Rifat Hossain

Student ID: 7366

CSCI 331 Database Systems

05-21-18

Homework 3

Queens College

Database Creation:

CREATE TABLE CUSTOMER(

CID NUMBER(4,0) PRIMARY KEY,

CFIRST VARCHAR(20) NOT NULL,

CLAST VARCHAR(20) NOT NULL,

CNUMBER CHAR(12) NOT NULL,

CEMAIL VARCHAR(40) NOT NULL,

CSTREET VARCHAR(60) NOT NULL,

CCITY VARCHAR(20) NOT NULL,

CSTATE VARCHAR(2) NOT NULL,

CZIP NUMBER(5) NOT NULL

);

CREATE TABLE STORE(

STOREID NUMBER(4,0) PRIMARY K

STOREID NUMBER (4,0) PRIMARY KEY,
STORENUMBER CHAR (12) NOT NULL,
STORESTREET VARCHAR (60) NOT NULL,
STORECITY VARCHAR (20) NOT NULL,
STORESTATE VARCHAR (2) NOT NULL,
STOREZIP NUMBER (5) NOT NULL

CREATE TABLE STAFF (

);

STAFFID NUMBER(4,0) PRIMARY KEY,

STAFFIRST VARCHAR(20) NOT NULL,

STAFFLAST VARCHAR(20) NOT NULL,

STAFFNUMBER CHAR(12) NOT NULL,

STAFFEMAIL VARCHAR(40) NOT NULL,

STAFFSTREET VARCHAR(60) NOT NULL,

STAFFSTATE VARCHAR(20) NOT NULL,

STAFFSTATE VARCHAR(2) NOT NULL,

STAFFSTATE VARCHAR(2) NOT NULL,

STAFFZIP NUMBER(5) NOT NULL,

```
FOREIGN KEY (STOREID) REFERENCES STORE (STOREID)
 );
 CREATE TABLE PRODUCT (
      PID NUMBER (4,0) PRIMARY KEY,
      PNAME VARCHAR (20) NOT NULL
);
 CREATE TABLE PPRICE (
      PRICEID NUMBER (4, 0) PRIMARY KEY,
      STOREID NUMBER (4) NOT NULL,
      FOREIGN KEY (STOREID) REFERENCES STORE (STOREID),
      PID NUMBER(4) NOT NULL,
      FOREIGN KEY (PID) REFERENCES PRODUCT(PID),
      PRICE NUMBER (7,2) NOT NULL
 );
 CREATE TABLE TRANSACTION (
      TID NUMBER (4,0) PRIMARY KEY,
      CID NUMBER (4,0) NOT NULL,
      STOREID NUMBER (4,0) NOT NULL,
      STAFFID NUMBER (4,0) NOT NULL,
      PID NUMBER (4,0) NOT NULL,
      TDATE DATE NOT NULL,
      FOREIGN KEY (STAFFID) REFERENCES STAFF(STAFFID),
      FOREIGN KEY (STOREID) REFERENCES STORE (STOREID),
      FOREIGN KEY(CID) REFERENCES CUSTOMER(CID),
      FOREIGN KEY (PID) REFERENCES PRODUCT (PID)
 );
```

RifatHossain Homework 2

CSCI 331- Database Systems

Sequence Creation:

```
CREATE SEQUENCE DRUGS

START WITH 1

INCREMENT BY 1;

CREATE SEQUENCE TRANS

START WITH 1

INCREMENT BY 1;

Inserting Data into Database:

INSERT INTO CUSTOMER(CID, CFIRST, CLAST, CNUMBER, CEMAIL, CSTREET, CCITY, CSTATE, CZIP)

VALUES

(1, 'JAMES', 'SMITH', '845-590-9481', 'JOHNSMITH12@YAHOO.COM', '85 SE. PENN CIRCLE', 'BRONX', 'NY', 10465);
```

INSERT INTO STORE(STOREID, STORENUMBER, STORESTREET, STORECITY, STORESTATE,

777 T TTE C

STOREZIP)

```
(1, '718-696-1958' ,'3215 BAINBRIDGE AVE', 'BRONX', 'NY', 10467);
```

INSERT INTO STAFF(STAFFID, STAFFFIRST, STAFFLAST, STAFFNUMBER, STAFFEMAIL, STAFFSTREET, STAFFCITY, STAFFSTATE, STAFFZIP, STOREID)

VALUES

(1, 'AMY', 'RIOS', '646-888-4215', 'RIOS3716@HOTMAIL.COM', '173 CHAPEL ST', 'FLUSHING', 'NY', 11354, 1);

INSERT INTO PRODUCT(PID, PNAME)

VALUES

(DRUGS.NEXTVAL, 'DIETHYL ETHER');

INSERT INTO PPRICE (PRICEID, STOREID, PID, PRICE)

VALUES

(1, 1, 1, 1.99);

INSERT INTO TRANSACTION(TID, CID, STOREID, STAFFID, PID, TDATE)
VALUES

(TRANS.NEXTVAL, 1, 1, 1, 3, '01/17/2018');

Data:

At least 5 customer:

SELECT * FROM CUSTOMER

CID	CFIRST	CLAST	CNUMBER	CEMAIL	CSTREET	ССІТҮ	CSTATE	CZIP
1	JAMES	SMITH	845-590-9481	JOHNSMITH12@YAHOO.COM	85 SE. PENN CIRCLE	BRONX	NY	10465
2	WILBERT	TRACY	615-560-2742	WILBERTTRACY33@GMAIL.COM	616 ASPEN CIRCLE	ASTORIA	NY	11106
3	SHANE	RUFFIN	919-929-5085	SHANERUFFIN@YAHOO.COM	377 1ST AVE	BROOKLYN	NY	11223
4	SHAWN	HANSEN	347-175-8887	SHAWN32@GMAIL.COM	9789 NORTH YORK	EAST ELMHURST	NY	11370
5	JUAN	GONZALEZ	718-548-7771	GONZALEZ91@YAHOO.COM	17 NEWPORT ST	FLUSHING	NY	11355

At least 2 purchases for each customer:

select * from transaction

order by cid

TID	CID	STOREID	STAFFID	PID	TDATE
1	1	1	1	3	01/17/2018
2	1	1	2	7	04/21/2018
3	2	1	2	10	05/19/2018
4	2	1	2	4	03/27/2018
5	3	1	1	10	11/10/2017
6	3	2	3	1	03/15/2018
7	4	2	4	2	05/17/2018
8	4	2	5	8	05/19/2018
9	5	2	3	6	02/14/2018
10	5	2	5	9	04/20/2018

At least 10 drugs:

select * from product

PID	PNAME
1	DIETHYL ETHER
2	DEXTROMETHORPHAN
3	DOXYLAMINE
4	TRAMADOL
5	ACETAMINOPHEN
6	KRATOM
7	DIPHENHYDRAMINE
8	DIMENHYDRINATE
9	PROPYLHEXEDRINE
10	LORATADINE

At lease 2 stores:

select * from store

STOREID	STORENUMBER	STORESTREET	STORECITY	STORESTATE	STOREZIP
1	718-696-1958	3215 BAINBRIDGE AVE	BRONX	NY	10467
2	718-361-6014	4108 QUEENS BLVD	SUNNYSIDE	NY	11104

Query:

1. Increase the price of "<u>Tramadol</u>" by10% for only stores in the <u>Bronx</u>. Identify the SQL required to implement. Display the price before and after the price increase.

Price of Tramadol before 10% increase:

```
PNAME
                 STOREID PRICE
 PID
      TRAMADOL
                          $2.25
 4
UPDATE PPRICE
SET PRICE = PRICE * 1.10
WHERE
     STOREID = (SELECT STOREID FROM STORE WHERE STORECITY = 'BRONX')
AND
     PID = (SELECT PID FROM PRODUCT WHERE PNAME = 'TRAMADOL')
 PID
       PNAME
                 STOREID PRICE
      TRAMADOL
                          $2.48
```

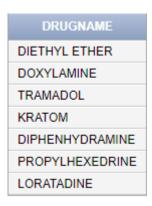
2. Identify drugs that have not been purchased this <u>week</u>. Display the drug name. Use a nested select to answer this question.

```
SELECT PRODUCT.PNAME DRUGNAME FROM

PRODUCT, TRANSACTION

WHERE PRODUCT.PID = TRANSACTION.PID

AND TRANSACTION.TDATE NOT BETWEEN '05/14/2018' AND '05/21/2018' SELECT
```



3. Reassign employee <u>Amy Rios</u> from the <u>Bronx</u> store to the <u>Sunnyside</u> store. Identify the SQL required to implement.



4. The drug 'Katom' will no longer be sold at any store. Identify the SQL required to implement.

PID	PNAME
1	DIETHYL ETHER
2	DEXTROMETHORPHAN
3	DOXYLAMINE
4	TRAMADOL
5	ACETAMINOPHEN
6	KRATOM
7	DIPHENHYDRAMINE
8	DIMENHYDRINATE
9	PROPYLHEXEDRINE
10	LORATADINE

```
DELETE FROM TRANSACTION

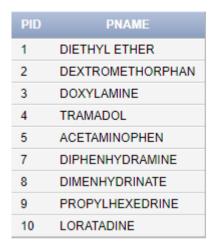
WHERE PID = (SELECT PID FROM PRODUCT WHERE PNAME = 'KRATOM')

DELETE FROM PPRICE

WHERE PID = (SELECT PID FROM PRODUCT WHERE PNAME = 'KRATOM')

DELETE FROM PRODUCT

WHERE PNAME = 'KRATOM'
```

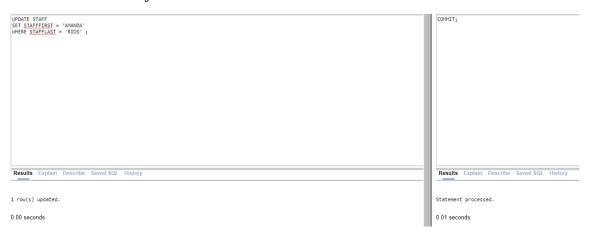


5. In one SQL window, change the address of CVS employee <u>'Amy Rios'</u>. Don't commit. In another SQL window, change the first name for CVS employee Joe Smith. Don't commit. Explain your results. Resolve the problem. Disable the auto commit flag at the top of the window before performing this operation.

The SQL server is in deadlock and it cannot progress any further. Both instances are trying to go inside and change the at once and thus causing deadlock and making the browser crash.



The lock is released once we Commit or Rollback. These commands basically tells the other instance that it is done doing its job and therefore releases the lock so others can obtain it and do their job.



- 6. In one SQL window, delete all products. Don't commit. In another SQL window increase the price of all products by 15%. Explain your results. Resolve the problem.
 - Since to delete all the products I have to delete all the child product instances if I do it concurrently it works. Since I'am not changing the same table I am allowed to update the price however for me to delete all the products I have to delete the instances of each product to be successful.
- 7. In one SQL window, change the salary for employee <u>Alex Charles</u>. Don't commit. In another SQL window, change the last name of employee <u>Alex Charles</u>. Don't commit. Quit both Oracle sessions. Login to Oracle and display all information for the employee <u>Alex Charles</u>. Explain your results. Disable the auto commit flag at the top of the windows before performing this operation.

```
alter table staff
add salary number(7,2)
UPDATE STAFF
SET SALARY = 50000
WHERE STAFFFIRST = 'ALEX'
AND STAFFLAST = 'CHARLES'
```

STAFFID	STAFFFIRST	STAFFLAST	STAFFNUMBER	STAFFEMAIL	STAFFSTREET	STAFFCITY	STAFFSTATE	STAFFZIP	STOREID	SALARY
2	ALEX	CHARLES	646-547-5587	ALEXC@YAHOO.COM	21 2ND AVE	NEW YORK	NY	10034	1	50000
STAFFID	STAFFFIRST	STAFFLAST	STAFFNUMBER	STAFFEMAIL	STAFFSTREET	STAFFCITY	STAFFSTATE	STAFFZIP	STOREID	SALARY

After doing the above commands nothing has changed. This is because we did not commit our changes to the database therefore the changes that we made didn't save. Also not both commands worked. Whichever query was run first was the command that went through while the other crashed from busy wait.

8.

Customer:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CUSTOMER	CID	NUMBER	-	4	0	1	-	-	-
	CFIRST	VARCHAR2	20	-	-	-	-	-	-
	CLAST	VARCHAR2	20	-	-	-	-	-	-
	CNUMBER	CHAR	12	-	-	-	-	-	-
	CEMAIL	VARCHAR2	40	-	-	-	-	-	-
	CSTREET	VARCHAR2	60	-	-	-	-	-	-
	CCITY	VARCHAR2	20	-	-	-	-	-	-
	<u>CSTATE</u>	VARCHAR2	2	-	-	-	-	-	-
	CZIP	NUMBER	-	5	0	-	-	-	-
								1-	- 9

Store:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STORE	STOREID	NUMBER	-	4	0	1	-	-	-
	STORENUMBER	CHAR	12	-	-	-	-	-	-
	STORESTREET	VARCHAR2	60	-	-	-	-	-	-
	STORECITY	VARCHAR2	20	-	-	-	-	-	-
	STORESTATE	VARCHAR2	2	-	-	-	-	-	-
	STOREZIP	NUMBER	-	5	0	-	-	-	-
								1	- 6

Staff:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STAFF	STAFFID	NUMBER	-	4	0	1	-	-	-
	STAFFFIRST	VARCHAR2	20	-	-	-	-	-	-
	<u>STAFFLAST</u>	VARCHAR2	20	-	-	-	-	-	-
	STAFFNUMBER	CHAR	12	-	-	-	-	-	-
	STAFFEMAIL	VARCHAR2	40	-	-	-	-	-	-
	STAFFSTREET	VARCHAR2	60	-	-	-	-	-	-
	STAFFCITY	VARCHAR2	20	-	-	-	-	-	-
	STAFFSTATE	VARCHAR2	2	-	-	-	-	-	-
	STAFFZIP	NUMBER	-	5	0	-	-	-	-
	STOREID	NUMBER	-	4	0	-	-	-	-
	SALARY	NUMBER	-	7	2	-	~	-	-
								1-	11

Product:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PRODUCT	PID	NUMBER	-	4	0	1	-	-	-
	PNAME	VARCHAR2	20	-	-	-	-	-	-
								1-	- 2

Price:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PPRICE	PRICEID	NUMBER	-	4	0	1	-	-	-
	STOREID	NUMBER	-	4	0	-	-	-	-
	PID	NUMBER	-	4	0	-	-	-	-
	PRICE	NUMBER	-	7	2	-	-	-	-
								1	- 4

Transaction:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
TRANSACTION	TID	NUMBER	-	4	0	1	-	-	-
	CID	NUMBER	-	4	0	-	-	-	-
	STOREID	NUMBER	-	4	0	-	-	-	-
	STAFFID	NUMBER	-	4	0	-	-	-	-
	PID	NUMBER	-	4	0	-	-	-	-
	TDATE	DATE	7	-	-	-	-	-	-
								1	- 6

9.

PRODUCT	VERSION	STATUS
NLSRTL	11.2.0.2.0	Production
Oracle Database 11g Express Edition	11.2.0.2.0	64bit Production
PL/SQL	11.2.0.2.0	Production
TNS for 64-bit Windows:	11.2.0.2.0	Production