Exercise 02.01: User Defined Types (UDTs)

In this exercise, you will:

- Create a user defined type
- Alter an existing table and add additional columns

Background

After reviewing your design of the tables that support tag and year queries, your manager happened to remember that there isn't a 'tags' column in the original table that stores video metadata. You have now been asked to include that in the videos table schema and also to add another column to store video encoding information.

The revised 'videos' table schema looks as follows:

Column Name	Data Type
video_id	timeuuid
added_date	timestamp
description	text
encoding	video_encoding
tags	set<text>
title	text
user_id	uuid

The encoding data structure:

field Name	Data Type
bit_rates	set<text>
encoding	text
height	int
width	int

Steps

1. Use a text editor to open and review the file *videos.csv* file in the *labwork/udts* directory. Notice the addition of the 'tags' column.
2. Also, open and review the file *videos_encoding.csv*.

3. At the prompt, navigate to the */home/ubuntu/labwork/udts* directory within a terminal window.
    a. Launch `cqlsh` and switch to the 'killrvideo' keyspace.
4. Run the TRUNCATE command to erase the data from the 'videos' table.
5. Modify the 'videos' table by adding a 'tags' column.
6. Load the data from the file *videos.csv* file using the COPY command.

```
COPY videos FROM 'videos.csv' WITH HEADER=true;
```

Remember, we do not need to create the user defined type called 'video_encoding' because we did so in the previous exercise. However, take a look at the code below as a refresher.

Do not run it again or you will get an error!

```
CREATE TYPE video_encoding (
   bit_rates SET<TEXT>,
   encoding TEXT,
   height INT,
   width INT,
);
```

7. Alter your table to add an 'encoding' column of the 'video_encoding' type.
8. Load the data from the file *videos_encoding.csv* using the COPY command.

```
COPY videos (video_id, encoding) FROM 'videos_encoding.csv' WITH
HEADER=true;
```

9. Run a query to retrieve the first 10 rows of the 'videos' table.

Notice the altered table contains data for the new 'tags' and 'encoding' column.

10. Exit `cqlsh`.

END OF EXERCISE