

Python: SQL DDL

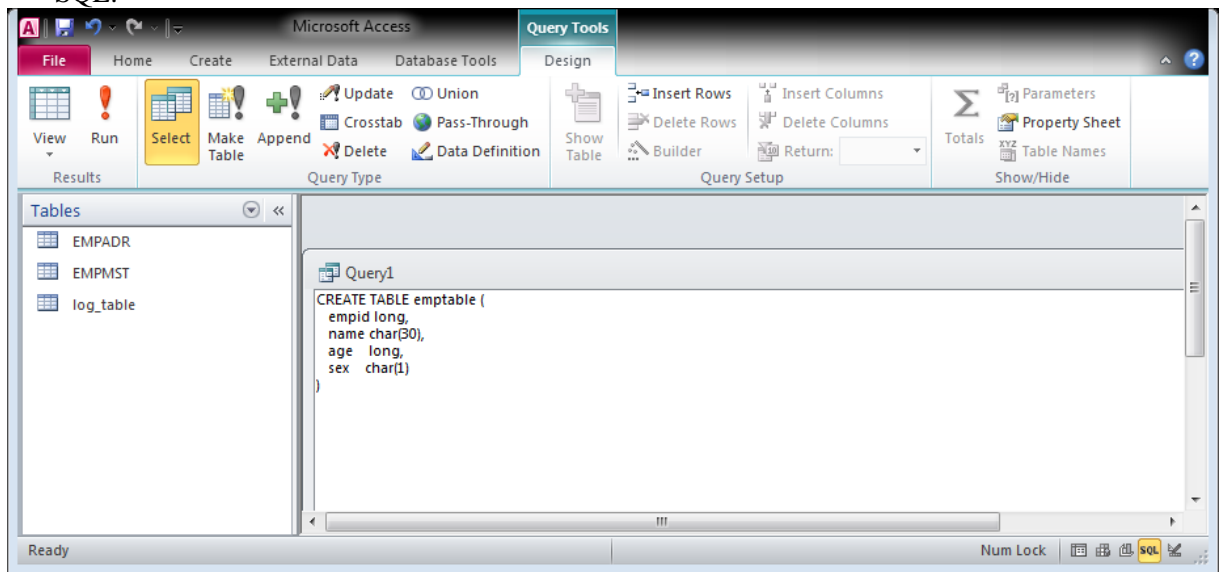
Data Manipulation Language (DML) and Data Definition Language (DDL) Workshop:

SELECT Statement Summary Review:

SELECT (<i>fields or *</i>)	Required
FROM <i>library.table</i>	Required
WHERE	Optional
ORDER BY	Optional
GROUP BY	Optional
HAVING	Optional

Note: To write and execute SQL statements in MS Access 2010 follow these directions:

1. Click on the **Create** tab.
2. Click on **Query Design** icon.
3. You will be prompted with the Show Table dialog box. Click Close.
4. Click on **View** and choose **SQL View**
5. Enter the SQL code into the SQL dialog box and click on the red exclamation mark to run the SQL.



(1) How to create a table using SQL (DDL):

```
CREATE TABLE emptable (
  empid long,
  name char(30),
  age long,
  sex char(1)
)
```

(2) How to create an index using SQL (DDL):

```
CREATE INDEX idx_emp ON emptable(empid)
```

(3) How to INSERT rows into a table (DML):

Method 1: Proper syntax (note the field count and types must match on the INTO and Values clauses):

```
INSERT INTO emptable(empid, name, age, sex)
VALUES(12345, 'Brian Candido', 29, 'M')
```

Method 2: Non-positional syntax (note the field count and types must match on the INTO and Values clauses):

```
INSERT INTO emptable(sex, age, name, empid)
VALUES('M', 35, 'Kevin Tyrrell', 44721)
```

Method 3: Specific columns (note the field count and types must match on the INTO and Values clauses):

```
INSERT INTO emptable
VALUES(88315, 'Zoe Candido', 21, 'F')
```

Method 4: Insert with sub-select

```
CREATE TABLE emptable2 (
  empid long,
  name char(30),
  age long,
  sex char(1)
)
```

Note: The field count and types must match on the INTO and Values clauses):

All columns:

```
INSERT INTO emptable2
SELECT * FROM emptable
WHERE sex = 'M'
```

Specific columns:

```
INSERT INTO emptable2(name, sex, age)
SELECT name, sex, age FROM emptable
WHERE sex = 'F'
```

(4) How to handle NULL values:

```
SELECT * FROM emptable2  
WHERE empid = 0
```

Why didn't Zoe Candido show up? Now try:

```
SELECT * FROM emptable2  
WHERE empid is null
```

```
SELECT * FROM emptable2  
WHERE empid is not null
```

(5) How to UPDATE rows and column values (DML):

Single column update:

```
UPDATE emptable2 SET empid = 61991  
WHERE empid is null
```

Multiple column update (separate with a comma):

```
UPDATE emptable2 SET empid = 61991, name = 'Zoe R.. Candido'  
WHERE empid is null
```

(6) How to DELETE rows values (DML):

```
DELETE FROM emptable2  
WHERE empid = 44721
```