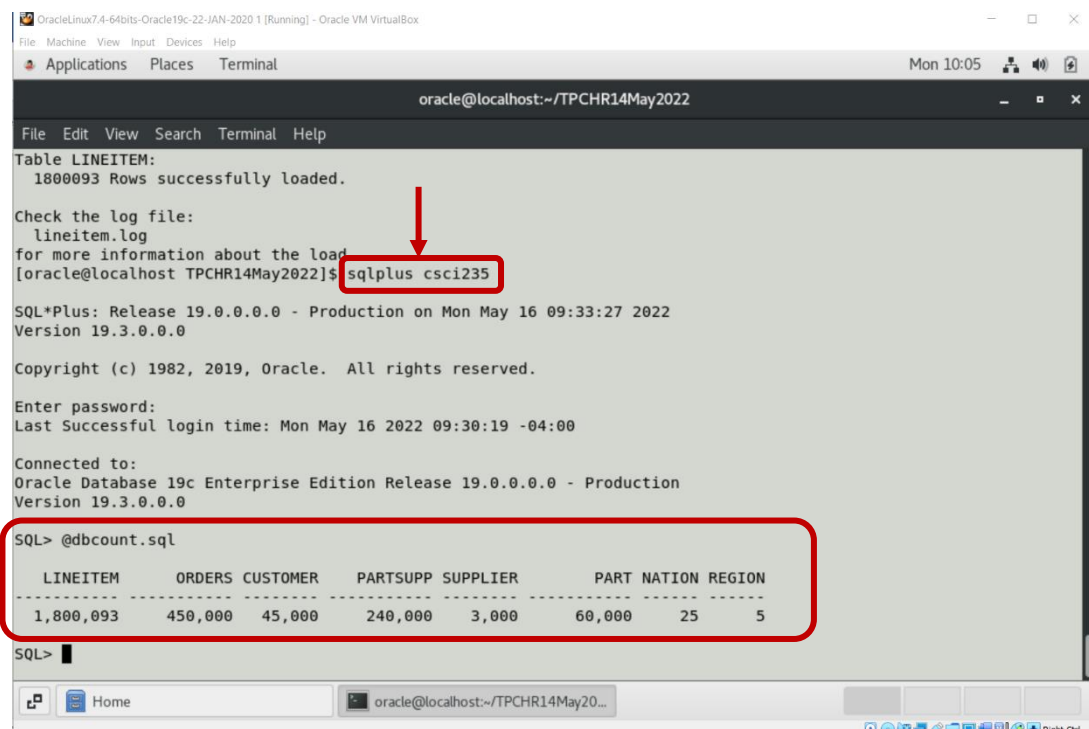


```
Commit point reached - logical record count 1795668
Commit point reached - logical record count 1795918
Commit point reached - logical record count 1796168
Commit point reached - logical record count 1796418
Commit point reached - logical record count 1796668
Commit point reached - logical record count 1796918
Commit point reached - logical record count 1797168
Commit point reached - logical record count 1797418
Commit point reached - logical record count 1797668
Commit point reached - logical record count 1797918
Commit point reached - logical record count 1798168
Commit point reached - logical record count 1798418
Commit point reached - logical record count 1798668
Commit point reached - logical record count 1798918
Commit point reached - logical record count 1799168
Commit point reached - logical record count 1799418
Commit point reached - logical record count 1799668
Commit point reached - logical record count 1799918
Commit point reached - logical record count 1800093

Table LINEITEM:
 1800093 Rows successfully loaded.

Check the log file:
  lineitem.log
for more information about the load.
[oracle@localhost TPCHR14May2022]$
```

Start SQLPlus, and log in using the userid csci235.



```
Table LINEITEM:
 1800093 Rows successfully loaded.

Check the log file:
  lineitem.log
for more information about the load.
[oracle@localhost TPCHR14May2022]$ sqlplus csci235

SQL*Plus: Release 19.0.0.0.0 - Production on Mon May 16 09:33:27 2022
Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Enter password:
Last Successful login time: Mon May 16 2022 09:30:19 -04:00

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

SQL> @dbcount.sql

  LINEITEM      ORDERS CUSTOMER      PARTSUPP SUPPLIER      PART NATION REGION
-----
 1,800,093      450,000    45,000      240,000    3,000      60,000    25    5

SQL>
```

The tables are now loaded with sample data.

Congratulation! You have successfully setup the TPCHR sample database and loaded with data.