

FileMaker® Pro 7 version of 3.5 Practical skills — Organising a database

Step 1 Designing the data dictionary

See page 57 of the textbook.

Step 2 Creating the new database

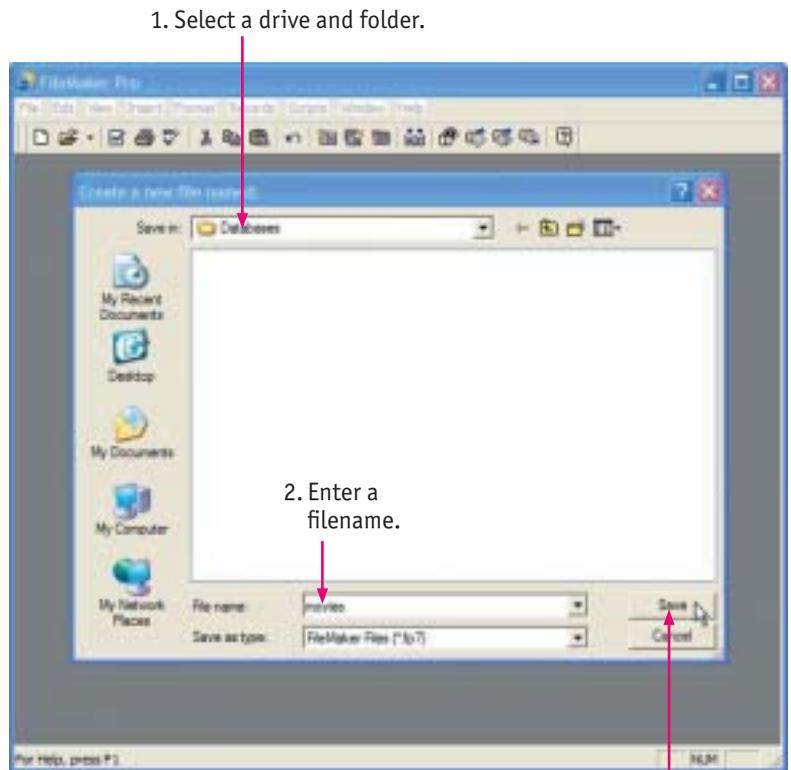
a Start Filemaker Pro and, from the opening screen, create a new empty file. Select a drive and directory for the database and enter the name *Movies* as shown in screen 1.

b Creating a new database automatically creates a data dictionary for it but you will be asked to name and describe each field in the database.

Step 3 Adding an automatically numbered field

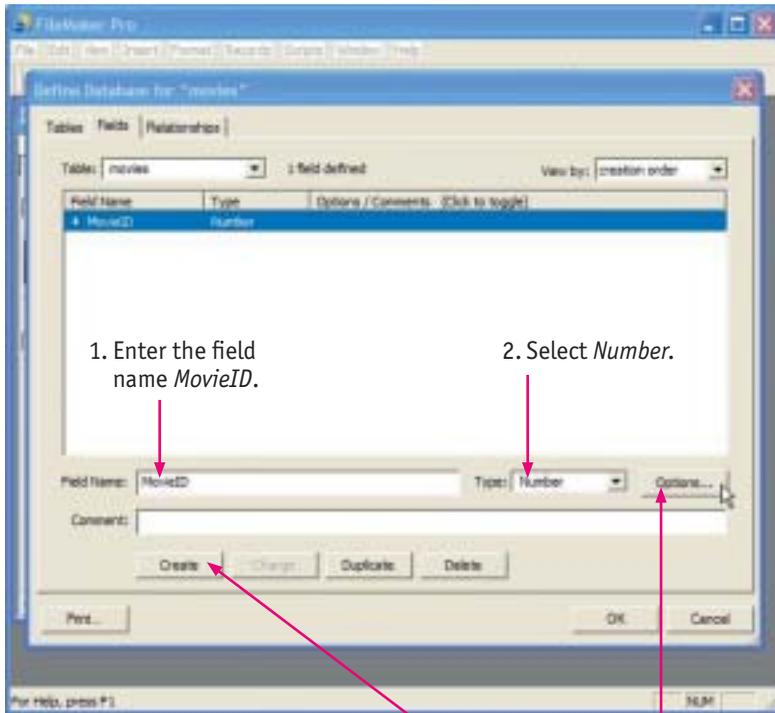
An automatically numbered field will be used to identify each movie in the database.

For this database, the field will contain '1' for the first record, '2' for the second, and so on. The DBMS will automatically enter the correct value in each new record. Screens 2 and 3 show how to create the correct type of field.

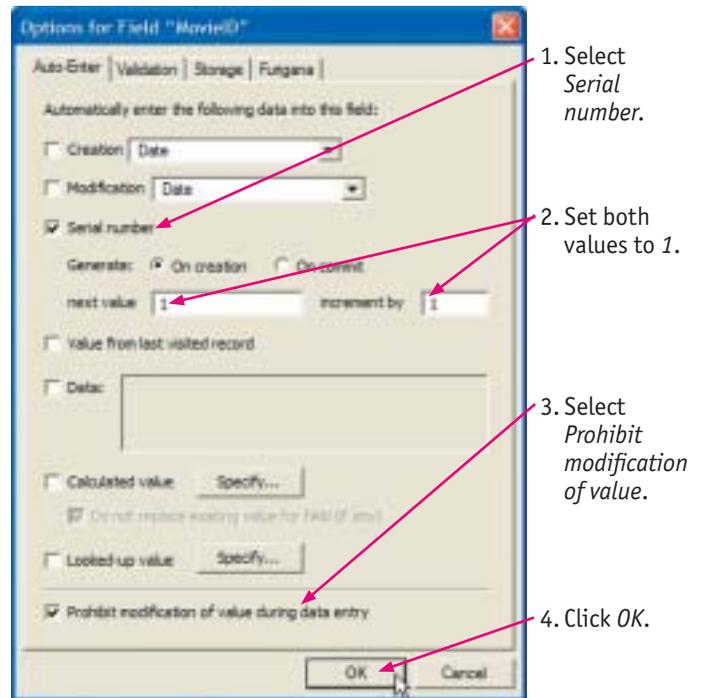


Screen 1 — Creating a new database

3. Click Save.



Screen 2 — Defining the data type of the *MovieID* field



Screen 3 — Setting options for the *MovieID* field



Step 4 Adding text fields

Text fields are the easiest to add as, by default, the DBMS sets the data type of each new field as text.

a Enter the field name *Title* for the next field; click *Create* and then *Options*. This field is a required field and must not be left blank. Screen 4 shows you how to set its properties.

b Enter the field name *IMDb* for the next text field and click *Create*. This field will be used later to create a hyperlink.

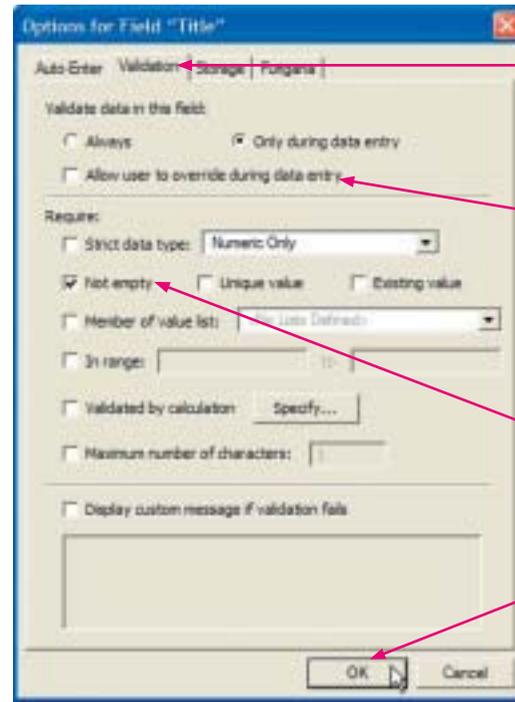
Step 5 Adding number fields with validation rules

Fields can be validated automatically by the DBMS. In this case, we will use validation rules to check that the data entered into the number fields are suitable numerical values.

a Create the next field with the name *Year* and data type *Number*. Click on the *Options* button to set its properties as shown in screen 5.

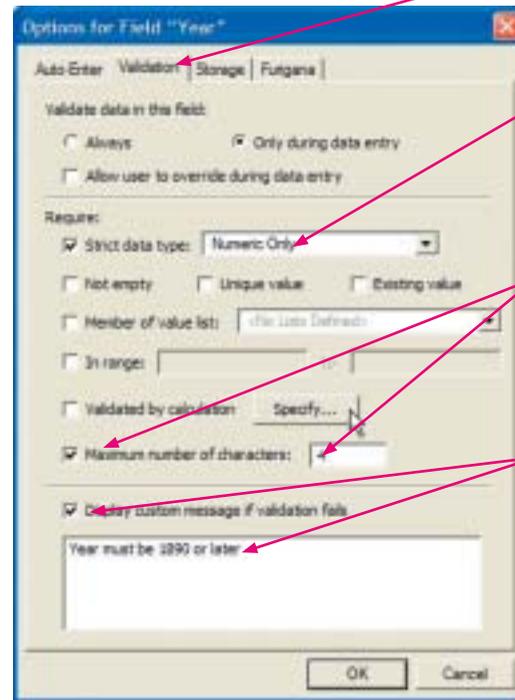
b Finally, click the *Specify* button to enter the validation rule. Screen 6 shows the steps for setting the data validation.

You can type the equation directly into the *Specify Calculation* box; alternatively, you can use the mouse to select the field name (*Year*) and the correct relational operator but you will have to type in the value *1890*.



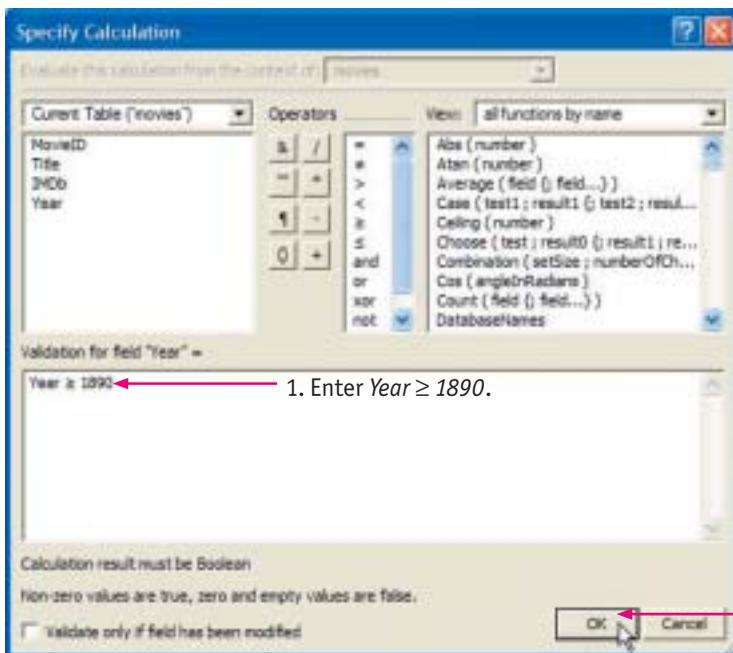
1. Select the *Validation* tab.
2. Deselect *Allow user to override during data entry*.
3. Select *Not empty*.
4. Click *OK*.

Screen 4 – Setting options for the *Title* field



1. Select the *Validation* tab.
2. Select *Strict data type* and set to *Numeric Only*.
3. Set *Maximum number of characters* to 4.
4. Set message to display if data entry fails the validation test.
5. Click *Specify*.

Screen 5 – Setting options for the *Year* field



1. Enter *Year >= 1890*.

2. Click *OK*.

Screen 6 – Setting the data validation rule for the *Year* field

C Create the next field with the name *Rating* and data type *Number*. Click on the *Options* button to set its properties as shown in screen 7. In this case, a range setting (from 0 to 10) can be used instead of an equation.

Step 6 Adding a pop-up menu field

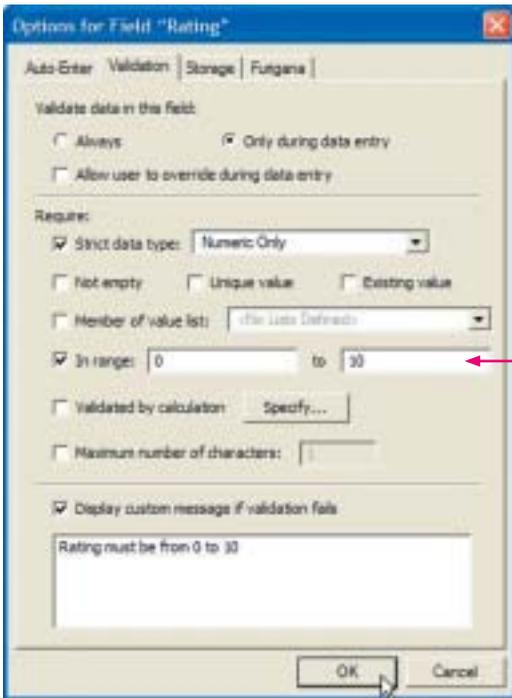
The 'Genre' field describes each movie as one of a set list of categories. The categories used by the IMDb are listed at right.

One way to avoid errors is to ask users to select their data from a list rather than typing it on the keyboard. Because there is only a limited number of genres, a pop-up menu is ideal for this field.

Create the next field with the name *Genre*. Screens 8–12 show how to create a pop-up menu for the field.

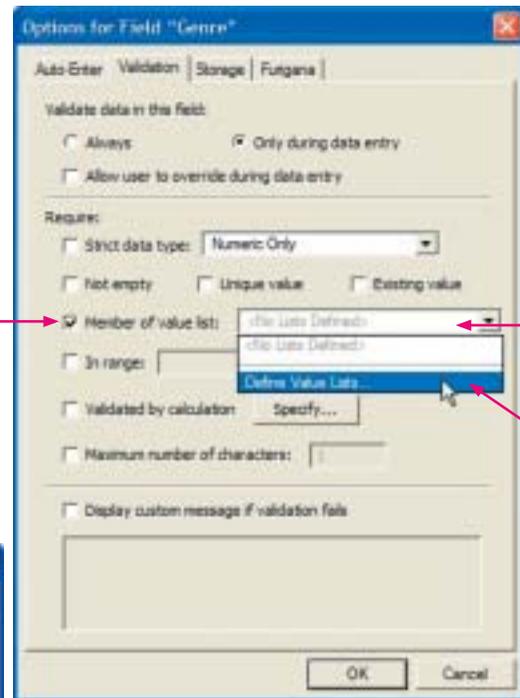
Film genres used by the IMDb

| | | | |
|---------|-------------|-----------|---------|
| Action | Adventure | Animation | Comedy |
| Crime | Documentary | Drama | Family |
| Fantasy | Film-noir | Horror | Music |
| Musical | Mystery | Romance | Sci-fi |
| Short | Thriller | War | Western |



Set valid range to 0 to 10.

1. Select Member of value list.

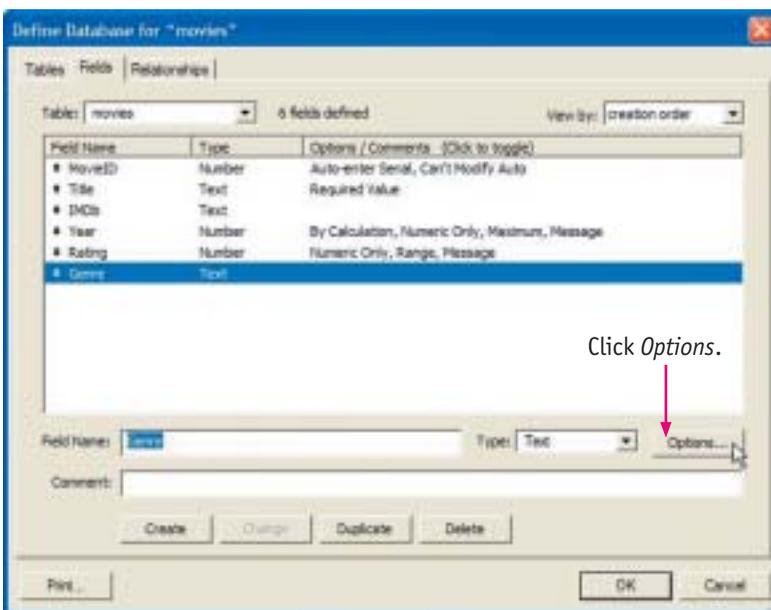


2. Open drop-down list.

3. Select Define Value Lists.

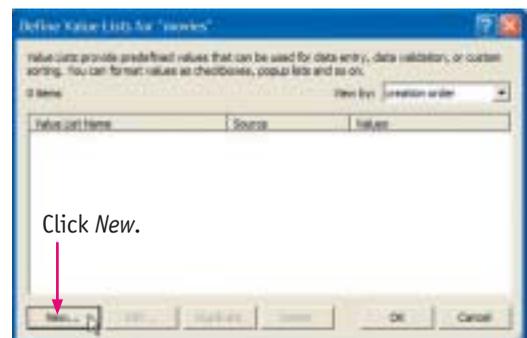
Screen 7 — Setting options for the *Rating* field

Screen 9



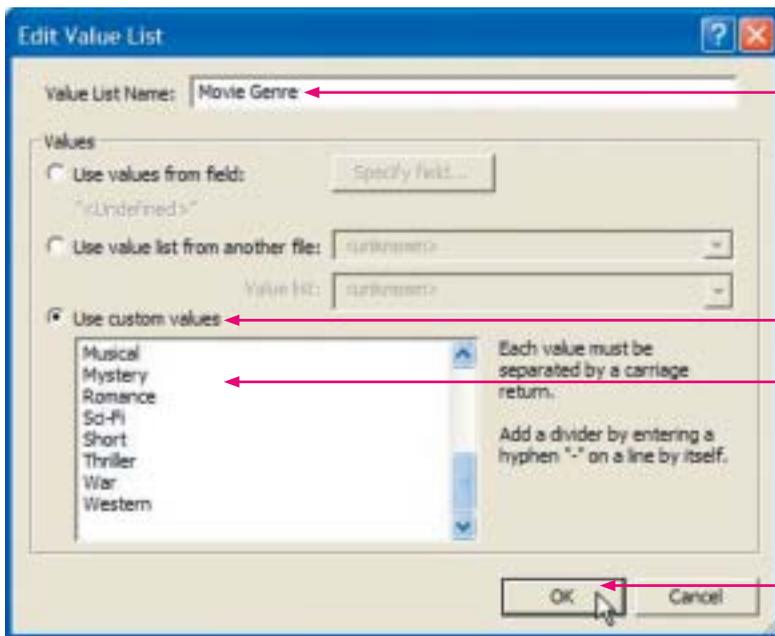
Click Options.

Screen 8



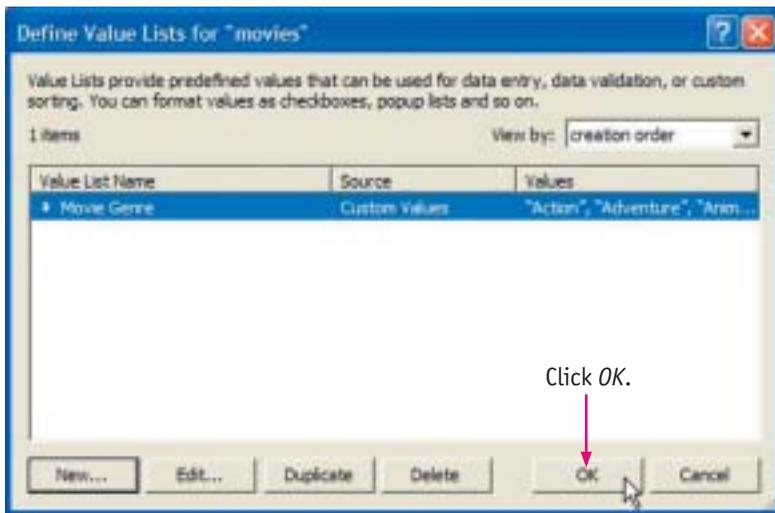
Click New.

Screen 10

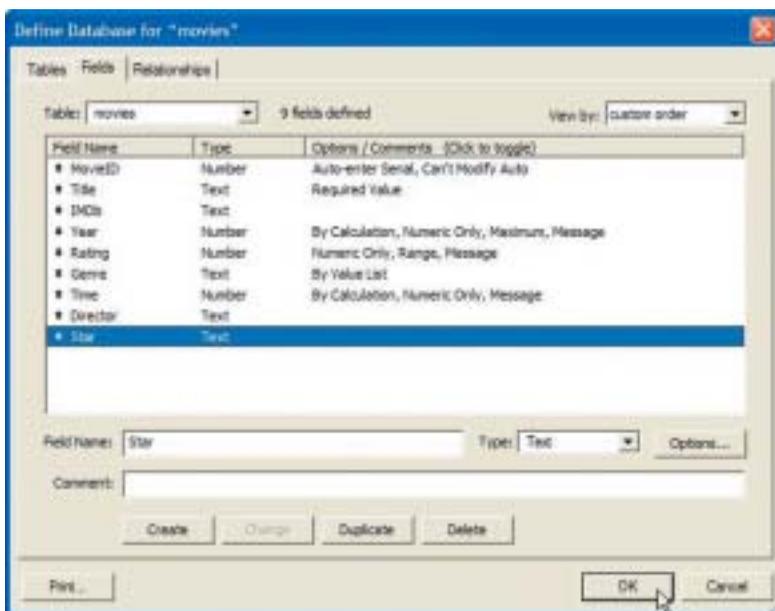


1. Enter a *Value List Name*.
2. Select *Use custom values*.
3. Enter each item, one per line.
4. After the last item, click *OK*.

Screen 11



Screen 12



Screen 13 – The completed data dictionary

Step 7 *Completing the data dictionary*

Complete the remaining fields using the information provided in the diagram at the top of page 57 of the textbook and in the following instructions.

a The *Time* field is a number field which needs a validation rule to detect entered values less than zero. Also, enter a suitable message to be displayed if validation fails.

b The two text fields, *Director* and *Star*, do not require any validation.

c Screen 13 shows the completed data dictionary. After completing the last field, click *OK*.

As soon as you have completed the data dictionary, you can enter data into new records in your 'Movies' database. Because some of the fields have been set as required or compulsory fields, you will not be able to exit FileMaker Pro until you have entered data into those fields. Continue with the instructions in the FileMaker Pro 7 version of 3.6 *Practical skills* — *Collecting and entering data* to enter at least one complete record into the database.