Assignment – 18 Maintaining the Integrity of your Data.

1) Create a table called Cityorders. This will contain the same onum, amt and snum fields as the Orders table, and the same cnum and city fields as the Customers table, so that each customer's order will be entered into this table along with his or her city. Onum will be the primary key of Cityorders. All of the fields in Cityorders will be constrained to match the Customers and Orders tables. Assume the parent keys in these tables already have the proper constraints.

```
KD1-89282-Om>CREATE TABLE Cityorders (
    -> Onum INT PRIMARY KEY,
    -> Amt FLOAT(7,2),
    -> Snum INT,
    -> Cnum INT,
    ->  City VARCHAR(10),
    ->  FOREIGN KEY (Cnum) REFERENCES Customers(Cnum),
    -> FOREIGN KEY (Snum) REFERENCES Salespeople(Snum));
Query OK, 0 rows affected, 1 warning (0.10 sec)

KD1-89282-Om>desc cityorders
    -> ;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| Onum  | int         | NO   | PRI | NULL    |       |
| Amt   | float(7,2)  | YES  |     | NULL    |       |
| Snum  | int         | YES  | MUL | NULL    |       |
| Cnum  | int         | YES  | MUL | NULL    |       |
| City  | varchar(10) | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
5 rows in set (0.01 sec)
```

2) Redefine the Orders table as follows:- add a new column called prev, which will identify, for each order, the onum of the previous order for that current customer. Implement this with a foreign key referring to the Orders table itself. The foreign key should refer as well to the cnum of the customer, providing a definite enforced link between the current order and the one referenced.

```
KD1-89282-Om>ALTER TABLE ORDERS
    -> DROP COLUMN PREV;
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

KD1-89282-Om>ALTER TABLE ORDERS ADD COLUMN PREV INT;
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

KD1-89282-Om>ALTER TABLE ORDERS ADD PRIMARY KEY(ONUM);
Query OK, 0 rows affected (0.21 sec)
Records: 0  Duplicates: 0  Warnings: 0

KD1-89282-Om>ALTER TABLE ORDERS ADD UNIQUE(ONUM, CNUM);
Query OK, 0 rows affected (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 0

KD1-89282-Om>ALTER TABLE ORDERS
    -> ADD CONSTRAINT FOREIGN KEY (PREV, CNUM)
    -> REFERENCES ORDERS(ONUM, CNUM)
    -> ON DELETE SET NULL ON UPDATE CASCADE;
Query OK, 10 rows affected (0.17 sec)
Records: 10  Duplicates: 0  Warnings: 0
```