

5. Write a query to insert values in a specific table of your choice in which one of the column has unique constraints and if one tries to insert data which is duplicate based on the column having unique constrain then the value gets updated

```
mysql> create table books (Book_id int primary key,
                                Book_name varchar(45) not null UNIQUE,
                                Price int,
                                Quantity int);
```

	Book_id	Book_name	Price	Quantity
▶	101	Tiny Habits	125	74
	102	Friendly JAVA	195	86
	103	Thinking in JAVA	250	100
	104	Effective JAVA	325	139
	106	CORE JAVA	256	50
*	107	Head First JAVA	300	60
	NULL	NULL	NULL	NULL

```
mysql> insert into school.books(Book_id,Book_name,Price,Quantity)
Values (108,'Head First JAVA',400,85)
ON duplicate key update Book_name = 'Java: A Beginner's Guide';
```

	Book_id	Book_name	Price	Quantity
▶	101	Tiny Habits	125	74
	102	Friendly JAVA	195	86
	103	Thinking in JAVA	250	100
	104	Effective JAVA	325	139
	106	CORE JAVA	256	50
	107	Java: A Beginner's Guide	300	60
*	108	Head First JAVA	400	85
	NULL	NULL	NULL	NULL

## 7. DEADLOCK

Created two users “user1” and “user2” for a database “school”

```
mysql> create table books (Book_id int primary key, Book_name varchar(45), Price
int,Quantity int);
```

```
mysql>begin;
```

```
mysql>set autocommit = off;
```

- Mysql -u user1 -p

```
mysql> update books set Price = Price+5 where Book_id = 101;
Query OK, 1 row affected (0.05 sec)
```

Rows matched:1 Changed: 1 Warnings:0

- **Mysql -u user2 -p**

```
mysql> update books set Quantity = Quantity+10 where Book_id = 102;
Query OK, 1 row affected (0.05 sec)
Rows matched:1 Changed: 1 Warnings:0
```

- **Mysql -u user2 -p**

```
mysql> update books set Quantity=Quantity+10 where Book_id=101;
Query OK, 1 row affected (16.33 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

- **Mysql -u user1 -p**

```
mysql> update books set Price=Price+5 where Book_id=102;
ERROR 1213 (40001): Deadlock found when trying to get lock; try restarting transaction
```

The screenshot shows two separate Command Prompt windows running on a Windows operating system. Both windows are titled "Command Prompt - mysql -u user1 -p" and "Command Prompt - mysql -u user2 -p".

**User1 Session (Left Window):**

- use school; Database changed
- begin;
- Query OK, 0 rows affected (0.00 sec)
- set autocommit = off; Query OK, 0 rows affected (0.00 sec)
- select \* from books;  
+----+-----+-----+-----+
| Book\_id | Book\_name | Price | Quantity |
+----+-----+-----+-----+
| 101 | Tiny Habits | 125 | 74 |
| 102 | Head First JAVA | 195 | 86 |
| 103 | Thinking in JAVA | 250 | 100 |
| 104 | Effective JAVA | 325 | 139 |
+----+-----+-----+-----+
4 rows in set (0.04 sec)
- update books set Price = Price + 5 where Book\_id = 101; Query OK, 1 row affected (0.05 sec)  
Rows matched: 1 Changed: 1 Warnings: 0
- update books set Price = Price + 5 where Book\_id = 102; ERROR 1213 (40001): Deadlock found when trying to get lock; try restarting transaction  
mysql> -

**User2 Session (Right Window):**

- use school; Database changed
- begin;
- Query OK, 0 rows affected (0.00 sec)
- set autocommit = off; Query OK, 0 rows affected (0.00 sec)
- select \* from books;  
+----+-----+-----+-----+
| Book\_id | Book\_name | Price | Quantity |
+----+-----+-----+-----+
| 101 | Tiny Habits | 125 | 74 |
| 102 | Head First JAVA | 195 | 86 |
| 103 | Thinking in JAVA | 250 | 100 |
| 104 | Effective JAVA | 325 | 139 |
+----+-----+-----+-----+
4 rows in set (0.00 sec)
- update books set Quantity=Quantiy+10 where Book\_id=102; ERROR 1054 (42S22): Unknown column 'Quantiy' in 'field list'  
mysql> update books set Quantity=Quantity+10 where Book\_id=102; Query OK, 1 row affected (0.03 sec)  
Rows matched: 1 Changed: 1 Warnings: 0
- update books set Quantity=Quantity+10 where Book\_id=101; Query OK, 1 row affected (6.93 sec)  
Rows matched: 1 Changed: 1 Warnings: 0
- mysql>