

Movie Database

The National Film Archive wants to change from a manual system to an electronic database system. Currently the data for each movie is stored in a card index. Here is an example card.

Title No.	Title	Director No.	Director Forename	Director Surname	Year of Release	Cert.	Video Rating
3333	Jaws	22	Steven	Spielberg	1975	PG	2
Actor No.	Actor Forename	Actor Surname	Sex	DOB	Nationality	Role	
256	Roy	Scheider	M	10/11/32	USA	Chief Brody	
35	Robert	Shaw	M	9/8/27	UK	Quint	

- An actor can appear in many films.
- An actor can play more than one role in the same film.
- A film is directed by only one person.
- Two films can have the same name.

The above card shows the details of the title of the film and the film cast. The National Film Archive use a video rating system that allocates a number to each film as follows.

Certificate	Video Rating
U	1
PG	2
12	3
15	4
18	5

Section A

- Identify the primary entities and associated attributes for UNF.
- Normalise the UNF entities to 1NF, 2NF and 3NF identifying clearly all keys and foreign keys at each stage.
- Draw an entity/relationship diagram for the 3NF entities.
- Create a detailed data dictionary ready for implementation in Filemaker Pro.

Section B

Roy Scheider has the actor number **256**. Previously, a more **meaningful** identifier has been used for identifying actor names. Roy Scheider had the number **101132RS**, a mixture of birth date and initials.

Give **two** reasons why it is not always a good idea to use a meaningful identifier such as this.

Mention the merits of using an arbitrary numeric identifier such as the one currently used to identify an actor.

Section C

a. Now implement your solution in Filemaker Pro with all relevant relationships established. Make sure that your solution matches the one produced for the class.

b. As well as the attributes already included in the database, include **calculations** to automatically:

- Identify how many movies a director has directed.
- Identify how many films an actor has appeared in.
- Identify how many films have a particular certificate, e.g. How many PG films are in the database?

c. Some details on the movie **Rush Hour** have been omitted from the database.

The names of the 2 main actors, Jackie Chan (who plays Detective Lee in the movie) and Chris Tucker (Detective Carter) have been entered into the actor entity.

The details regarding the movie have to be added.


Add these details.

Note: The names Jackie Chan and Chris Tucker are currently unique in the actor entity.

d. The database should only store information on films released **after 1955**.

- (i). Write down how many movies were released before 1955.
- (ii). How many roles are contained in the database in total?
- (iii). Delete all movies before 1955 including the roles that correspond to these movies.
- (iv). How many roles are now contained in the database?

e. Part of a report is shown listing alphabetically the directors stored in the database, includes a listing of the films they have directed also in alphabetical order.



MOVIE DATABASE
Movie Directors

James Cameron

Movie Title	Year	Cert
The Abyss	1989	15
The Terminator	1984	18
Titanic	1997	12

Ridley Scott

Movie Title	Year	Cert
Alien	1979	18
Blade Runner	1982	15
Gladiator	2000	15

Kevin Smith

Create a similar report (this report has actually been created in the **movie** entity). Find the directors who have directed **more than 2** films and obtain a print out of this report. (To perform the search requires the inclusion of the function to identify how many movies a director has directed).

f. A similar report should be created in the **role** entity, as shown below. This should be sorted by actor surname and then year of release as shown below. Only actors and actresses whose surname begins with **F, G or H** should be included in the report.

MOVIE DATABASE
Movie Roles

Jason Flemming

Movie Title	Year	Cert	Role
Legally Blonde	2001	12	Bobby Beers

Harrison Ford

Movie Title	Year	Cert	Role
Star Wars	1977	U	Han Solo
Raiders of the Lost Arc	1981	PG	Indiana Jones
Blade Runner	1982	15	Rick Deckard

Michael Lee