SCSD2523-05

DATABASE

SEM 1 20192020

ASSIGNMENT 1

JUSTLEE BOOKS DATABASE

Name: Muhammad Amirul Fahmi bin Noor Anim

Matric Num: B19EC0018

1. Modify the following SQL command so that the Rep_ID column is the PRIMARY KEY for the table and the default value of Y is assigned to the Comm column. (The Comm column indicates whether the sales representative earns commission.)

Coding:

```
CREATE TABLE store_reps
(rep_ID NUMBER(5),
last VARCHAR2(15),
first VARCHAR2(10),
comm char(1) DEFAULT 'Y',
CONSTRAINT "REP_ID" PRIMARY KEY ("REP_ID"));
```

Object Type **TABLE** Object **STORE_REPS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STORE_REPS	REP_ID	NUMBER	-	5	0	1	-	-	-
	LAST	VARCHAR2	15	-	-	-	✓	-	-
	FIRST	VARCHAR2	10	-	-	-	✓	-	-
	COMM	CHAR	1	-	-	-	✓	'Y'	-

1 - 4

2. Change the STORE_REPS table so that NULL values can't be entered in the name columns (First and Last).

Coding:

```
alter table store_reps
modify (last constraint store_reps_last_nn Not null,
first constraint store_reps_first_nn Not null);
```

Object Type **TABLE** Object **STORE_REPS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STORE_REPS	REP_ID	NUMBER	-	5	0	1	-	-	-
	LAST	VARCHAR2	15	-	-	-	-	-	-
	FIRST	VARCHAR2	10	-	-	-	-	-	-
	COMM	CHAR	1	-	-	-	✓	'Y'	-

1 - 4

3. Change the STORE_REPS table so that only a Y and N can be entered in the Comm column.

Coding:

```
ALTER table store_reps
ADD constraint store_reps_comm_ck check (comm IN ('Y','N'));
```

Object Type **TABLE** Object **STORE_REPS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STORE_REPS	REP_ID	NUMBER	-	5	0	1	-	-	-
	LAST	VARCHAR2	15	-	-	-	-	-	-
	FIRST	VARCHAR2	10	-	-	-	-	-	-
	COMM	CHAR	1	-	-	-	✓	'Y'	-

1 - 4

4. Add a column named Base salary with a datatype of NUMBER(7,2) to the STORE_REPS table. Ensure that the amount entered is above zero.

Coding:

```
ALTER TABLE store_reps
ADD base_salary NUMBER(7,2)
ADD (CONSTRAINT base_salary_ck CHECK (base_salary > 0));
```

Object Type **TABLE** Object **STORE_REPS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STORE_REPS	REP_ID	NUMBER	-	5	0	1	-	-	-
	LAST	VARCHAR2	15	-	-	-	-	-	-
	FIRST	VARCHAR2	10	-	-	-	-	-	-
	COMM	CHAR	1	-	-	-	✓	'Y'	-
	BASE_SALARY	NUMBER	-	7	2	-	✓	-	-

1 - 5

5. Create a table named BOOK_STORES to include the columns listed in the following chart:

Column Name	Data Type	Constraint Comments
Store_ID	NUMBER(8)	PRIMARY KEY column
Name	VARCHAR2(30	Should be UNIQUE and NOT NULL
Contact	VARCHAR2(30)	
Rep_ID	VARCHAR2(5)	

Coding:

```
CREATE TABLE book_stores
(store_id NUMBER(8),
CONSTRAINT store_id_pk PRIMARY KEY (store_id),
name VARCHAR2(30),
CONSTRAINT name_uk UNIQUE (name),
contact VARCHAR2(30),
rep_id VARCHAR2(5));
```

Object Type TABLE Object BOOK_STORES

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BOOK_STORES	STORE_ID	NUMBER	-	8	0	1	-	-	-
	NAME	VARCHAR2	30	-	-	-	✓	-	-
	CONTACT	VARCHAR2	30	-	-	-	✓	-	-
	REP_ID	VARCHAR2	5	-	-	-	✓	-	-

1 - 4

6. Add a constraint to make sure the Rep_ID value entered in the BOOK_STORES table is a valid value contained in the STORE_REPS table. The Rep_ID columns of both tables were initially created as different datatypes. Does this cause an error when adding constraint? Make table modifications as needed so that you can add the required constraint.

Coding:

```
ALTER TABLE BOOK_STORES

ADD CONSTRAINT FOREIGN KEY (REP_ID)

REFERENCES (STORE_REPS);
```

Yes. Because the datatype of Rep ID value for the Store_reps table is Number and for the Book_Stores table is Varchar2

Coding:

```
ALTER TABLE BOOK_STORES

ADD CONSTRAINT FOREIGN KEY (REP_ID)

REFERENCES STORE_REPS (REP_ID);
```

PART 2: In this part, you first need to run JLDB_Build_8.sql script to ensure that all necessary tables and constraints are available. For each of the question in this part, construct and execute the SQL statement:

1. Add a new row in the ORDERS table with the following data: Order# = 1021, Customer# = 1009, and Order date = July 20, 2009.

Coding:

```
INSERT INTO ORDERS
(ORDER#,CUSTOMER#, ORDERDATE)
VALUES (1021, 1009, DATE '2009-07-20');
```

Output:

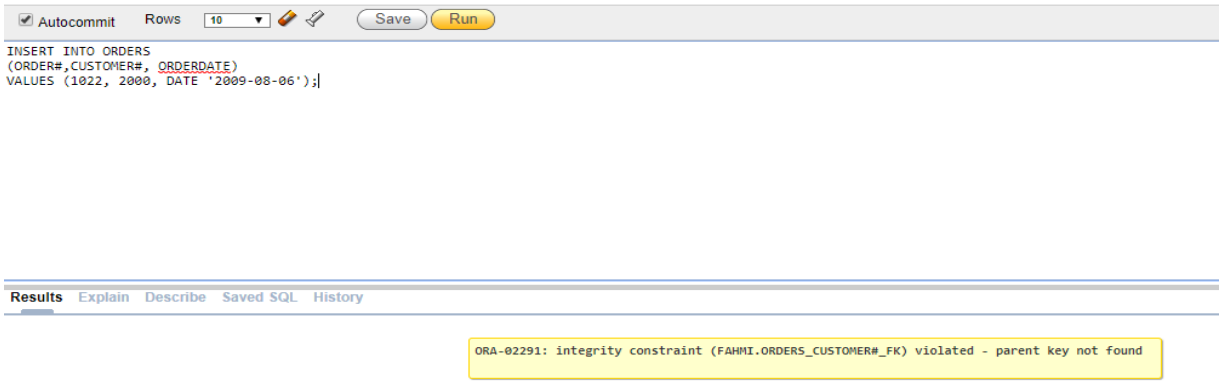
Columns | Data | Model | Constraints | Grants | Statistics | Triggers | Flashback | Dependencies | Details | Partitions | Indexes | SQL

Sort.. | Filter: | Actions...

	ORDER#	CUSTOMER#	ORDERDATE	SHIPDATE	SHIPSTREET	SHIPCITY	SHIPSTATE	SHIPZIP	SHIPCOST
2	1001	1010	31/03/2009	01/04/2009	114 EAST SAVANNAH	ATLANTA	GA	30314	3
3	1002	1011	31/03/2009	01/04/2009	58 TILA CIRCLE	CHICAGO	IL	60605	3
4	1003	1001	01/04/2009	01/04/2009	958 MAGNOLIA LANE	EASTPOINT	FL	32328	4
5	1004	1020	01/04/2009	05/04/2009	561 ROUNDABOUT WAY	TRENTON	NJ	08601	(null)
6	1005	1018	01/04/2009	02/04/2009	1008 GRAND AVENUE	MACON	GA	31206	2
7	1006	1003	01/04/2009	02/04/2009	558A CAPITOL HWY.	TALLAHASSEE	FL	32307	2
8	1007	1007	02/04/2009	04/04/2009	9153 MAIN STREET	AUSTIN	TX	78710	7
9	1008	1004	02/04/2009	03/04/2009	69821 SOUTH AVENUE	BOISE	ID	83707	3
10	1009	1005	03/04/2009	05/04/2009	9 LIGHTENING RD.	SEATTLE	WA	98110	(null)
11	1010	1019	03/04/2009	04/04/2009	384 WRONG WAY HOME	MORRISTOWN	NJ	07960	2
12	1011	1010	03/04/2009	05/04/2009	102 WEST LAFAYETTE	ATLANTA	GA	30311	2
13	1012	1017	03/04/2009	(null)	1295 WINDY AVENUE	KALMAZOO	MI	49002	6
14	1013	1014	03/04/2009	04/04/2009	7618 MOUNTAIN RD.	CODY	WY	82414	2
15	1014	1007	04/04/2009	05/04/2009	9153 MAIN STREET	AUSTIN	TX	78710	3
16	1015	1020	04/04/2009	(null)	557 GLITTER ST.	TRENTON	NJ	08606	2
17	1016	1003	04/04/2009	(null)	9901 SEMINOLE WAY	TALLAHASSEE	FL	32307	2
18	1017	1015	04/04/2009	05/04/2009	887 HOT ASPHALT ST	MIAMI	FL	33112	3
19	1018	1001	05/04/2009	(null)	95812 HIGHWAY 98	EASTPOINT	FL	32328	(null)
20	1019	1018	05/04/2009	(null)	1008 GRAND AVENUE	MACON	GA	31206	2
21	1020	1008	05/04/2009	(null)	195 JAMISON LANE	CHEYENNE	WY	82003	2
22	1021	1009	20/07/2009	(null)	(null)	(null)	(null)	(null)	(null)

2. Add a new row in the ORDERS table with the following data: Order# = 1022, Customer# = 2000, and Order date = August 6, 2009. Describe the error raised and what caused the error.

Output:



Because the data didn't find the foreign key and the primary key.

3. Which books aren't in the Fitness category? List each book title and category.

Coding:

```
SELECT
TITLE, CATEGORY
FROM
BOOKS
WHERE
CATEGORY != 'FITNESS';
```

Output:

TITLE	CATEGORY
REVENGE OF MICKEY	FAMILY LIFE
BUILDING A CAR WITH TOOTHPICKS	CHILDREN
DATABASE IMPLEMENTATION	COMPUTER
COOKING WITH MUSHROOMS	COOKING
HOLY GRAIL OF ORACLE	COMPUTER
HANDCRANKED COMPUTERS	COMPUTER
E-BUSINESS THE EASY WAY	COMPUTER
PAINLESS CHILD-REARING	FAMILY LIFE
THE WOK WAY TO COOK	COOKING
BIG BEAR AND LITTLE DOVE	CHILDREN
More than 10 rows available. Increase rows selector to view more rows.	

10 rows returned in 0.01 seconds Download

4. Which customers live in Georgia or New Jersey? Put the results in ascending order by last name. List each customer's customer number, last name, and state.

Coding:

```
SELECT
CUSTOMER#, LASTNAME, STATE
FROM
CUSTOMERS
WHERE
STATE = 'NJ' OR STATE = 'GA'
ORDER BY
LASTNAME ASC;
```

Output:

Results Explain Describe Saved SQL History

CUSTOMER#	LASTNAME	STATE
1020	FALAH	NJ
1010	LUCAS	GA
1018	MONTIASA	GA
1019	SMITH	NJ

4 rows returned in 0.01 seconds Download

5. Which orders were placed on or before April 1, 2009? List each order number and order date.

Coding:

```
SELECT ORDER#, ORDERDATE
FROM
ORDERS
WHERE
SHIPDATE <= DATE'2009-04-01';
```

Output:

ORDER#	ORDERDATE
1001	03/31/2009
1002	03/31/2009
1003	04/01/2009

3 rows returned in 0.00 seconds Download

6. List all authors whose last name contains the letter pattern "IN." Put the results in order of last name, then first name. List each author's last name and first name.

Coding:

```
SELECT
LNAME, FNAME
FROM
AUTHOR
WHERE
LNAME LIKE '%IN%'
ORDER BY LNAME, FNAME;
```

Output:

LNAME	FNAME
AUSTIN	JAMES
MARTINEZ	SHEILA
ROBINSON	ROBERT
WILKINSON	ANTHONY

4 rows returned in 0.00 seconds Download

7. A customer service representative is trying to identify all books in the Computer or Family Life category and published by Publisher 1 or Publisher 3. However, the results shouldn't include any book selling for less than $45.00.

Coding:

```
SELECT
TITLE
FROM
BOOKS
WHERE
CATEGORY = 'COMPUTER' OR CATEGORY = 'FAMILY LIFE'
AND PUBID = 1 OR PUBID = 3
AND COST > 45.00;
```

Output:

Results Explain Describe Saved SQL History

TITLE
REVENGE OF MICKEY
DATABASE IMPLEMENTATION
HOLY GRAIL OF ORACLE
HANDCRANKED COMPUTERS
E-BUSINESS THE EASY WAY

5 rows returned in 0.00 seconds Download