

# Modifying Data with SQL Part 4 Notes

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## 1 Intro to Transactions

- Transaction
  - **Syntax:** BEGIN TRANSACTION; or BEGIN;
    - \* Turns off autocommit and begins a transaction
  - **Syntax:** COMMIT;
    - \* Saves all results of the statements at the beginning of transaction to disk
  - Makes a batch of process atomic
    - \* All are processed before being committed
    - \* If power loss occurs during processing, no data is saved to database

## 2 Rolling Back from Transactions

- **Syntax:** ROLLBACK;
  - Resets the state of database to before the beginning of transaction
  - Is useful when an error / power outage occurs in the middle of transaction
  - Or spelling mistakes

### 3 Quiz 1

1. Which of these is the correct way to start a transaction?

- A. TRANSACTION BEGIN;
- B. BEGIN;
- C. START;

**Answer: B**

2. The BEGIN; or the BEGIN TRANSACTION; statement does what?

- A. Reverses any changes since the before the statement.
- B. Turns autocommit mode on.
- C. Turns autocommit mode off.

**Answer: C**

3. What following statement reverts changes since a transaction began

- A. UNDO;
- B. COMMIT;
- C. REVERT;
- D. ROLLBACK;

**Answer: D**

4. If my computer crashed in the middle of a transaction, what state would my database be in?

- A. It would have some of my statements persisted.
- B. It would be in the same state before the transaction.

**Answer: B**

5. What does the COMMIT; statement do?

- A. Reverts any changes.
- B. Turns autocommit mode off;
- C. Commits all changes since the transaction began and turns autocommit mode on.

**Answer:** B

## 4 Databases with Frameworks

### 5 Quiz 1

1. What is a transaction?

- A. Performing a really complex INSERT statement on one line.
- B. A safe way to perform multiple statements in one single go.

**Answer:** B

2. Please fill in the correct answer in each blank provided below.

What is the keyword used to create rows in a database table? \_\_\_

**Answer:** INSERT

3. Please fill in the correct answer in each blank provided below.

What keyword is used to update values in a database table? \_\_\_

**Answer:** UPDATE

4. If you want to update or delete specific rows in a table, what keyword will you have to use?

- A. LIKE
- B. IN
- C. WHERE
- D. IS

**Answer: C**

5. What does an ORM do?

- A. Validates your SQL code to see if there are any syntax errors.
- B. Stores a complete history of your database so you can rollback to any point.
- C. Provides a convenient way for developers to perform CRUD operations in their language of choice.

**Answer: C**

6. What's wrong with this create statement?

```
1  INSERT cars VALUES (NULL, "Fiat", "Fiat Punto");  
2
```

- A. It's missing a column name.
- B. It's missing a keyword.
- C. Nothing. It's valid syntax.
- D. It's missing a table name.

**Answer: B**

7. Please fill in the correct answer in each blank provided below.

What is the keyword used to read from a database? \_\_\_

**Answer: SELECT**

8. What's wrong with this create statement?

```
1  UPDATE SET first_name = "Andrew" WHERE last_name = "Chalkley";  
2
```

- A. It's missing a keyword.
- B. Nothing. This is valid syntax.
- C. It's missing a table name.
- D. It's missing a column name.

**Answer: C**

9. Please fill in the correct answer in each blank provided below.

What keyword is used to delete rows from a database table? \_\_\_

**Answer:** DELETE

10. What's wrong with this create statement?

```
1  DELETE * FROM sports_teams;  
2
```

- A. It's missing a keyword.
- B. Nothing. It's valid syntax.
- C. It's missing a column name.
- D. It doesn't need an asterisk (\*).

**Answer:** D