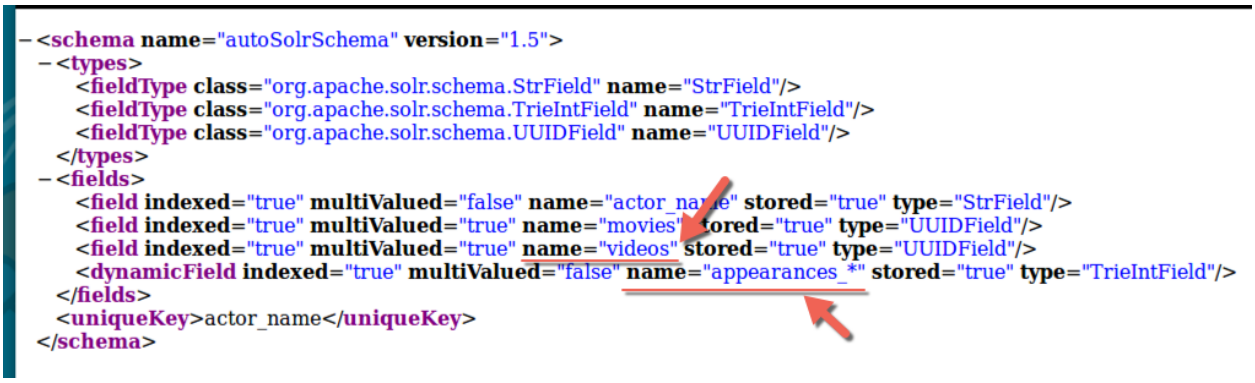
Exercise 06.03 – Implementing Searching in a Collection Field

In this exercise, you will:

- Understand the concept of multivalued and dynamic fields
- Lists and sets are mapped to search indexes as multivalued fields
- Maps are mapped to search indexes as dynamic fields.

Step 1: Analyzing the actors.xml file

1. Navigate to the *~/search* directory for *session3* and open the *actors.xml* file with the text editor of your choice. This file determines the search schema for the actors table.



2. Let's compare this file to the schema of the actors table:

```
CREATE TABLE killrvideo_test.actors (
    actor_name text PRIMARY KEY,
    appearances_ map<text, int>,
    solr_query text,
    videos set<uuid>
)
```

3. Note the `videos` field and the `appearances_` are set up as multivalued valued fields. This is because `appearances_` is a map and `videos` is a set. These field declarations should enable a search for any of the values in these columns.

4. Also, note that `appearances_`, because it is a map, is set up as a dynamic field.

Step 2: Creating the index

1. Close the file and then create the following index using CQL.

```
CREATE SEARCH INDEX IF NOT EXISTS ON killrvideo_test.actors;
```

Step 3: Using the index

1. Start `cqlsh` and execute a CQL search index to find the actors that were in the movies with the following video IDs:

    a. cb1da30c-6333-11e6-9aae-a45e60eb67c5;

    b. cb20bc38-6333-11e6-a75d-a45e60eb67c5; and

    c. cb1ea900-6333-11e6-819c-a45e60eb67c5.

```
USE killrvideo_test;

SELECT actor_name FROM killrvideo_test.actors WHERE solr_query =
'videos:(cb1da30c-6333-11e6-9aae-a45e60eb67c5 AND cb20bc38-6333-11e6-
a75d-a45e60eb67c5 AND cb1ea900-6333-11e6-819c-a45e60eb67c5)';
```

2. Your results should include Meg Ryan and Tom Hanks.

3. Now execute a CQL search index to find all actors who have had six (6) movie appearances in 2015.

```
SELECT actor_name FROM Killrvideo_test.actors
WHERE solr_query = '{ "q": "appearances_2015:6"}';
```

4. Your result should include Anthony Mackie, Ben Whishaw, Judy Greer, and Michael Peña.

5. Finally, execute another CQL search index that can answer how many actors had at least one movie appearance in 2000.

```
SELECT actor_name FROM Killrvideo_test.actors
WHERE solr_query = '{ "q": "appearances_2000:[1 TO *]"}' LIMIT 2000;

(1909 rows)
```