SQL DDL DML

DDL – Data Definition Language -- Modify Database Structures

```
Create
Alter
Drop
```

DML – Data Manipulation Language -- Modify data values

```
Insert
Update
Delete
Truncate
```

SQL Alter

ALTER allows you to change many different characteristics of database structures (such as tables, columns, views)

You can ALTER a TABLE:

RENAME the table

RENAME a column

RENAME a constraint

SQL Alter

You can ALTER a TABLE:

    ADD or DROP a column

    ADD or DROP a constraint

You can ALTER a COLUMN:

    SET or DROP a default

    SET a DATA_TYPE

SQL Alter

Let's practice some ALTER commands

1. Rename a table

2. Rename a column

3. Add a column

4. Populate that column with values

5. Change a column's data type

6. Look at it...

7. DROP a column

SQL Alter

First, let's create and populate a table:

```
DROP TABLE IF EXISTS "alanparadise/nw"."items";
CREATE TABLE "alanparadise/nw"."items"
   (
      itemID      INT          NOT NULL ,
      itemcode    VARCHAR(5)   NULL,
      itemname    VARCHAR(40)  NOT NULL DEFAULT ' ',
      quantity    INT          NOT NULL DEFAULT 0,
      price       REAL          NOT NULL DEFAULT 0
   );
```

SQL Alter

```
INSERT INTO "alanparadise/nw"."items"
  (SELECT productid, concat(supplierid, categoryid, discontinued),
          productname, unitsinstock, unitprice
    from "alanparadise/nw"."products");
```

Verify it:

```
SELECT * FROM "alanparadise/nw"."items"
```

SQL Alter - Examples

```
1. ALTER TABLE "alanparadise/nw"."items"
        RENAME TO "alters";


2. ALTER TABLE "alanparadise/nw"."alters"
        RENAME COLUMN "itemcode" TO "itemref";


3. ALTER TABLE "alanparadise/nw"."alters"
        ADD COLUMN "itemcode" VARCHAR(5) NULL;
```

SQL Alter - Examples

```
4. UPDATE "alanparadise/nw"."alters"

        SET "itemcode" = "itemref";


5. ALTER TABLE "alanparadise/nw"."alters"

        ALTER COLUMN "itemcode" SET DATA TYPE char(4);


6. SELECT itemid, itemname, itemcode FROM "alanparadise/nw"."alters";


7. ALTER TABLE "alanparadise/nw"."alters"

        DROP COLUMN "itemcode";
```

SQL Alter – Lab 9

This concludes Module 5, Lesson 3, "Alters"

Next step: Follow the instructions for Lab # 9