Using ORACLE server 12c

Lab 1   1 % Due September 21, 2017 midnight via BLearn

Use your Oracle USER ID STxx on BTACS server database.

- Use the SQL Developer HELP (Tutorial: Creating Objects for a Small Database) to find the Script to create library objects. This small library schema has three tables: BOOKS, PATRONS, and TRANSACTIONS. Additionally, the script has a sequence, a view, a trigger, and a stored procedure.

- Run the script to create the database and to insert the data.

1. Use the following box and indicate the primary and foreign keys:

books (book_id, title, author_last_name, author_first_name, rating)

patrons (patron_id, last_name, first_name, street_address, city_state_zip, location)

transactions (transaction_id, patron_id, book_id, transaction_date, transaction_type)

Please note the following codes: transaction code 1 = checking out, 2 = returning 3 = placing a hold

Primary Keys highlighted in pink
Foreign Keys highlighted in yellow

2. Create SQL statements to add
   a. Yourself as a patron

```
INSERT INTO PATRONS VALUES (
    patron_id_seq.nextval,
    'Bilkhu',
    'Jagjit',
    '1610 Greenfield Avenue',
    'Kamloops BC V2B4N3',
    null);
```

   b. Our textbook as a book (with high rating!)

```
INSERT INTO BOOKS VALUES (
    '0132943263',
    'Database Systems: A Practical Approach to Design, Implementation, and Management',
    'Connolly',
    'Thomas',
    10);
```

   c. Transaction to take the book out from the library. Use today's date and time as a transaction date and time.
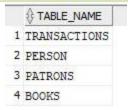
```
INSERT INTO TRANSACTIONS (transaction_id,
patron_id,book_id,transaction_date,transaction_type)
    VALUES (1000, '100','0132943263', SYSDATE, 1);
```

3. Prepare a select statement to list all patrons ordered by the last name (this list should include your name).

```
SELECT * FROM patrons ORDER BY LAST_NAME;
```

	PATRON_ID	LAST_NAME	FIRST_NAME	STREET_ADDRESS	CITY_STATE_ZIP	LOCATION
1	100	Bilkhu	Jagjit	1610 Greenfield Avenue	Kamloops BC V2B4N3	(null)
2	103	Chen	William	16 S. Maple Road	Mytown, MA 01234	(null)
3	104	Fernandez	Maria	502 Harrison Blvd.	Sometown, NH 03078	(null)
4	101	Murphy	Sam	57 Main Street	Mytown, MA 01234	(null)
5	102	Smith	Jane	123 Main Street	Mytown, MA 01234	(null)

4. Write an SQL query to list all tables created by you (USER_TABLES). List the table names only.

SELECT TABLE_NAME FROM USER_TABLES;

TABLE_NAME
1 TRANSACTIONS
2 PERSON
3 PATRONS
4 BOOKS

5. Write an SQL query to list all tables, sequences, and indexes created by you (USER_OBJECTS). List the names of the objects, types, and date and time of their creation.

SELECT OBJECT_NAME, OBJECT_TYPE, CREATED FROM USER_OBJECTS;

	OBJECT_NAME	OBJECT_TYPE	CREATED
1	AUTHOR_TITLE_UNIQUE	INDEX	21-SEP-17
2	BOOKS	TABLE	21-SEP-17
3	BOOKS_PK	INDEX	21-SEP-17
4	PATRONS	TABLE	21-SEP-17
5	PATRONS_PK	INDEX	21-SEP-17
6	PATRON_ID_SEQ	SEQUENCE	21-SEP-17
7	PERSON	TABLE	14-SEP-17
8	SYS_C00183917	INDEX	14-SEP-17
9	SYS_IL0000397316C00012$$	INDEX	21-SEP-17
10	SYS_IL0000397316C00013$$	INDEX	21-SEP-17
11	SYS_LOB0000397316C00012$$	LOB	21-SEP-17
12	SYS_LOB0000397316C00013$$	LOB	21-SEP-17
13	TRANSACTIONS	TABLE	21-SEP-17
14	TRANSACTIONS_PK	INDEX	21-SEP-17

6. Write an SQL query to display current **date and time** using **ISO 8601 date/time standard with the local time zone.**

a. Using the date/time from the Oracle server

SELECT to_char (SYSDATE,'YYYY-MM-DD HH24:MI:SS') FROM DUAL;

TO_CHAR(SYSDATE,'YYYY-MM-DDHH24:MI:SS')
1 2017-09-21 11:18:36

b. Using the date/time from the user session (client session using SQLDeveloper).

SELECT to_char (CURRENT_DATE,'YYYY-MM-DD HH24:MI:SS') FROM DUAL;

TO_CHAR(CURRENT_DATE,'YYYY-MM-DDHH24:MI:SS')
1 2017-09-21 11:19:01

7. Write an SQL query to display the name of day spelled out in English (e.g., Monday, Tuesday…) of your date of birth. You may use TO_CHAR () and TO_DATE () to convert between strings and date.

SELECT to_char (to_date('1995/10/05','YYYY/MM/DD'),'DAY - MONTH - YYYY')
FROM DUAL;

TO_CHAR(TO_DATE('1995/10/05','YYYY/MM/DD'),'DAY-MONTH-YYYY')
1 THURSDAY - OCTOBER   - 1995

Submit the answer as a pdf file

1. List of the tables and their primary and foreign keys. (Box above)
2. SQL queries and their results for questions 2-7.