Information Systems and Technology
IENG372 / MANE372

Access LAB

By : Khaoula Chnina

Introduction

In the course IENG372/MANE372 :

The concepts of information technology and their importance within the framework of management of organizations and the ability to exploit continuous innovations in order to stay competitive in business.

- Information Technology.
- Basic data information concepts.
- Appropriate theoretical concepts of decision making.
- Systems Analysis, Structured analysis methodologies.
- Information systems development methodologies.
- Database management.
- Decision support systems.
- Expert systems.

Data and Information

- **Data** (plural for "**datum**") are simply facts or figures — bits of information, but not information itself.
- When data are processed, interpreted, organized, structured or presented so as to make them meaningful or useful, they are called information.
- Information provides context for data.
- Information is data that has been processed in such a way as to be meaningful to the person who receives it. it is any thing that is communicated.

How ???

>> Database

A database (DB) is an organized collection of data. More specifically, a database is an electronic system that allows data to be easily accessed, manipulated and updated.

It is used by an organization as a method of storing, managing and retrieving information.

AN OVERVIEW OF THE DATABASE CONCEPT

- Microsoft Access is a Relational Database Management System (RDBMS), designed primarily for home or small business use.
- The database component of *MS Office* is designed to act as an intelligent electronic filing cabinet.
- Like a manual filing cabinet, it enables you to :
  - collect sets of related data and keep the data organized;
  - update the data once you've collected them, by adding or deleting records and by changing existing records;
- An *electronic* filing cabinet such as a database allows you also to easily and quickly *use* the data--sort them, create reports, merge the data with other documents, and so forth.

Within files, different terminology is used to describe the organization of data depending on the type of file in question.

- Word processed files tend to organize data in paragraphs and sentences;
- Spreadsheet files organize the data in rows and columns;
- Database files organize the data into records and fields.

How is a database organized?

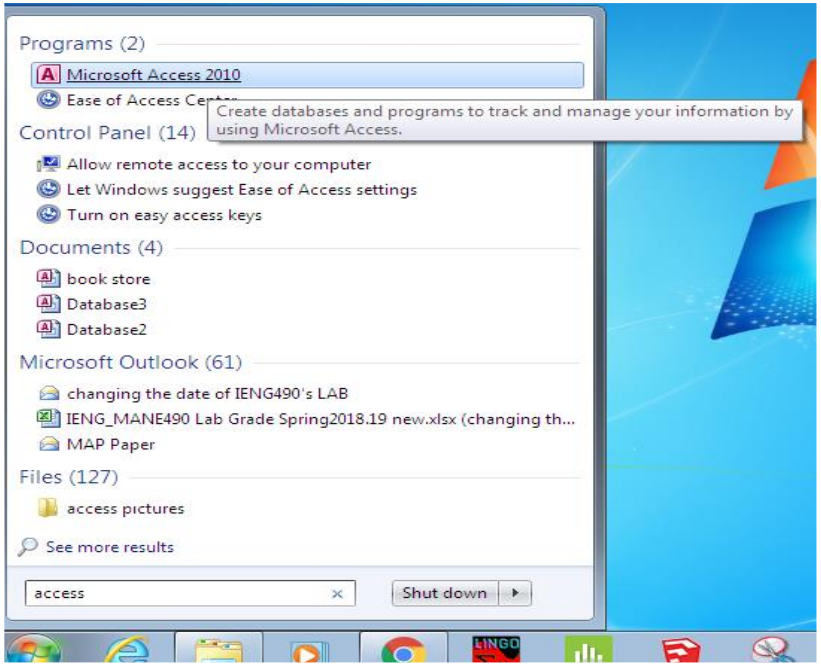
Access is an object-oriented relational database management system. The objects that make up any particular database that you create using Access are :

Tables	• an object which represents the data in rows and columns, rather like a spreadsheet. For this reason, when you view a table in an Access database, you are in what Access refers to as a Datasheet View.
Queries	• an object which makes a request to the database to find some set of data that is stored in the database.
Forms	• an object which gives the user another view of the data in the database. Whereas a Table allows the user to view multiples records at once, a Form displays the contents of just one record at a time.
Reports	• an object which is designed based on the data in the database and which is used to inform the user of the selected contents of the database.
Pages	• a special type of web page designed for viewing and working with data from the Internet.
Macros	• a sequence of instructions which can be carried out with a single click of the mouse button on a button in a toolbar or by pressing a key or keys on the keyboard.
Modules	• a collection of programming procedures designed to give programmer control over the Access database look and feel.

LET'S !
START

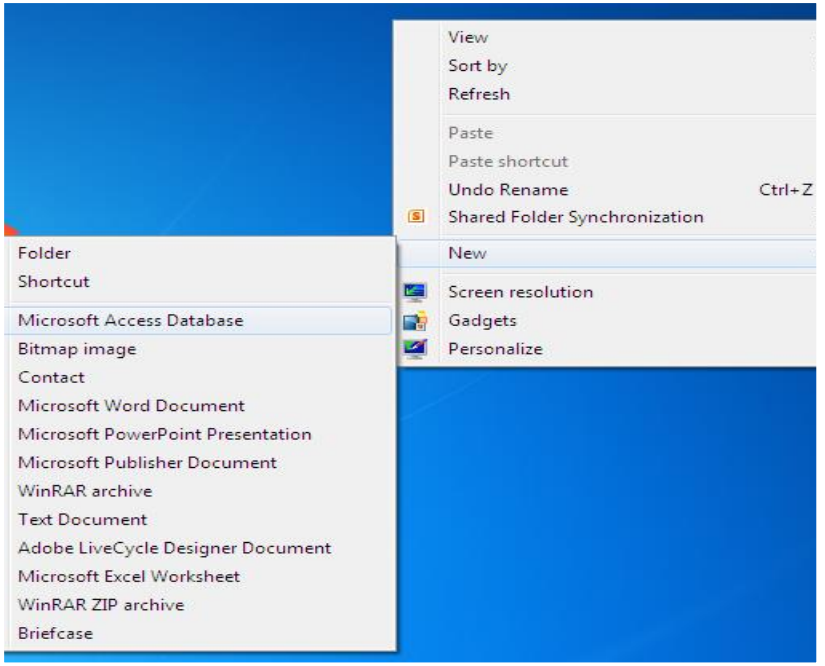
Open access

Way 1 : From start menu

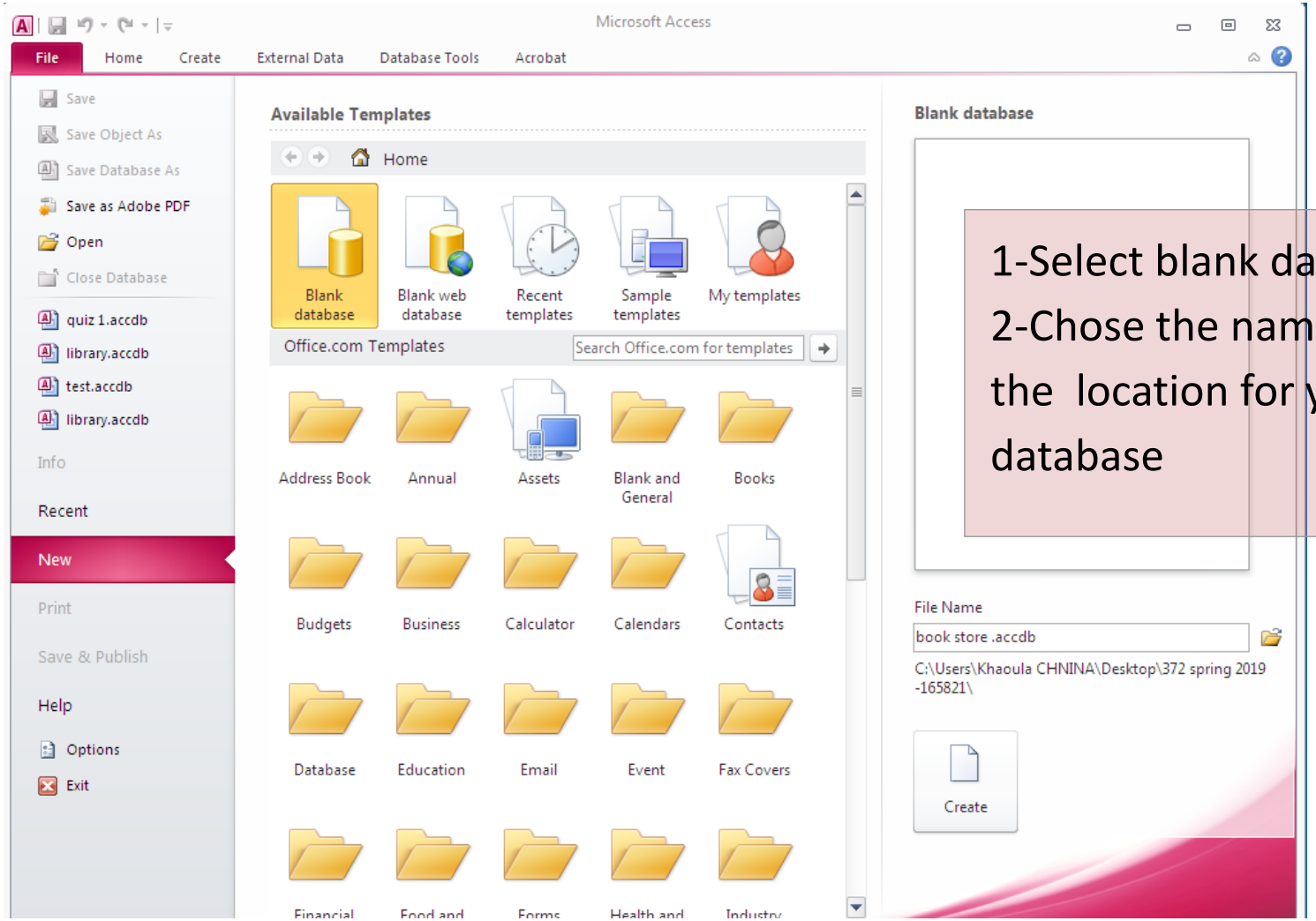


OR

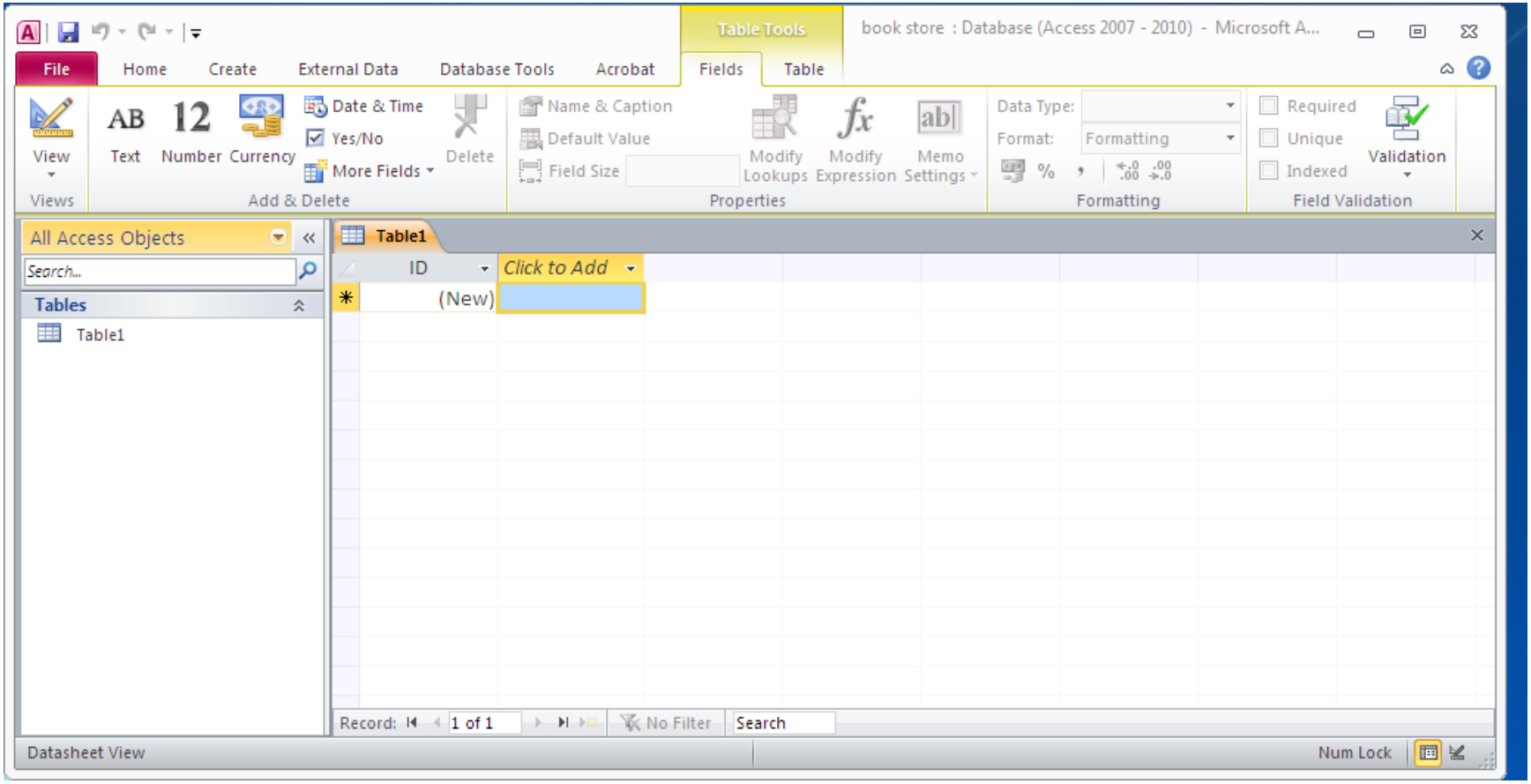
Way 2 :Right click in the desired folder



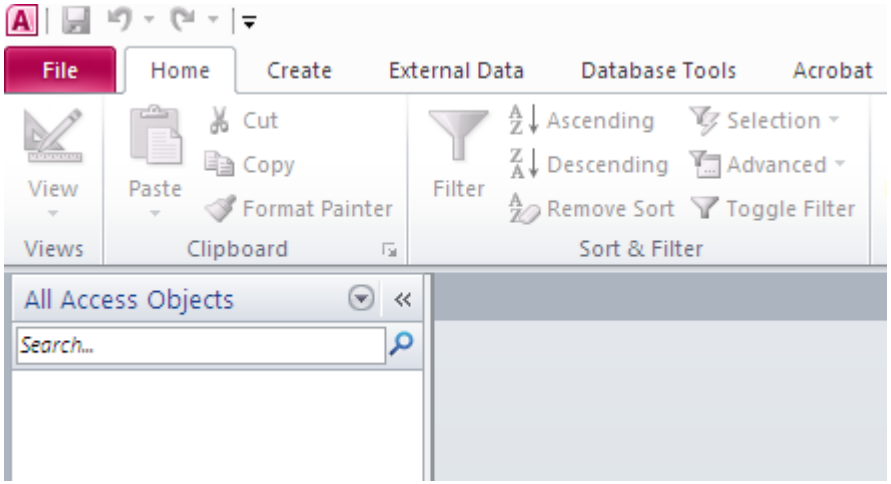
If you had chosen Way 1 :



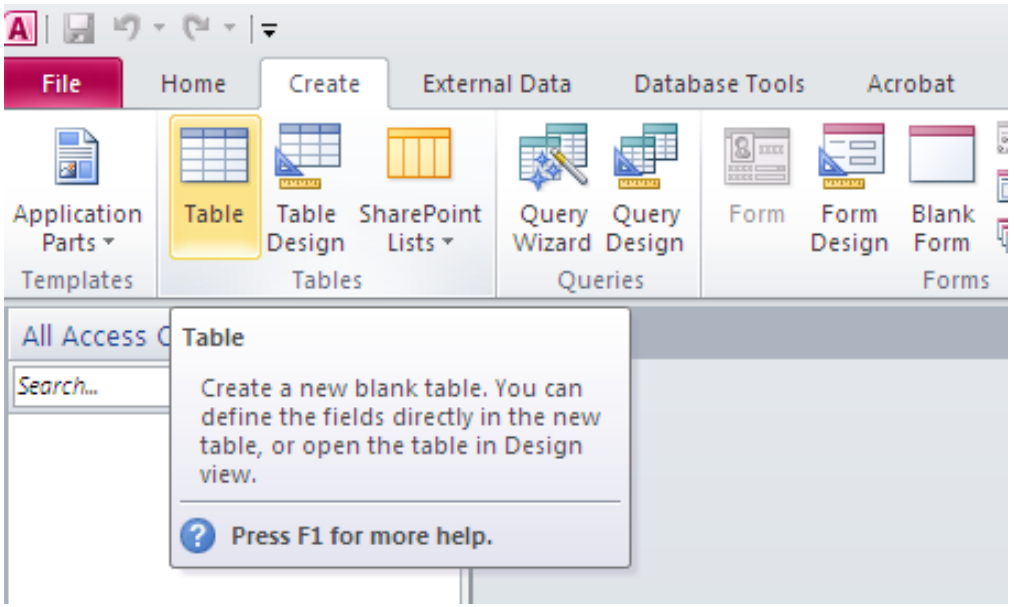
>> The firt table created automatically



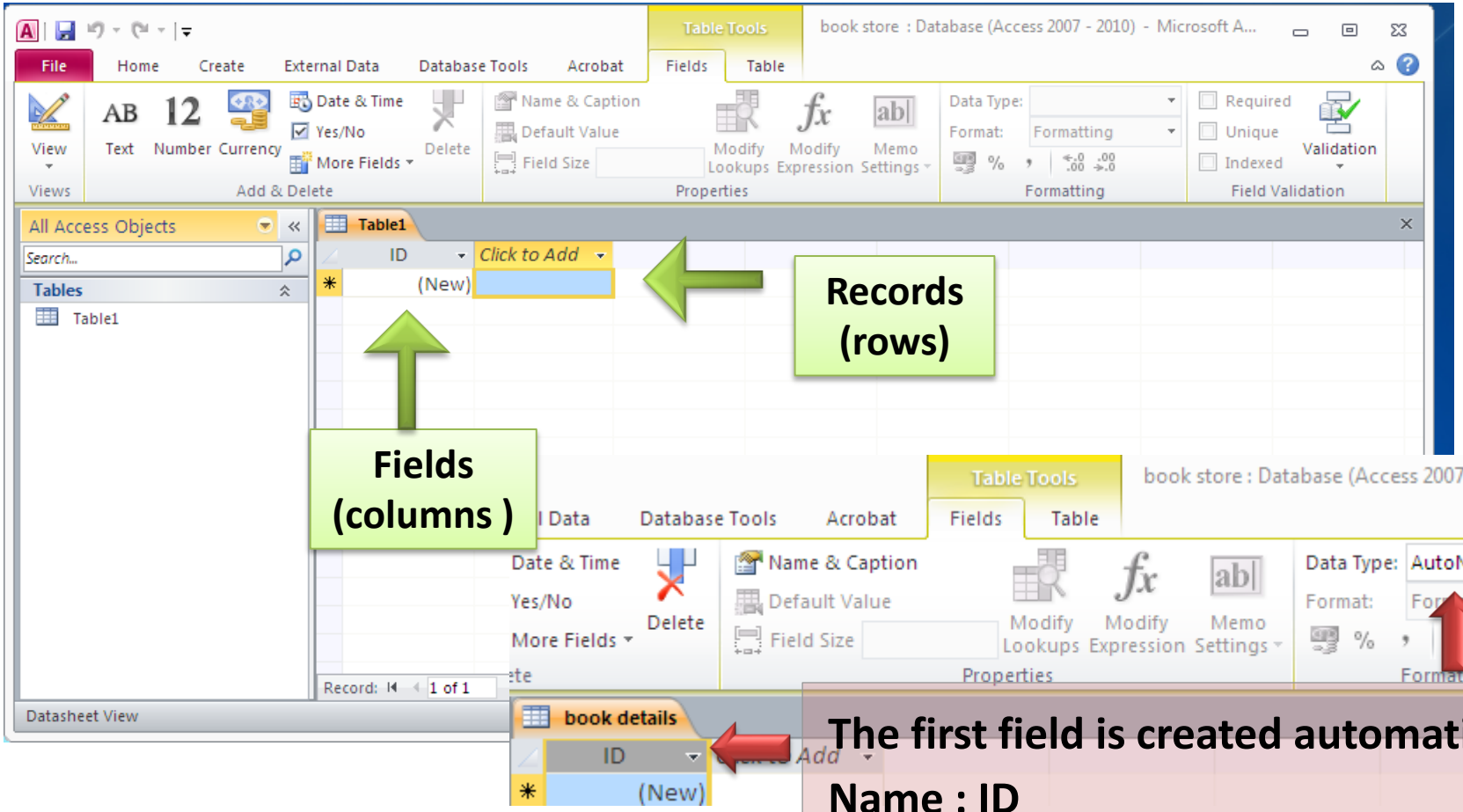
If you had chosen Way 2 :



Create your table manually by selecting Table
Or table design

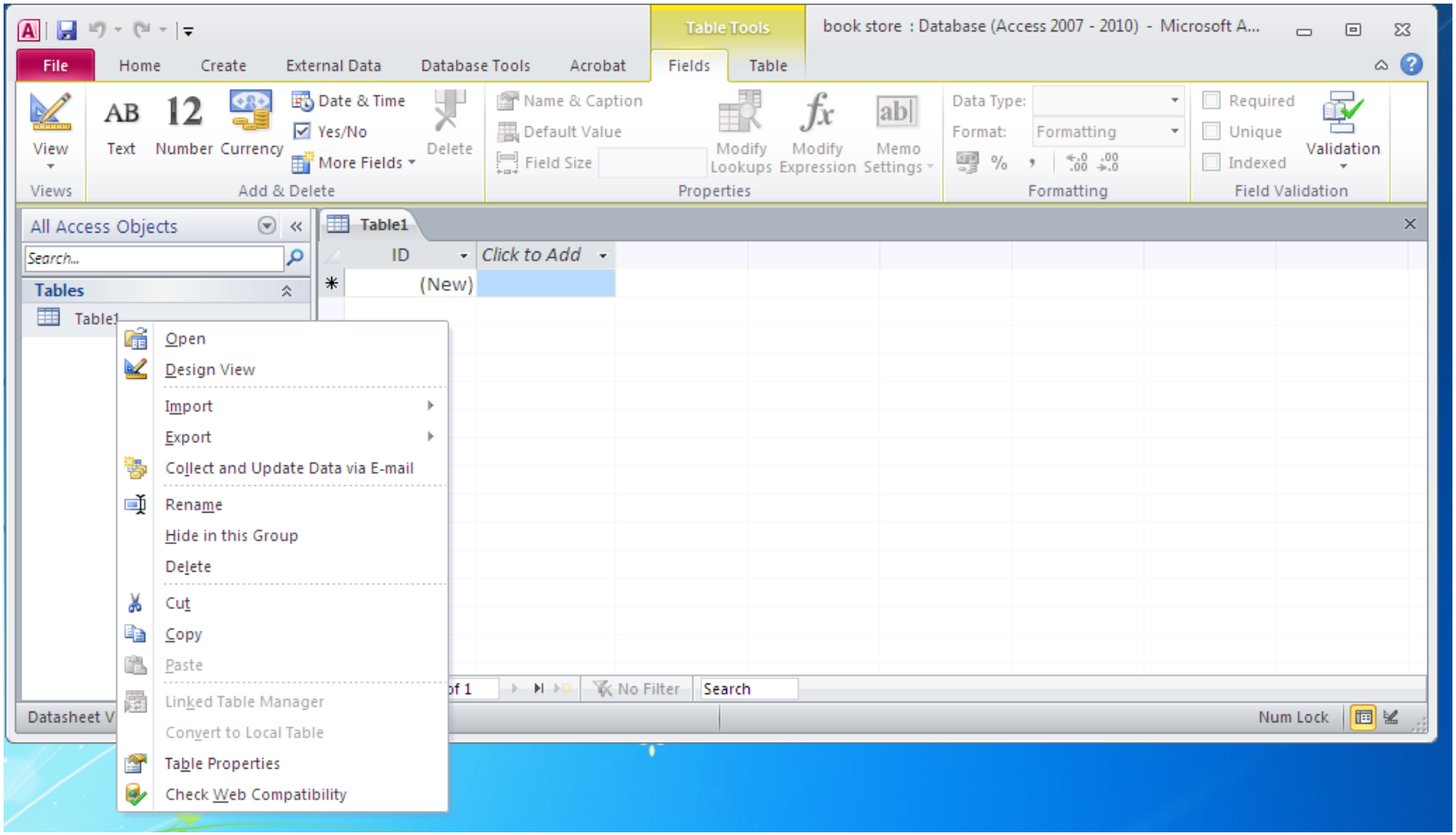


Now the first table is created (way 1 or 2)



Tables

If we right click on table name, we have many options :



And also

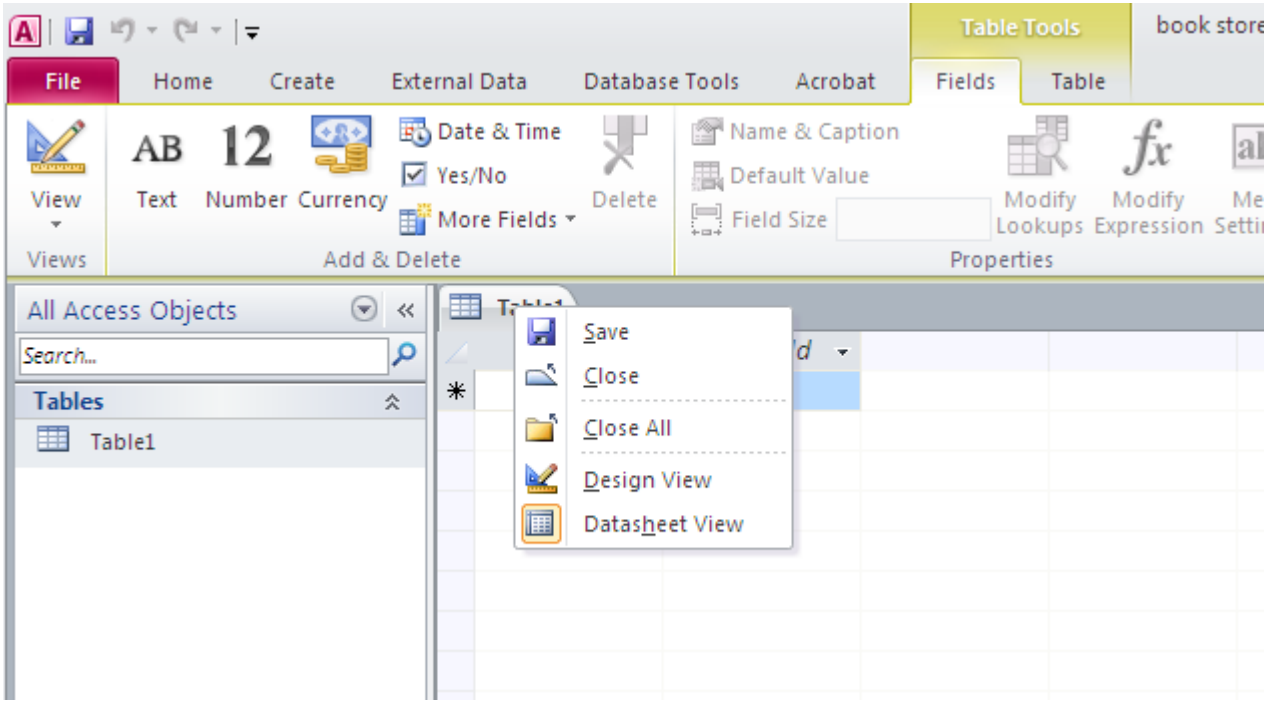
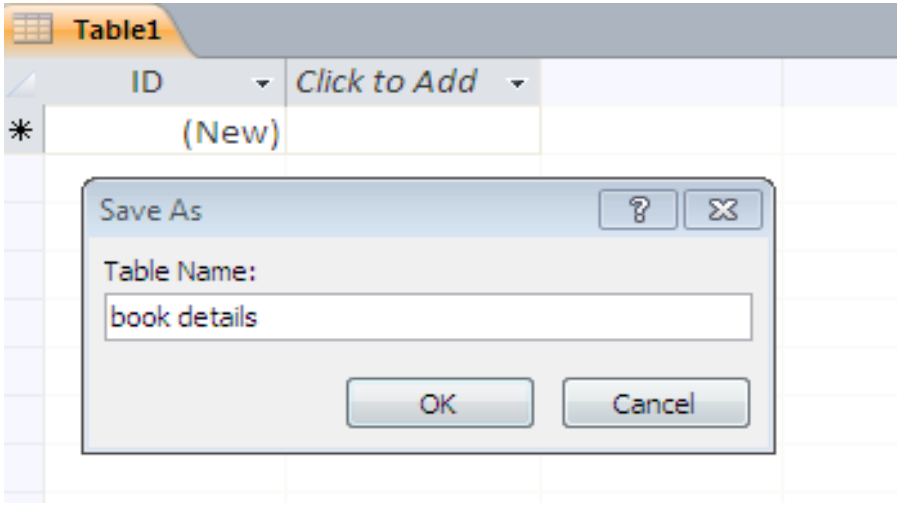
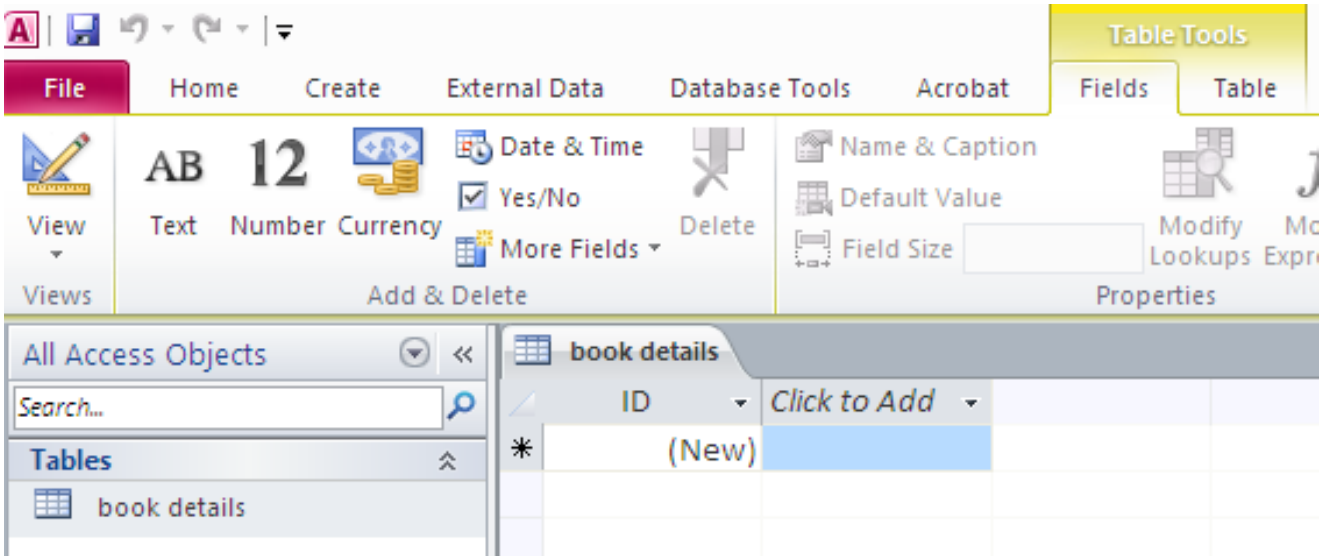


Table Tools
book store
File
Home
Create
External Data
Database Tools
Acrobat
Fields
Table
View
Views
Text
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Add & Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Properties
All Access Objects
Search...
Tables
Table1
Save
Close
Close All
Design View
Datasheet View

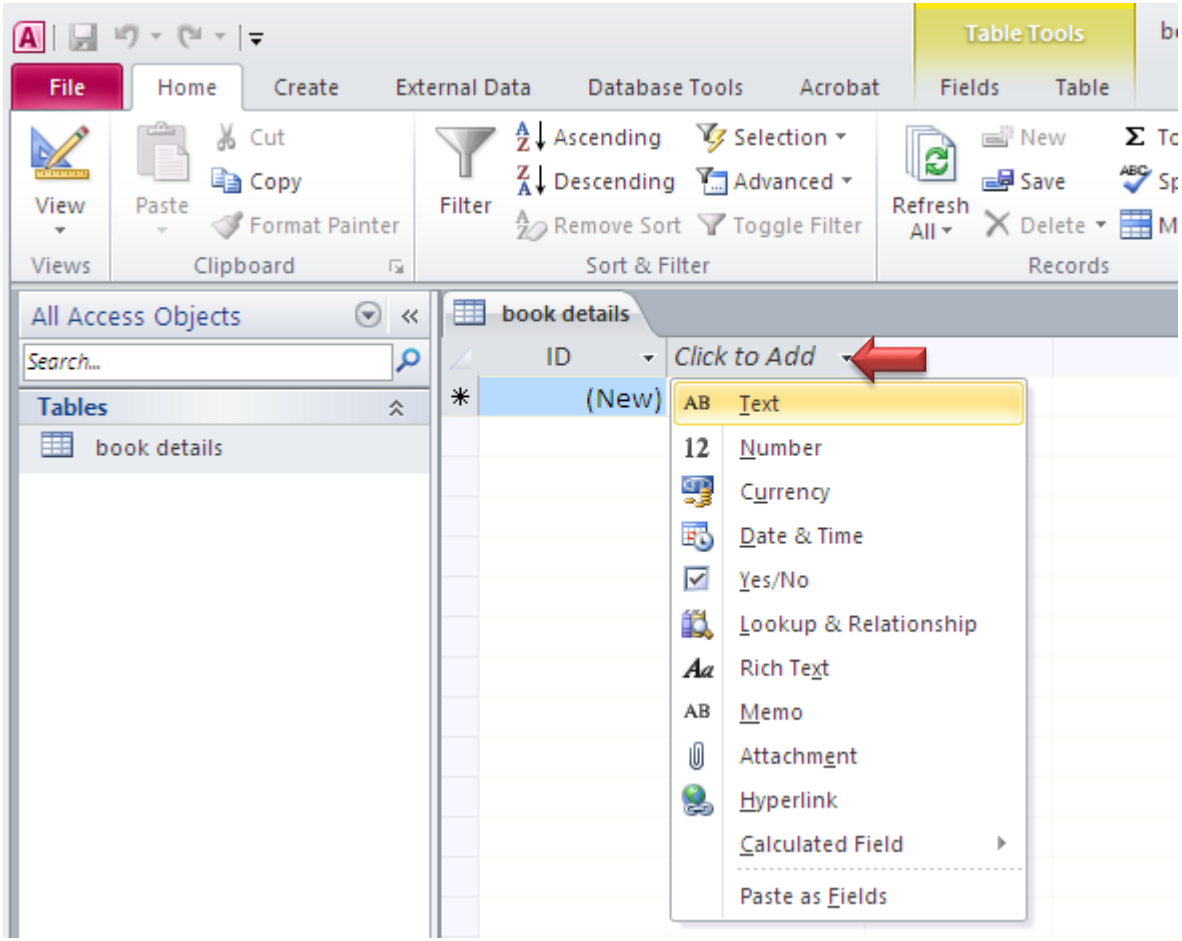
Save as : book details





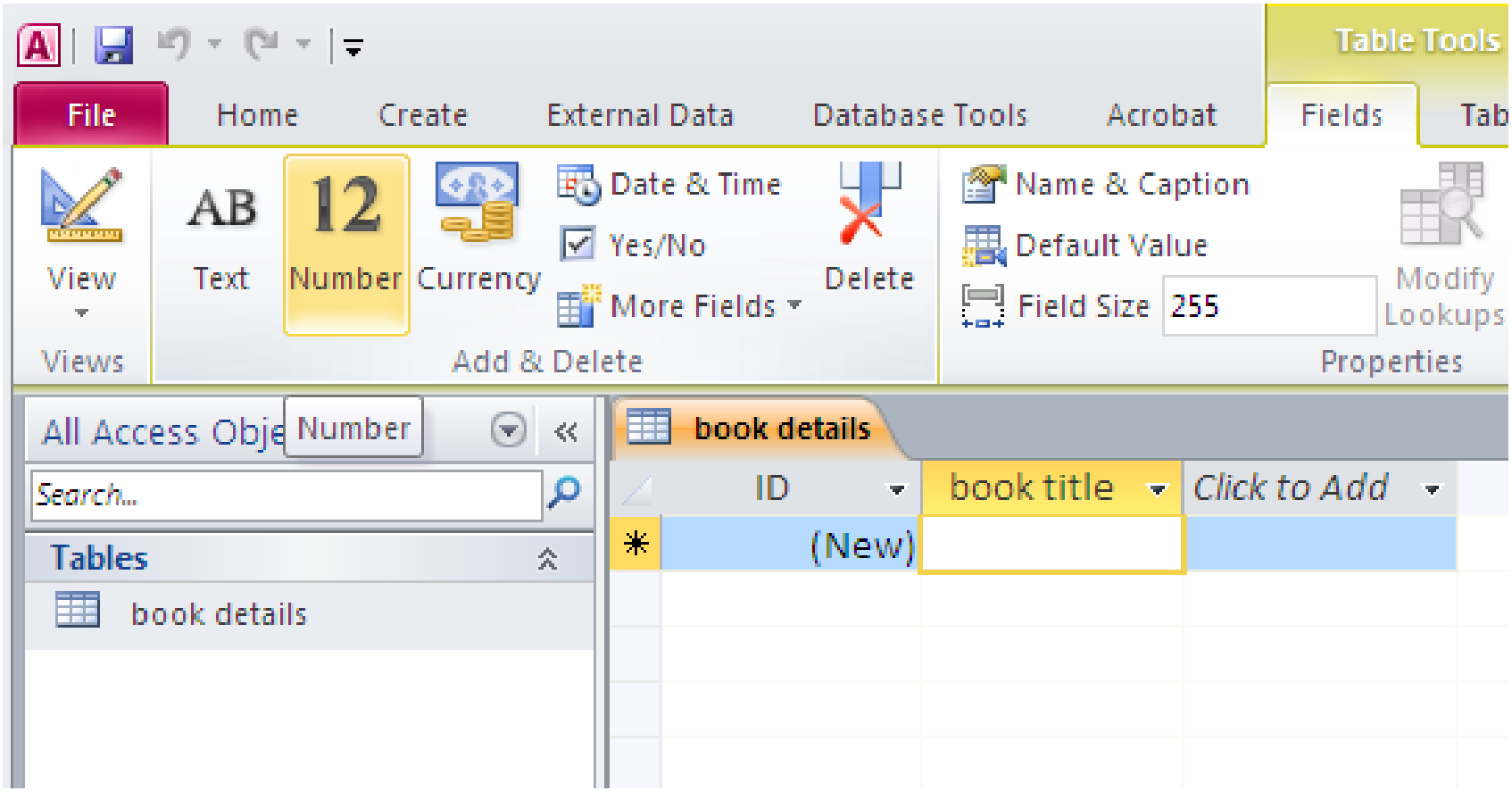
New field

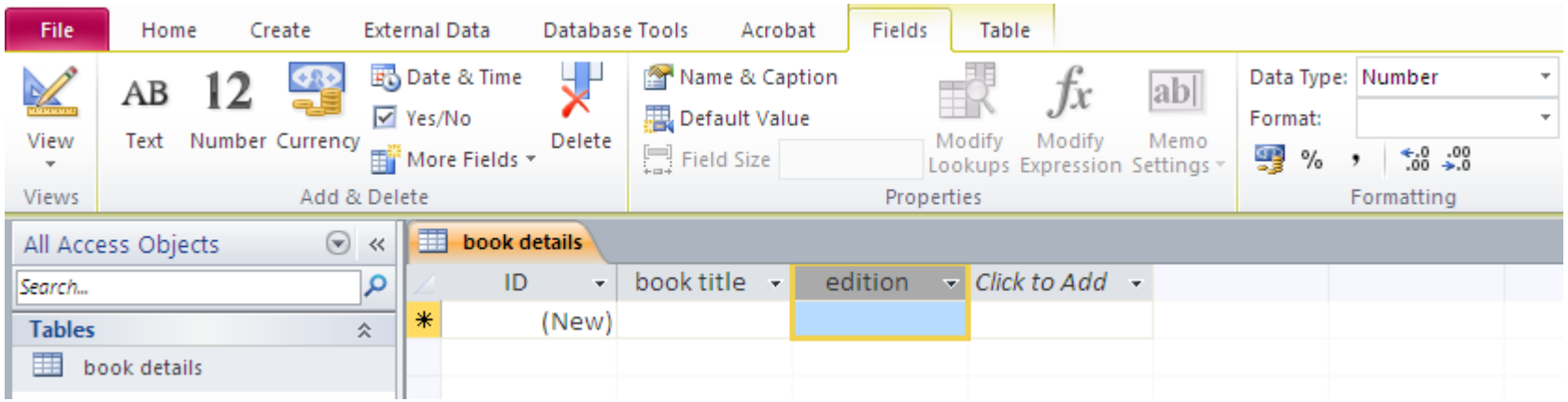
Option 1 :
Click on
« click to add»



Option 2:

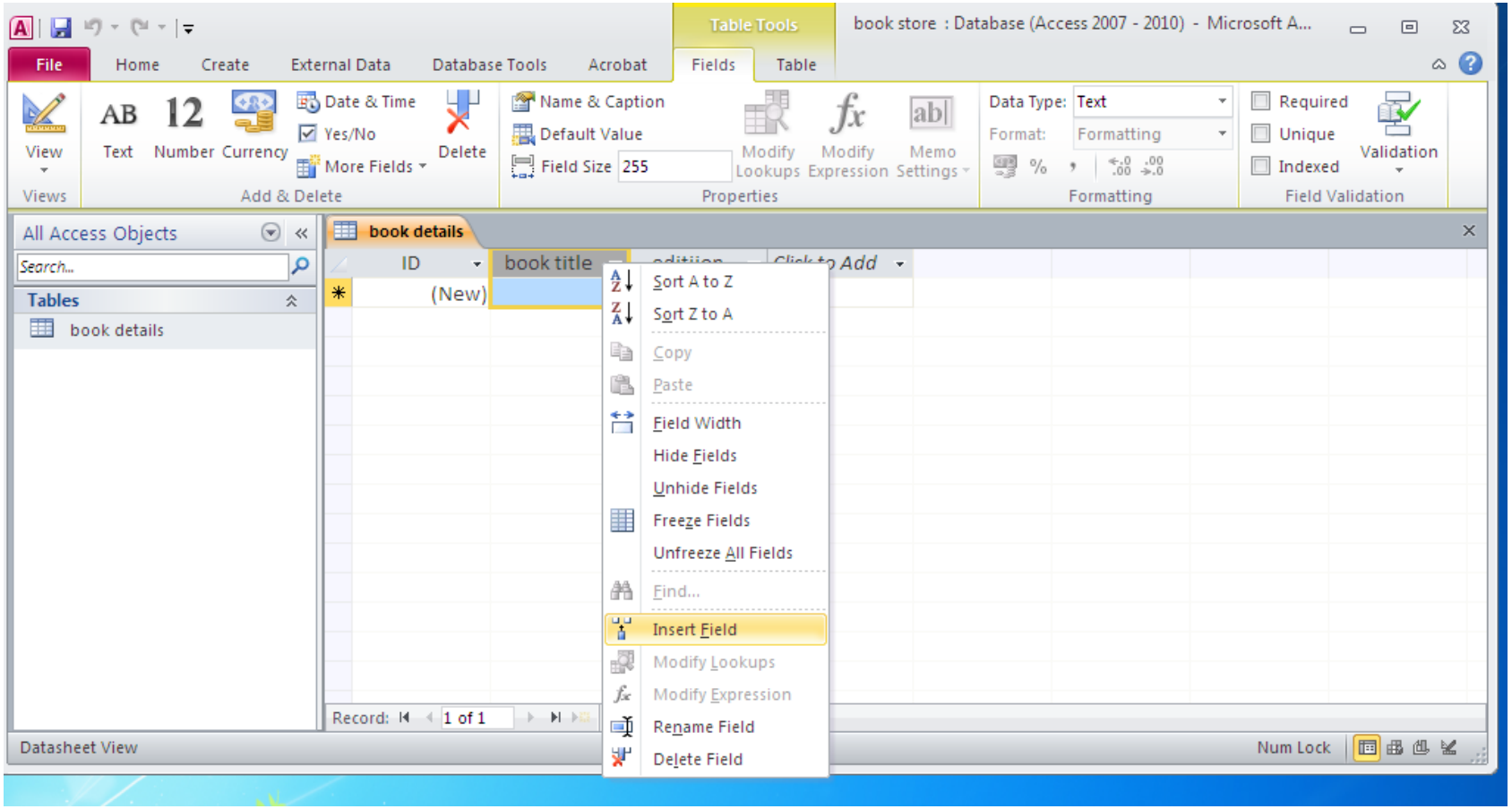
Click on « Fields» , different types of fields will appear select the desired type.

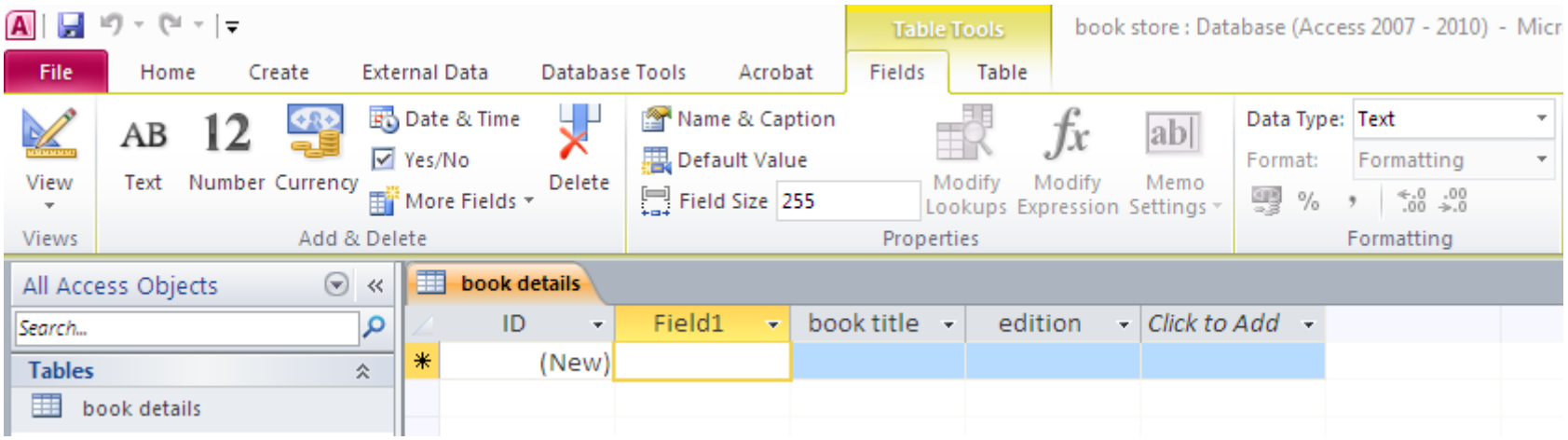


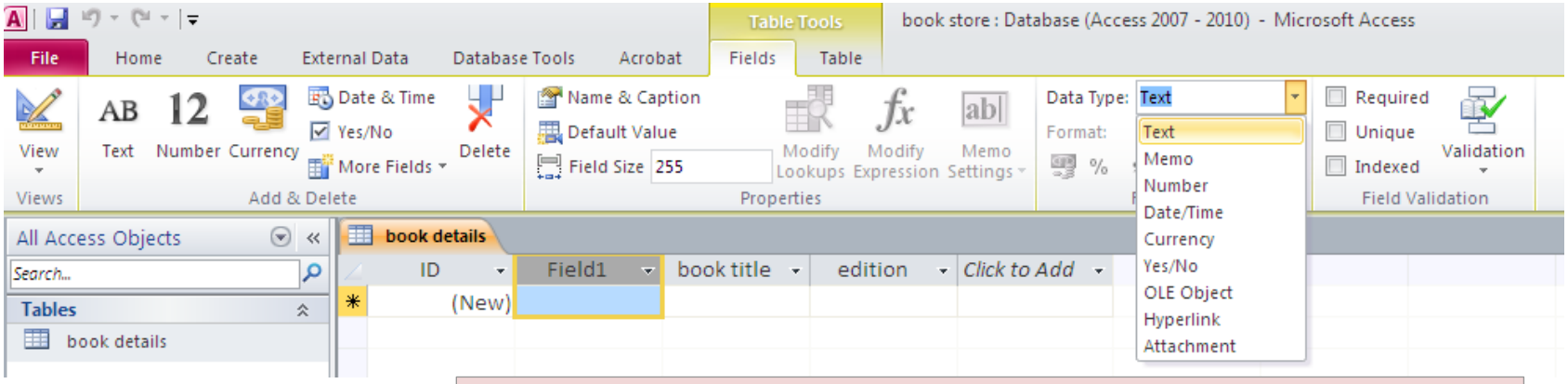

File
Home
Create
External Data
Database Tools
Acrobat
Fields
Table
View
Views
Text
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Add & Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Properties
Data Type:
Number
Format:
Formatting
All Access Objects
Search...
Tables
book details
book details
ID
book title
edition
Click to Add
(New)

Option 3 :

Rigth Click on a given field and select «insert field» , A new field is created before (in the left of) the selected one.







Then you chose its type and rename it.

Basic data types

Format	Use to display
Text	Short, alphanumeric values, such as a last name or a street address. Note, beginning in Access 2013, Text data types have been renamed to **Short Text**.
Number, Large Number	Numeric values, such as distances. Note that there is a separate data type for currency.
Currency	Monetary values.
Yes/No	Yes and No values and fields that contain only one of two values.
Date/Time	Date and Time values for the years 100 through 9999.
Rich Text	Text or combinations of text and numbers that can be formatted using color and font controls.

Calculated Field	Results of a calculation. The calculation must refer to other fields in the same table. You would use the Expression Builder to create the calculation. Note, Calculated fields were first introduced in Access 2010.
Attachment	Attached images, spreadsheet files, documents, charts, and other types of supported files to the records in your database, similar to attaching files to e-mail messages.
Hyperlink	Text or combinations of text and numbers stored as text and used as a hyperlink address.
Memo	Long blocks of text. A typical use of a Memo field would be a detailed product description. Note, beginning in Access 2013, Memo data types have been renamed to Long Text.
Lookup	Displays either a list of values that is retrieved from a table or query, or a set of values that you specified when you created the field. The Lookup Wizard starts and you can create a Lookup field. The data type of a Lookup field is either Text or Number, depending on the choices that you make in the wizard. Lookup fields have an additional set of field properties, which are located on the **Lookup** tab in the **Field Properties** pane.

Number

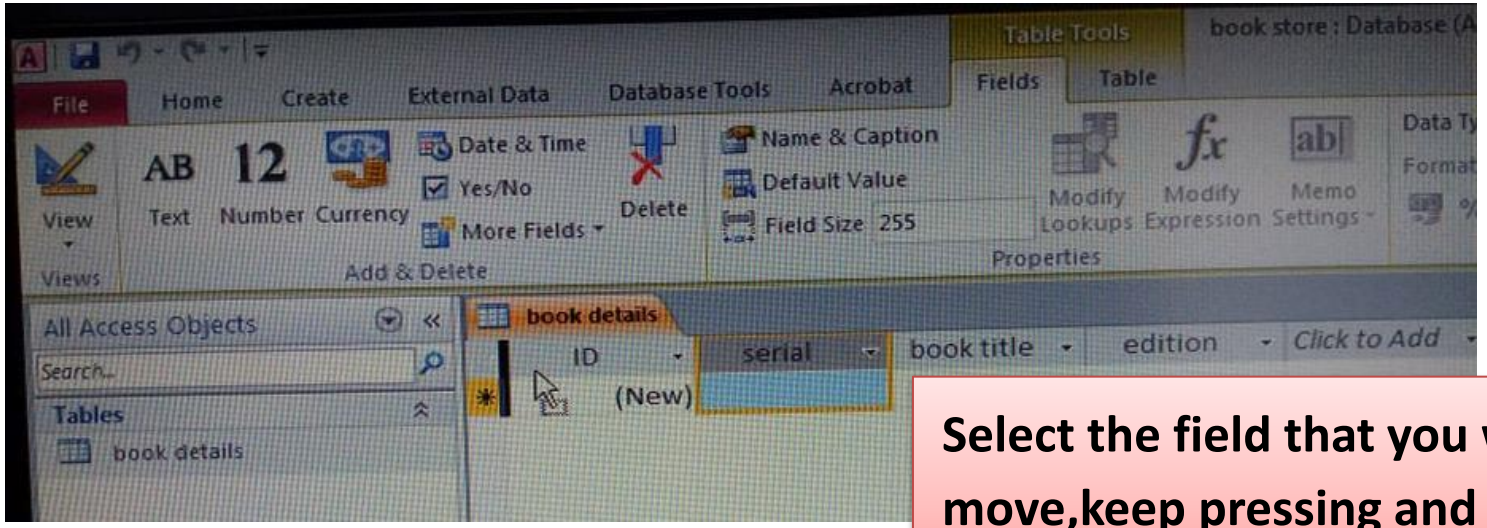
Format	Use to display
General	Numbers without additional formatting exactly as it is stored.
Currency	General monetary values.
Euro	General monetary values stored in the EU format.
Fixed	Numeric data.
Standard	Numeric data with decimal.
Percentage	Percentages.
Scientific	Calculations.

Date and Time

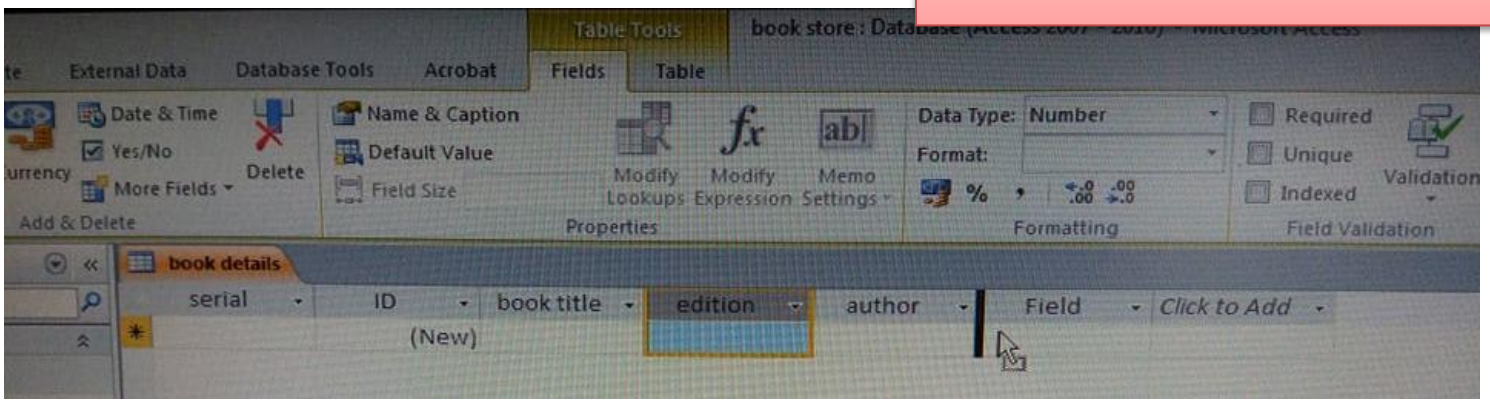
Format	Use to display
Short Date	Display the date in a short format. Depends on your regional date and time settings. For example, 3/14/2001 for USA.
Medium Date	Display the date in medium format. For example, 3-Apr-09 for USA.
Long Date	Display the date in a long format. Depends on you're the regional date and time settings. For example, Wednesday, March 14, 2001 for USA.
Time am/pm	Display the time only using a 12 hour format that will respond to changes in the regional date and time settings.
Medium Time	Display the time followed by AM/PM.
Time 24hour	Display the time only using a 24 hour format that will respond to changes in the regional date and time settings

Click here For more details

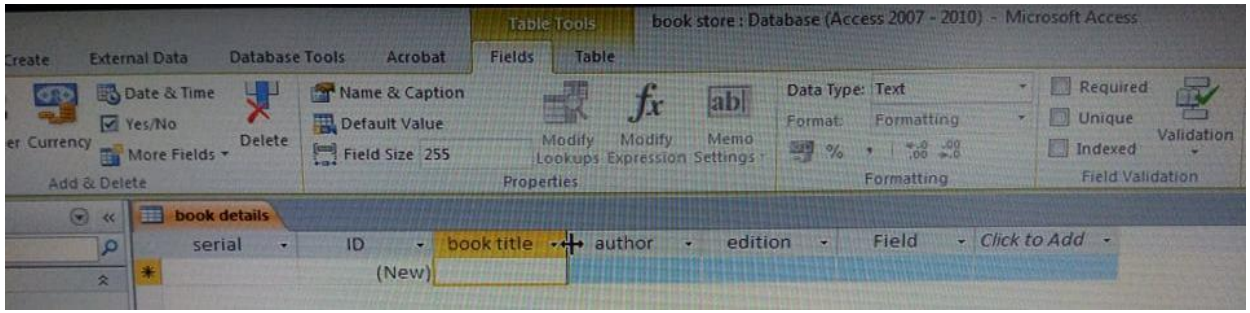
Rearrane the place of the fields

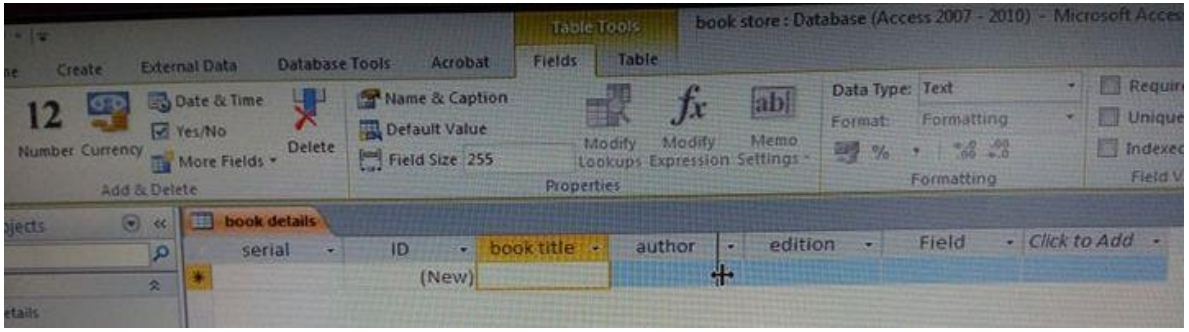


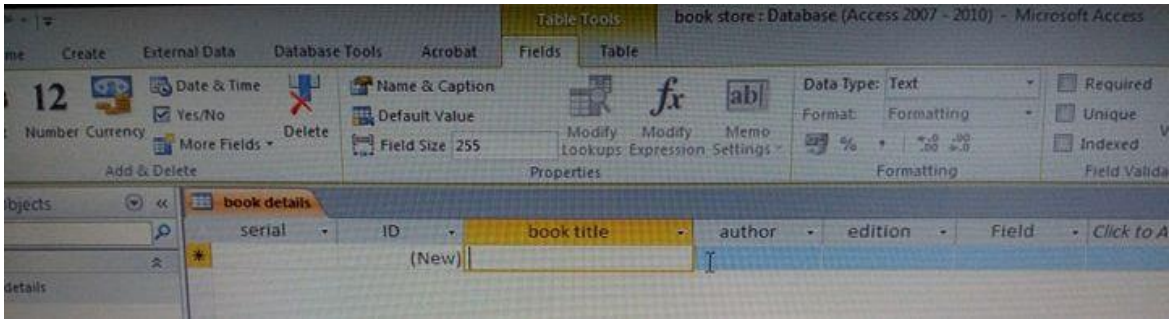
Select the field that you want to move,keep pressing and drag



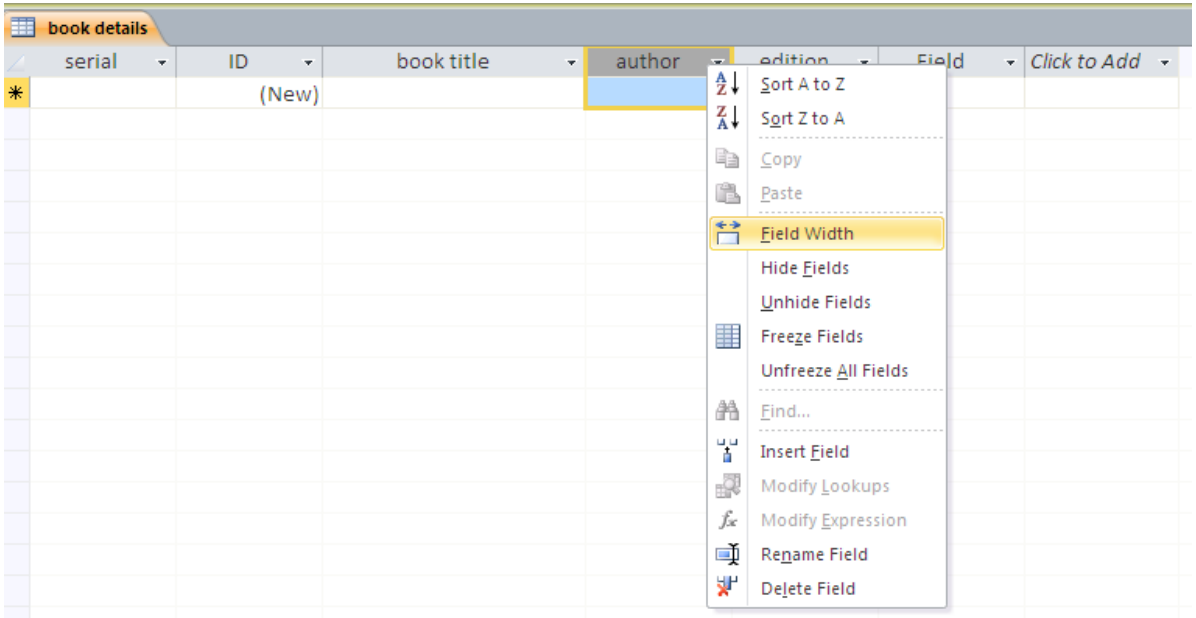
Change the width of the field



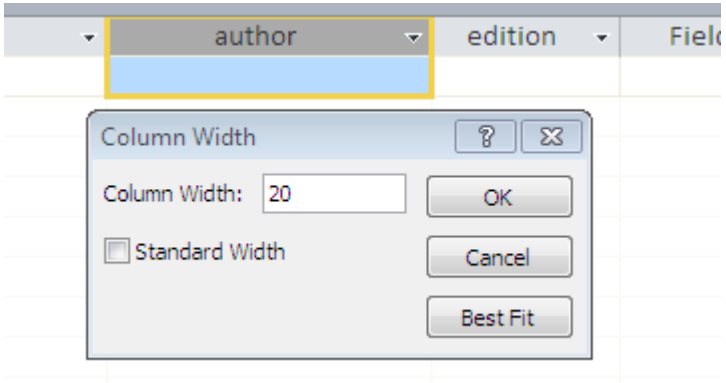




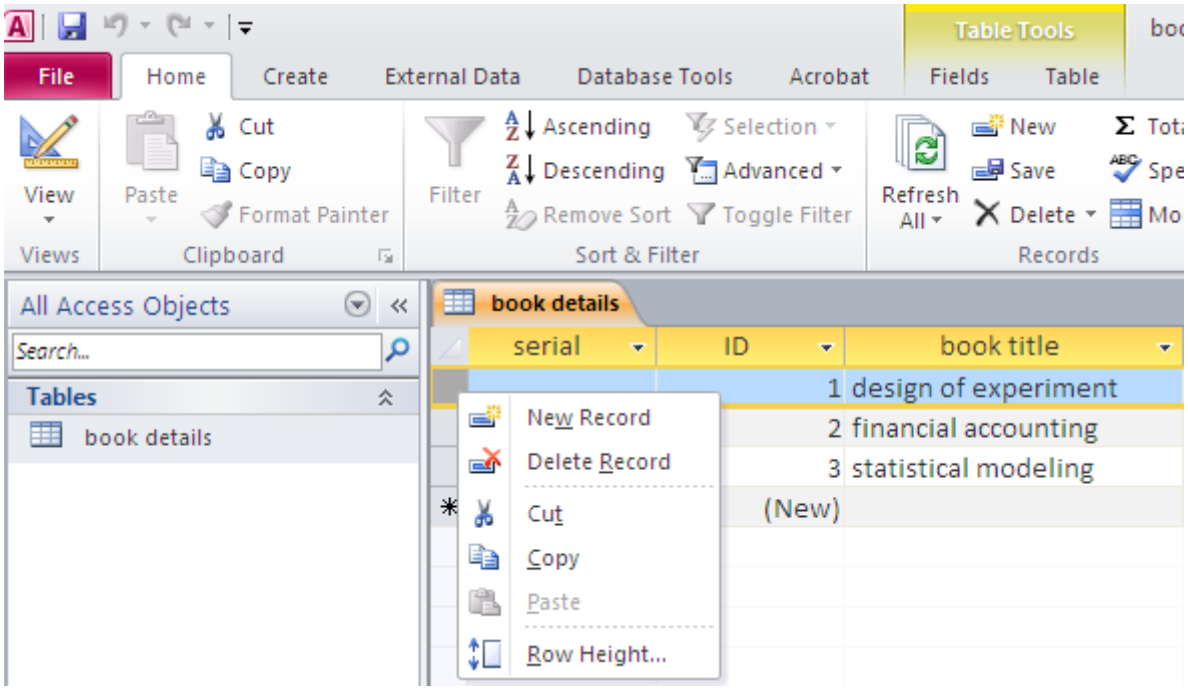
Method 1 : Drag



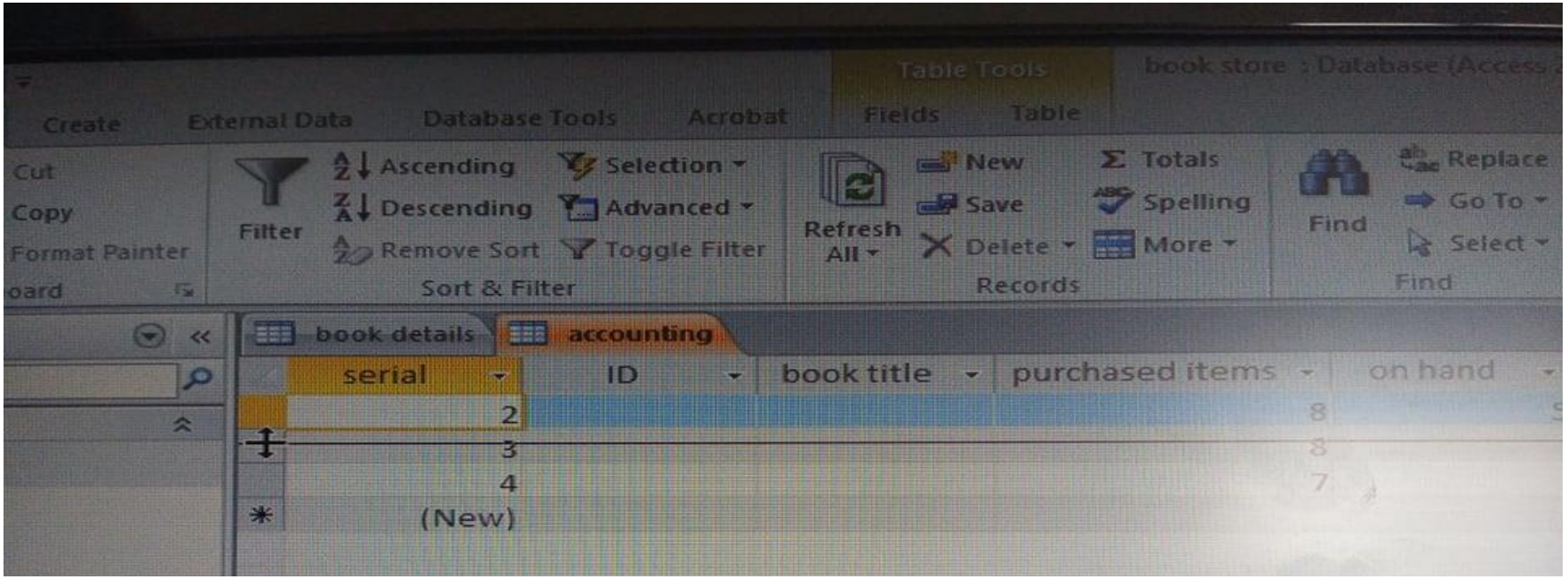
Method 2 :
Right click on the field name



Change the High of the rows

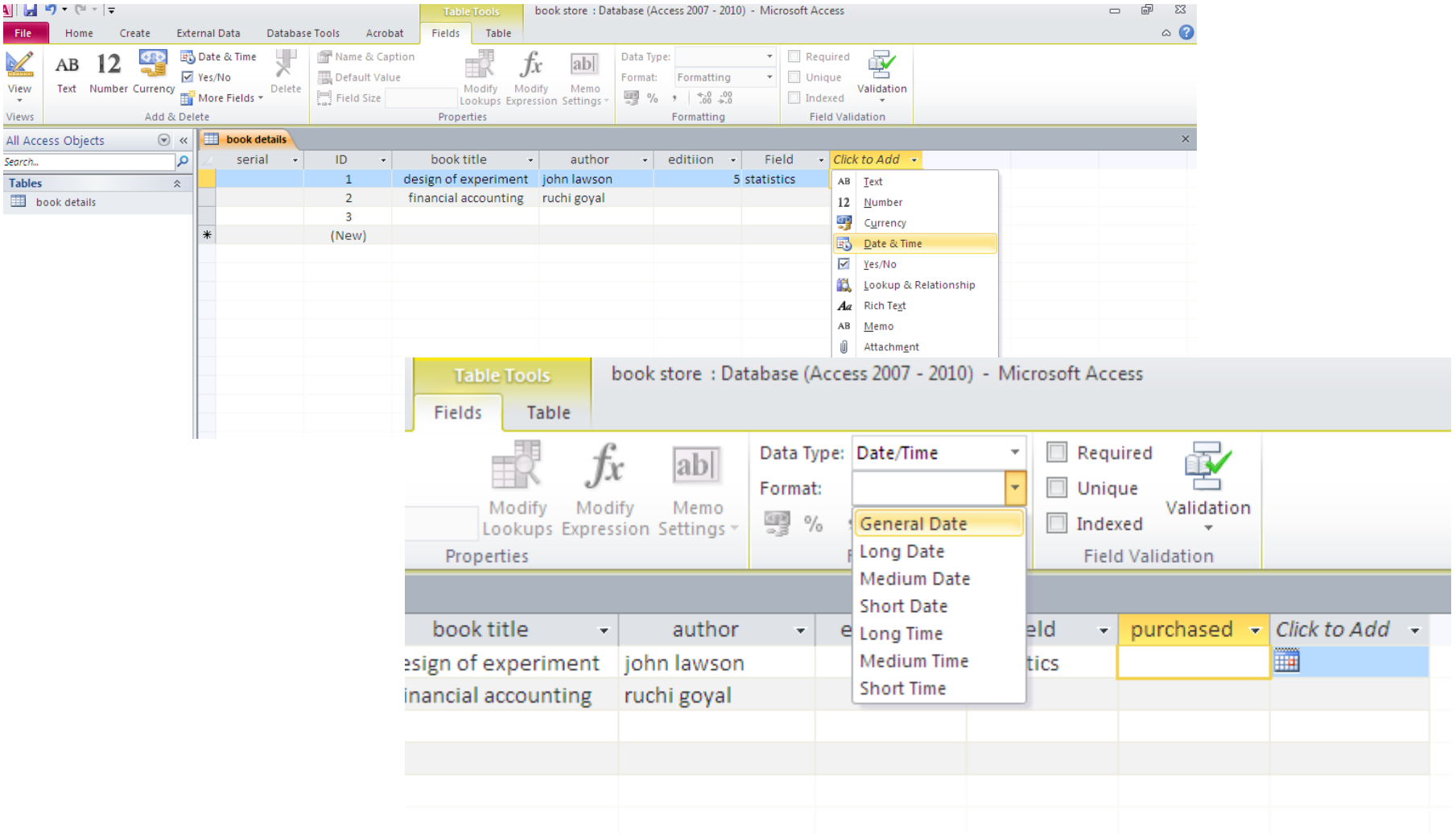


Method 1 :
Right click on a record



Method 2 : Drag

Add more fields – date –



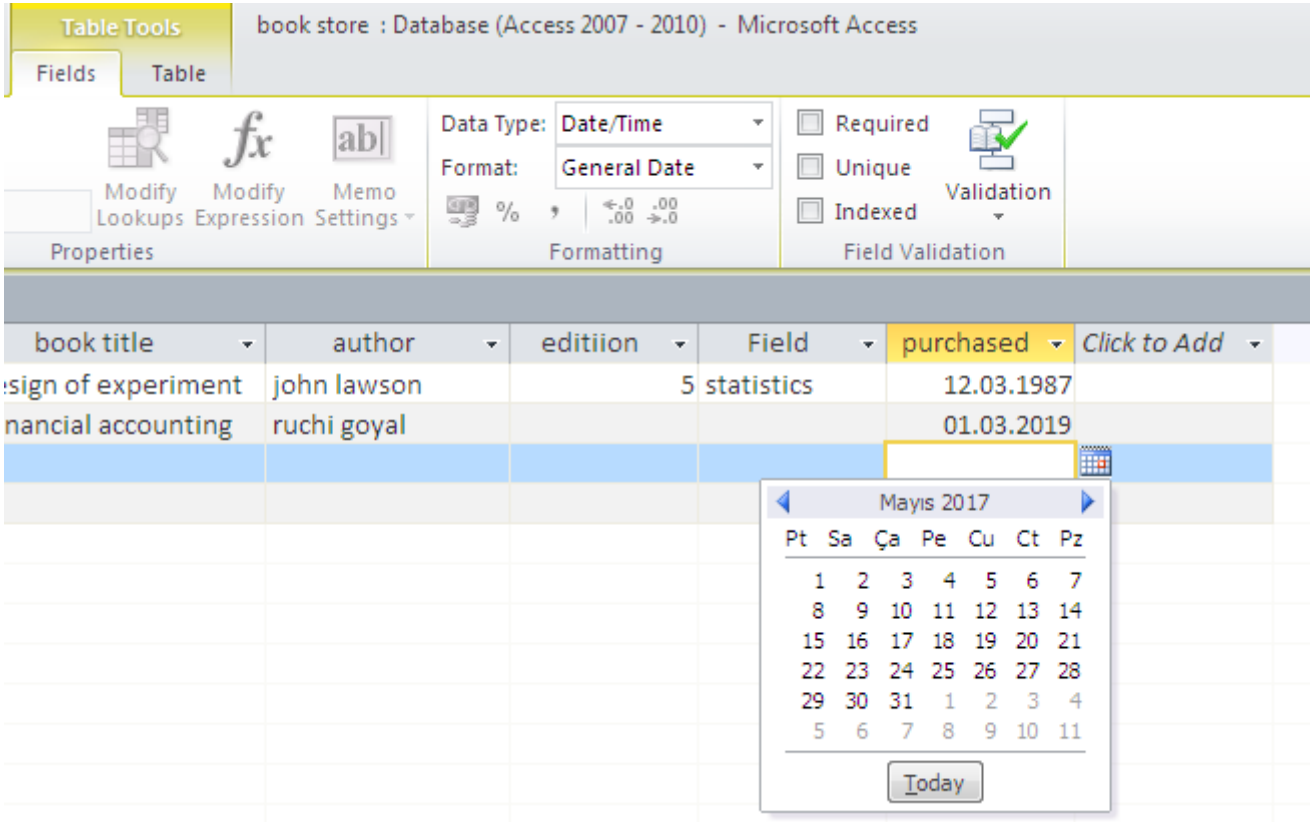
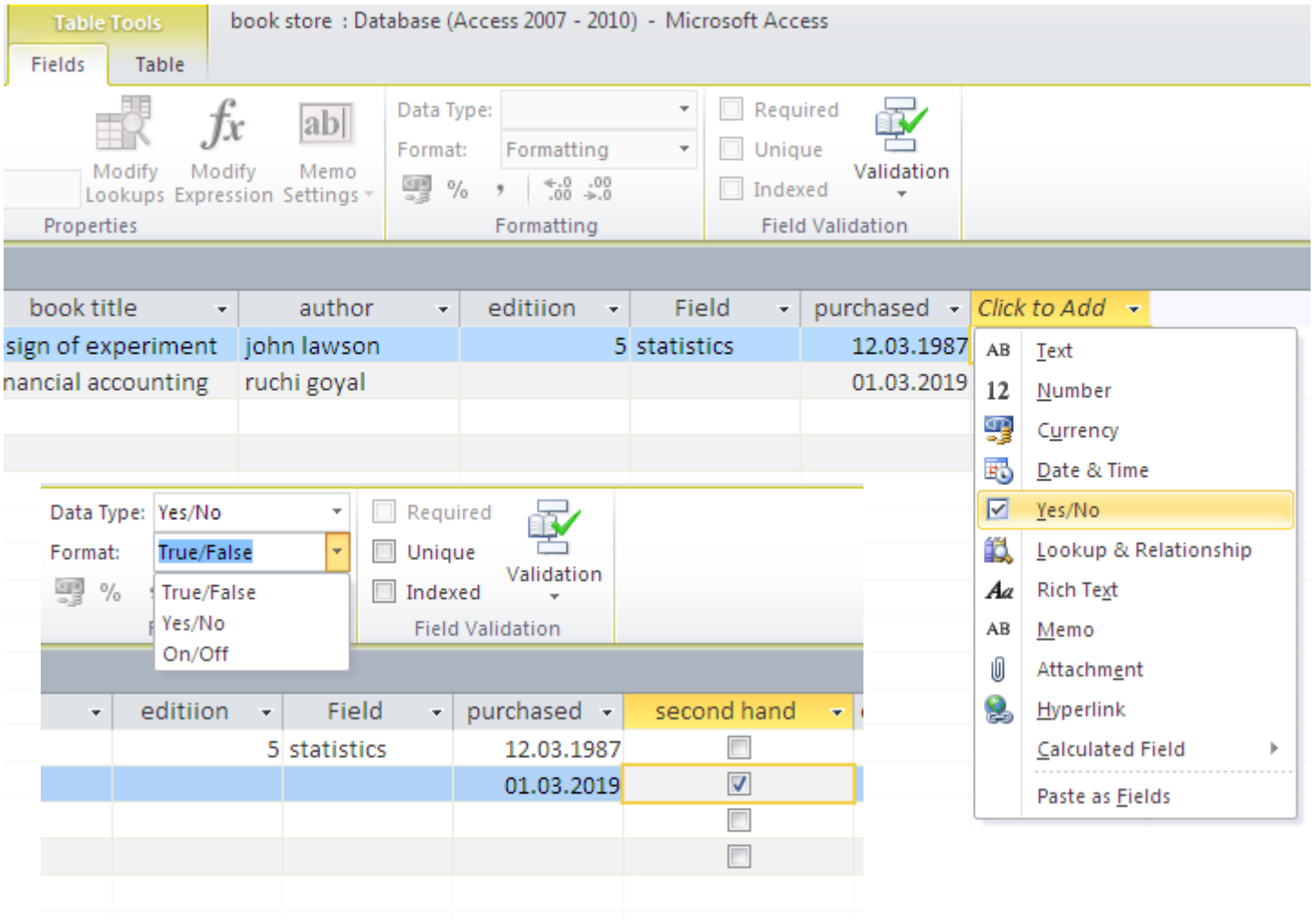
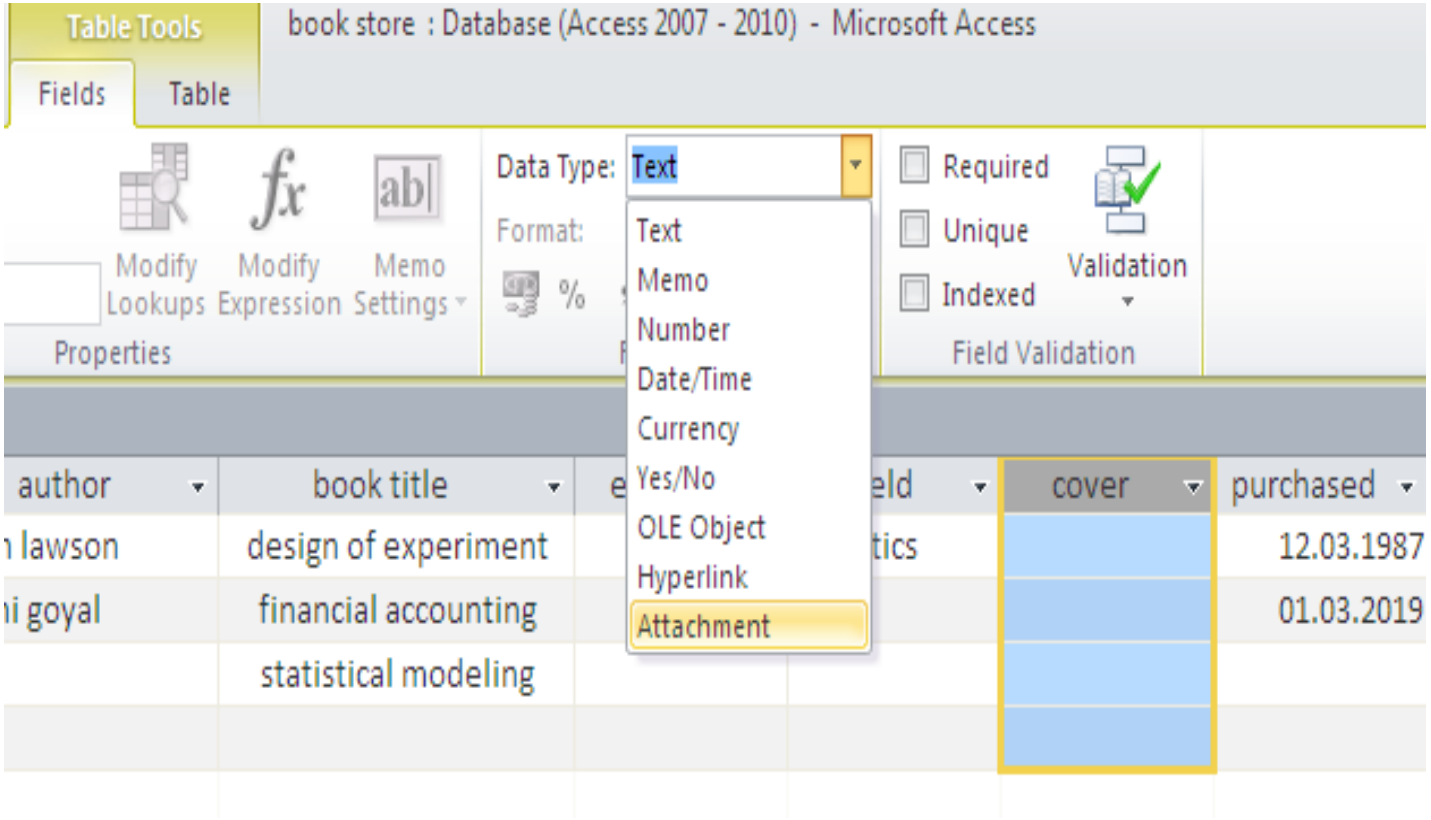


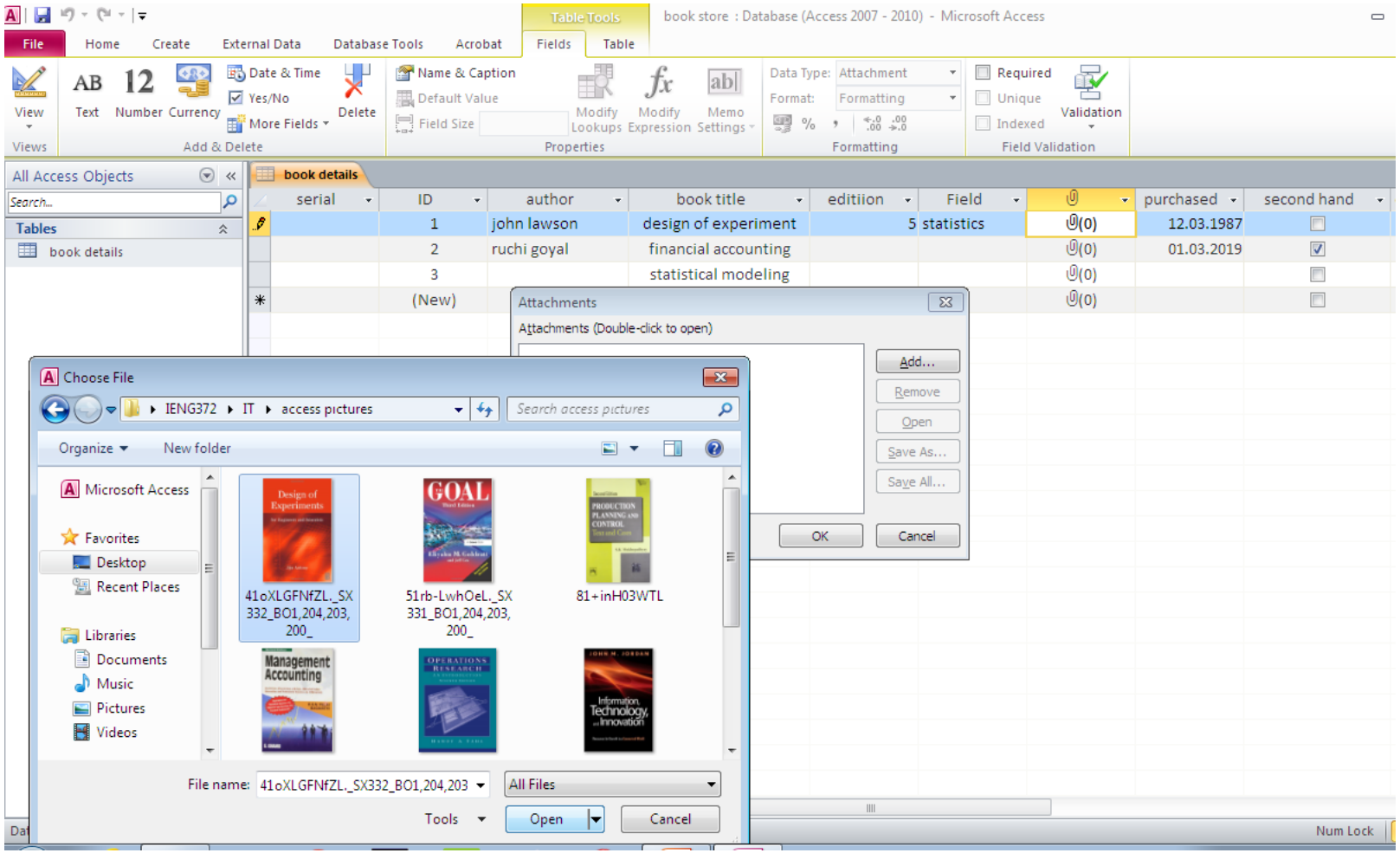
Table Tools
book store : Database (Access 2007 - 2010) - Microsoft Access
Fields
Table
Modify Lookups
Modify Expression
Memo Settings
Properties
Data Type: Date/Time
Format: General Date
Formatting
Required
Unique
Indexed
Validation
Field Validation
book title
author
editiion
Field
purchased
Click to Add
sign of experiment
john lawson
5
statistics
12.03.1987
nancial accounting
ruchi goyal
01.03.2019
Mayıs 2017
Pt Sa Ça Pe Cu Ct Pz
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31 1 2 3 4
5 6 7 8 9 10 11
Today

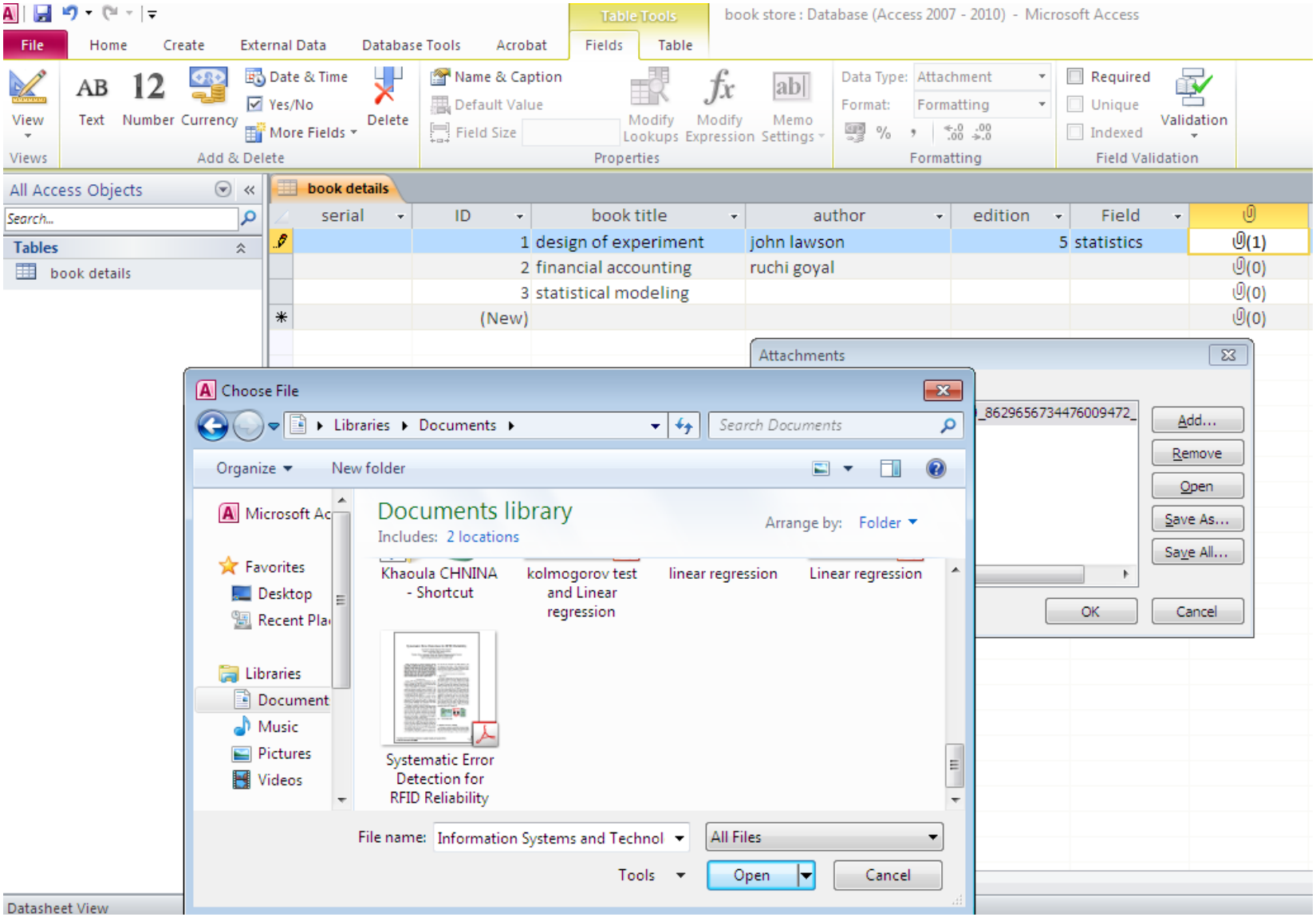
Add more fields – yes/no –



Add more fields – Attachement –

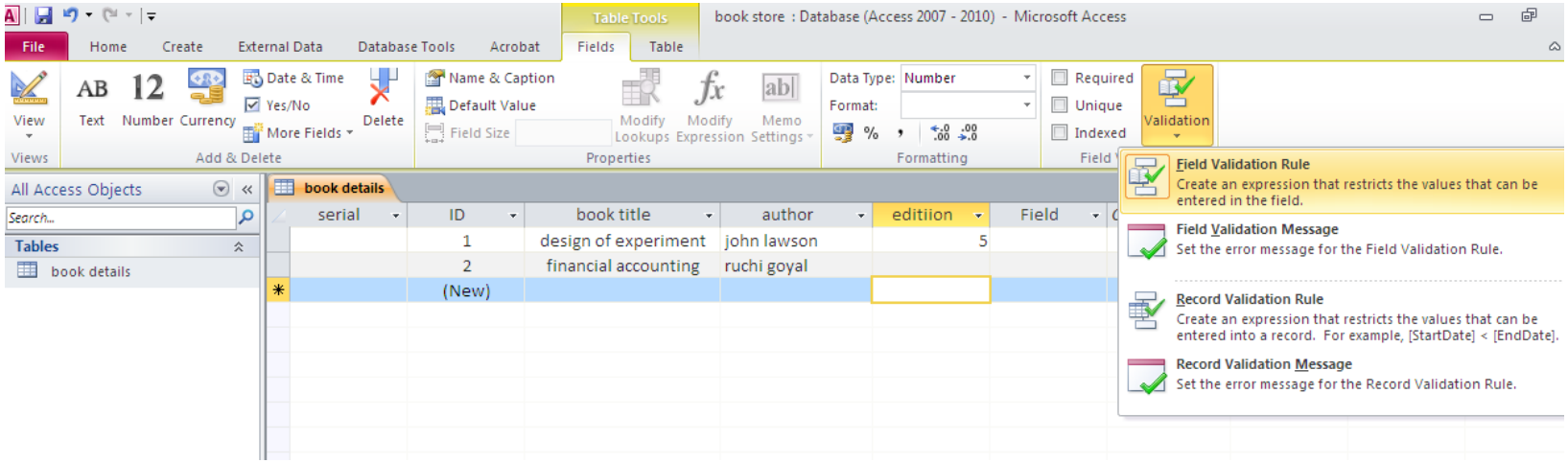


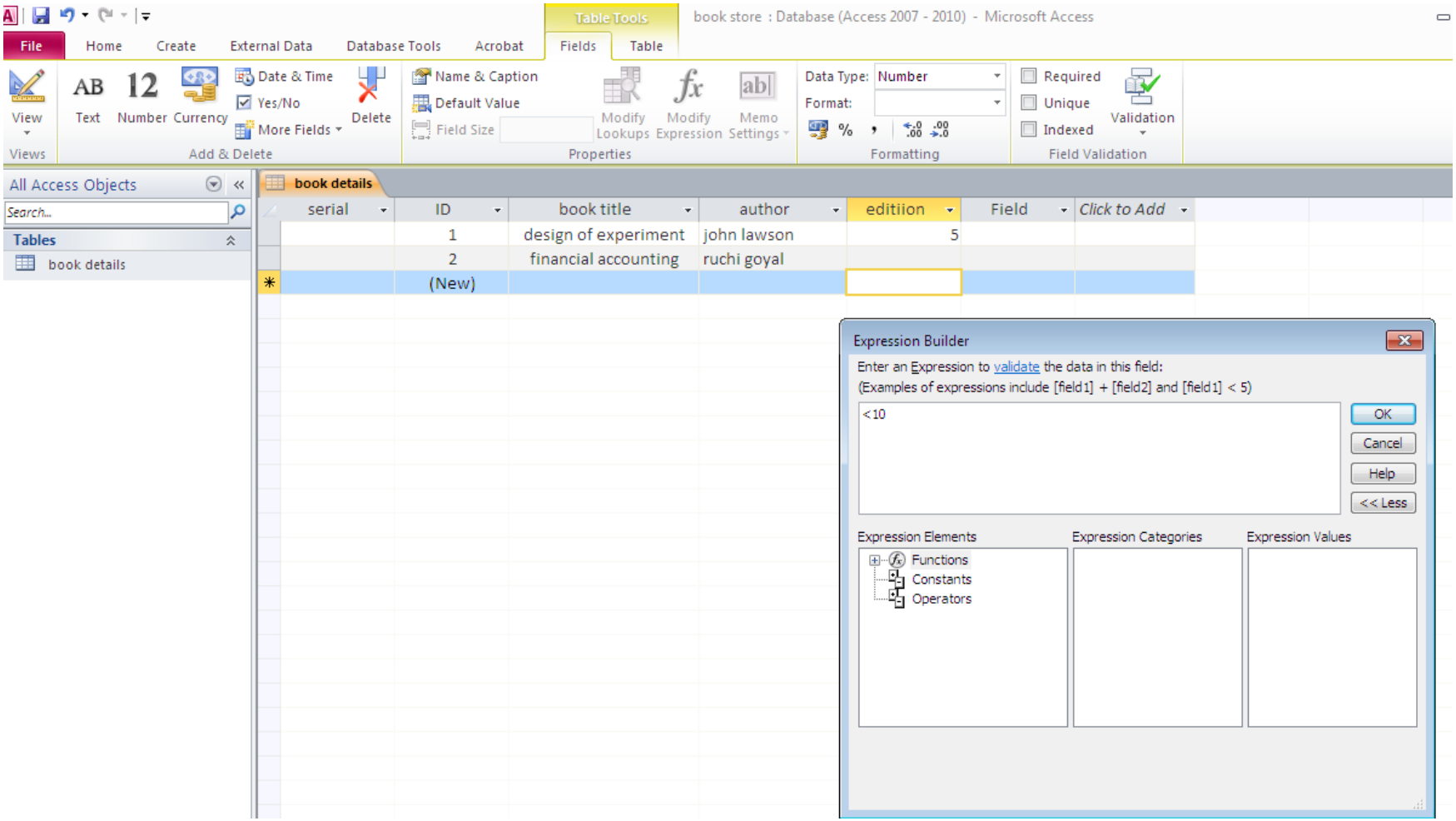

book store : Database (Access 2007 - 2010) - Microsoft Access
Table Tools
File
Home
Create
External Data
Database Tools
Acrobat
Fields
Table
All Access Objects
Tables
book details
serial
ID
author
book title
editiion
Field
purchased
second hand
1
john lawson
design of experiment
5
statistics
12.03.1987
2
ruchi goyal
financial accounting
01.03.2019
3
statistical modeling
(New)
Attachments
Attachments (Double-click to open)
Add...
Remove
Open
Save As...
Save All...
OK
Cancel
Choose File
IENG372 ▸ IT ▸ access pictures
Search access pictures
Organize
New folder
Microsoft Access
Favorites
Desktop
Recent Places
Libraries
Documents
Music
Pictures
Videos
41oXLGFNfZL._SX332_BO1,204,203,200_
51rb-LwhOeL._SX331_BO1,204,203,200_
81+inH03WTL
File name: 41oXLGFNfZL._SX332_BO1,204,203
All Files
Tools
Open
Cancel
Num Lock


book store : Database (Access 2007 - 2010) - Microsoft Access
Table Tools
File
Home
Create
External Data
Database Tools
Acrobat
Fields
Table
View
Text
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Data Type: Attachment
Format: Formatting
Required
Unique
Indexed
Validation
Views
Add & Delete
Properties
Formatting
Field Validation
All Access Objects
Search...
Tables
book details
book details
serial
ID
book title
author
edition
Field
1 design of experiment john lawson 5 statistics (1)
2 financial accounting ruchi goyal (0)
3 statistical modeling (0)
(New) (0)
Attachments
Add...
Remove
Open
Save As...
Save All...
OK
Cancel
Choose File
Libraries ▸ Documents ▸
Search Documents
Organize
New folder
Microsoft Ac
Favorites
Desktop
Recent Pla
Libraries
Document
Music
Pictures
Videos
Documents library
Includes: 2 locations
Arrange by: Folder
Khaoula CHNINA - Shortcut
kolmogorov test and Linear regression
linear regression
Linear regression
Systematic Error Detection for RFID Reliability
File name: Information Systems and Technol
All Files
Tools
Open
Cancel
Datasheet View

Field Validation rule

You can use the **Validation Rule** property to require specific values, and the **Validation Text** property to alert your users to any mistakes.
For example, entering a rule such as **>100 And <1000** in the **Validation Rule** property forces users to enter values between 100 and 1,000.
A rule such as **[EndDate]>=[StartDate]** forces users to enter an ending date that occurs on or after a starting date.

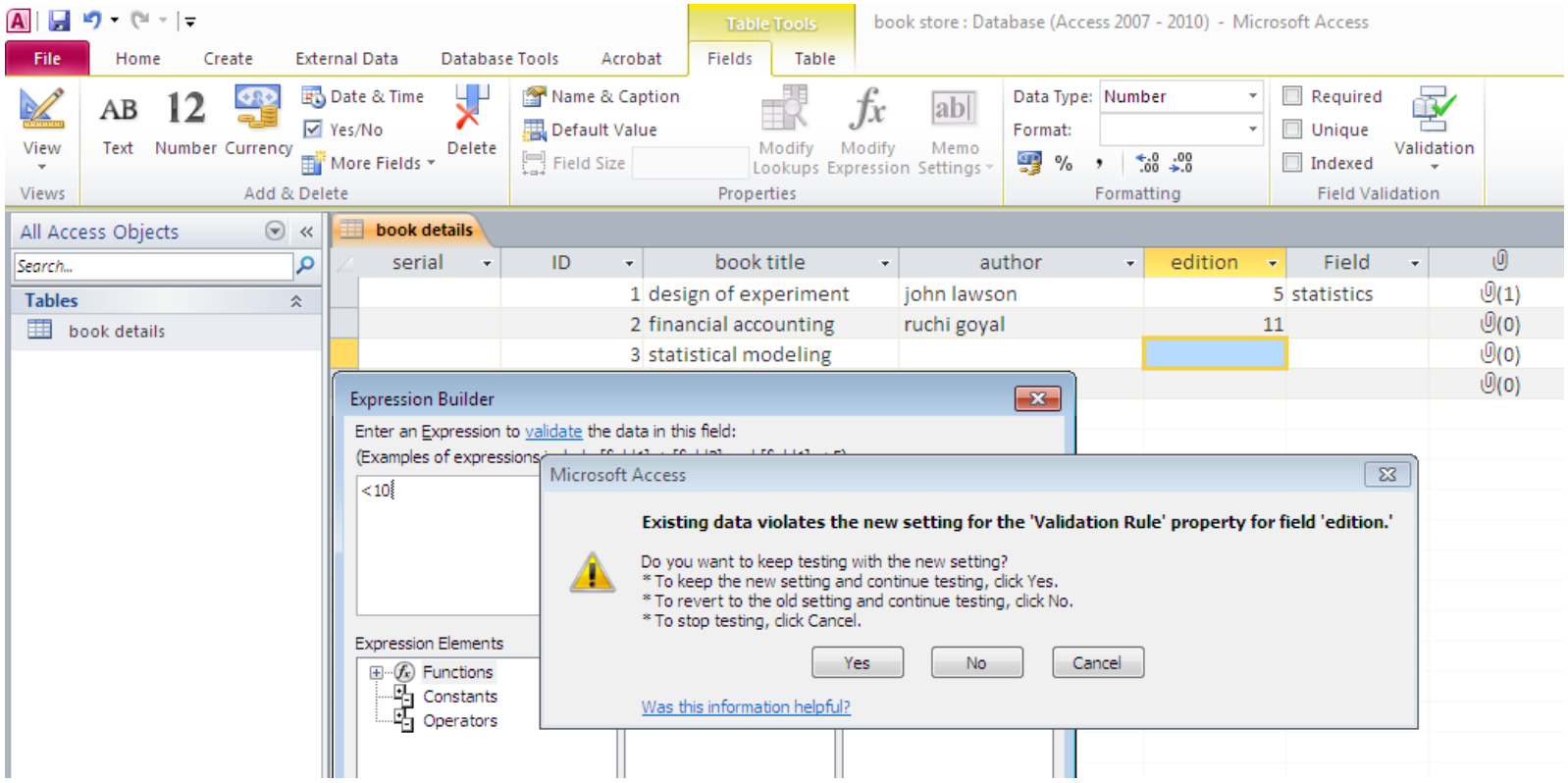



book store : Database (Access 2007 - 2010) - Microsoft Access
Table Tools
File
Home
Create
External Data
Database Tools
Acrobat
Fields
Table
View
Text
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Data Type: Number
Format:
Required
Unique
Indexed
Validation
Views
Add & Delete
Properties
Formatting
Field Validation
All Access Objects
Search...
Tables
book details
book details
serial
ID
book title
author
editiion
Field
Click to Add
1
design of experiment
john lawson
5
2
financial accounting
ruchi goyal
(New)
Expression Builder
Enter an Expression to validate the data in this field:
(Examples of expressions include [field1] + [field2] and [field1] < 5)
<10
OK
Cancel
Help
<< Less
Expression Elements
Expression Categories
Expression Values
Functions
Constants
Operators

But if there are already some records which violate the new setting (new validation rule) we will have to chose :

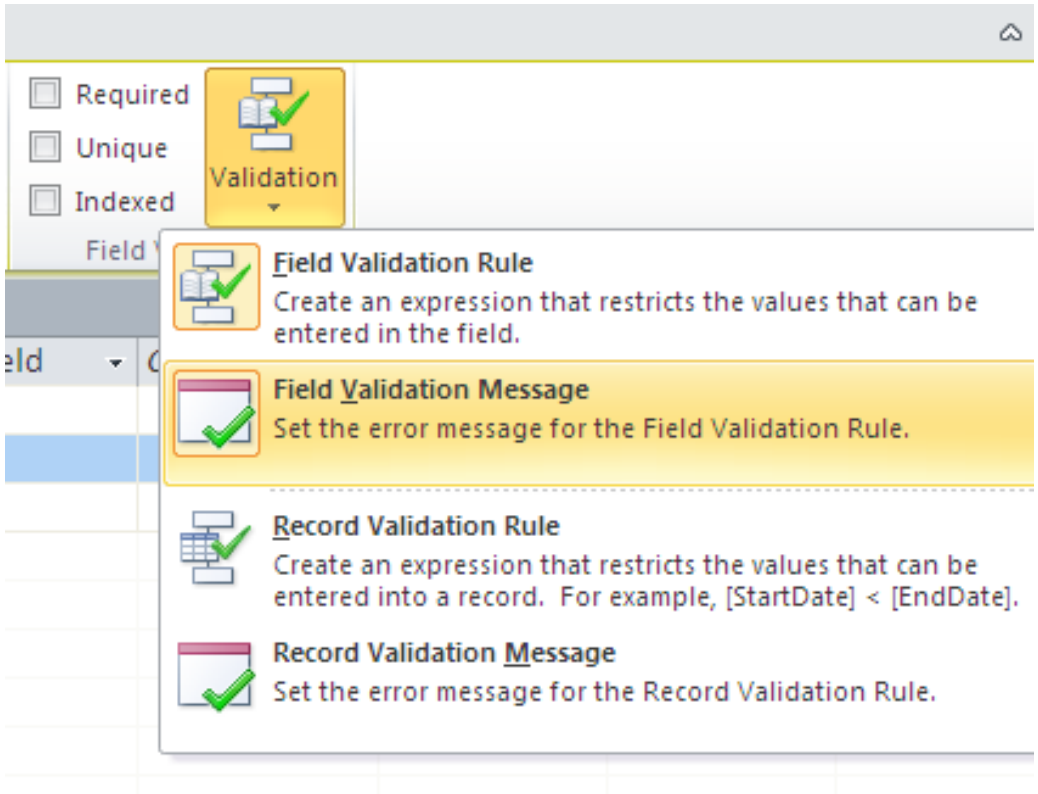
YES : access will keep these records and will start testing from the future one,

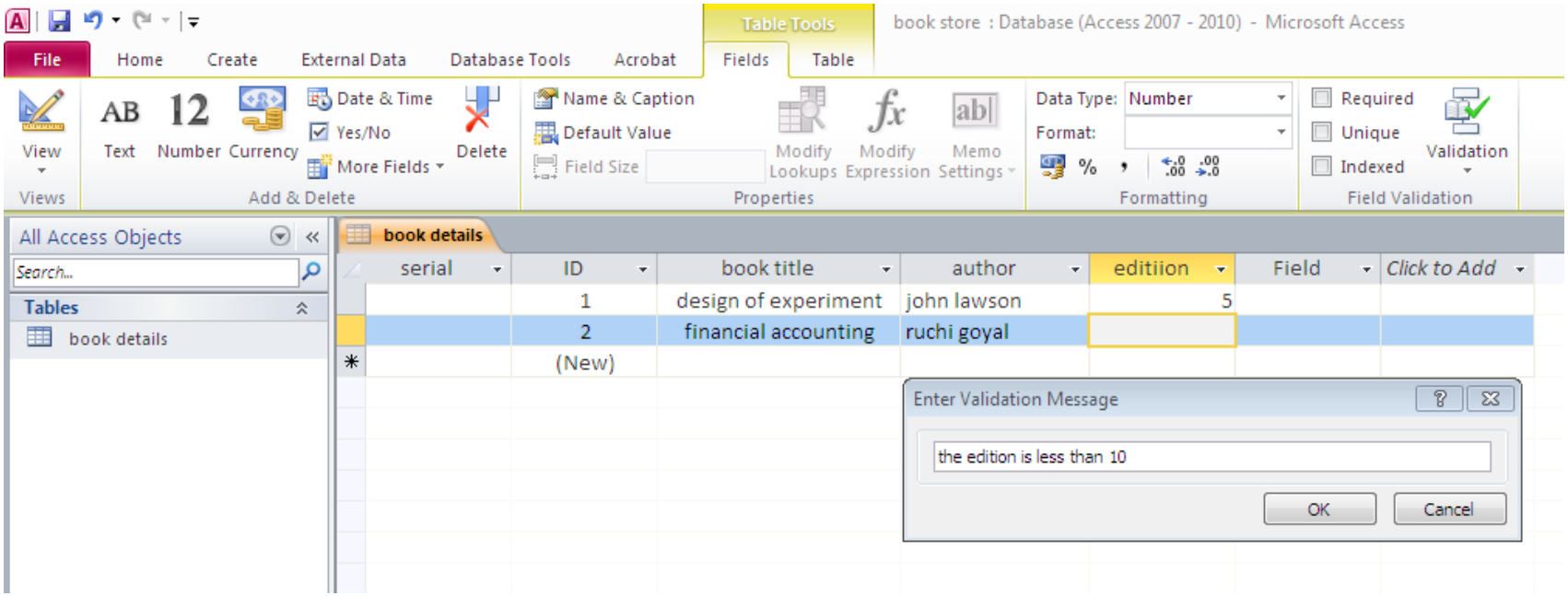
NO : the nes validation rule will be deleted ,and we will continue without testing



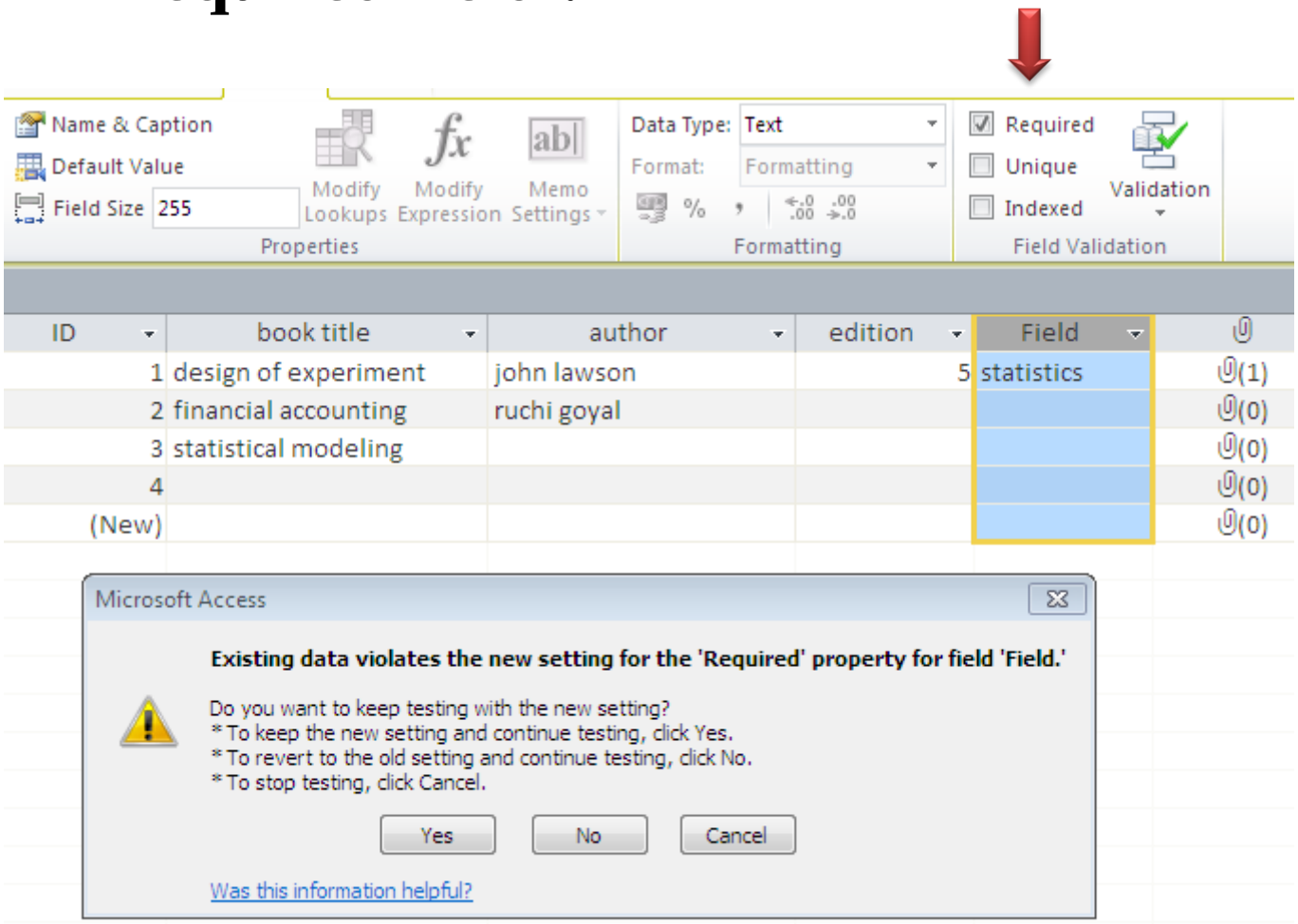
Field Validation message

Entering text such as "Enter values between 100 and 1,000" or "Enter an ending date on or after the start date" in the **Validation Text** property tells users when they have made a mistake and how to fix the error.




book store : Database (Access 2007 - 2010) - Microsoft Access
Table Tools
File
Home
Create
External Data
Database Tools
Acrobat
Fields
Table
View
Text
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Data Type: Number
Format:
Required
Unique
Indexed
Validation
Views
Add & Delete
Properties
Formatting
Field Validation
All Access Objects
Search...
Tables
book details
book details
serial
ID
book title
author
editiion
Field
Click to Add
1
design of experiment
john lawson
5
2
financial accounting
ruchi goyal
(New)
Enter Validation Message
the edition is less than 10
OK
Cancel

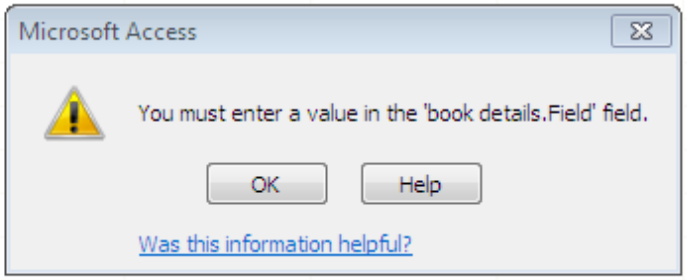
Required field :



The field «Field» is now required , it is impossible to add a new record (5th) unless we fill that field

book details

serial	ID	author	book title	editiion	Field		purchased
	1	john lawson	design of experiment	5	statistics	(1)	12.03.1987
	2	ruchi goyal	financial accounting			(0)	01.03.2019
	3		statistical modeling			(0)	
	4		the goal			(0)	
	(New)					(0)	



Design View

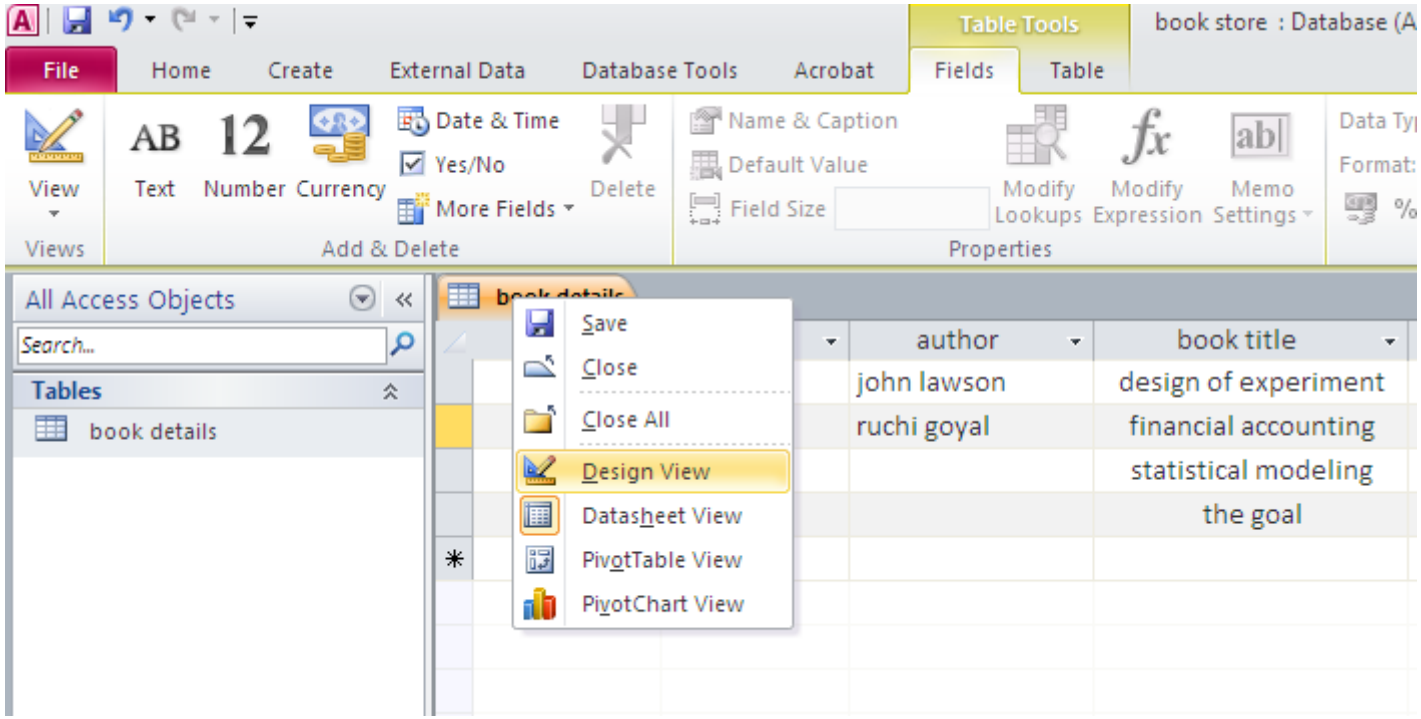
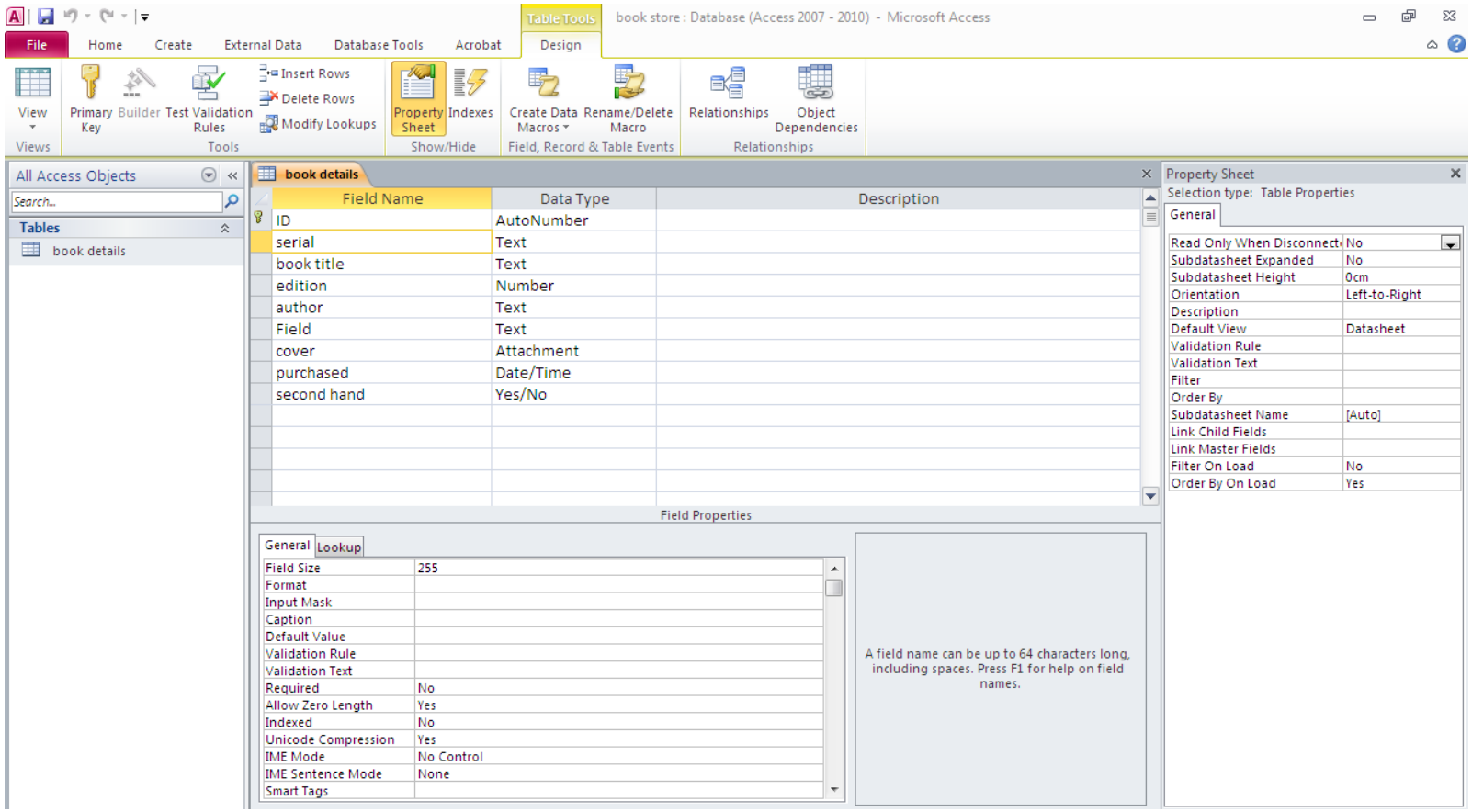
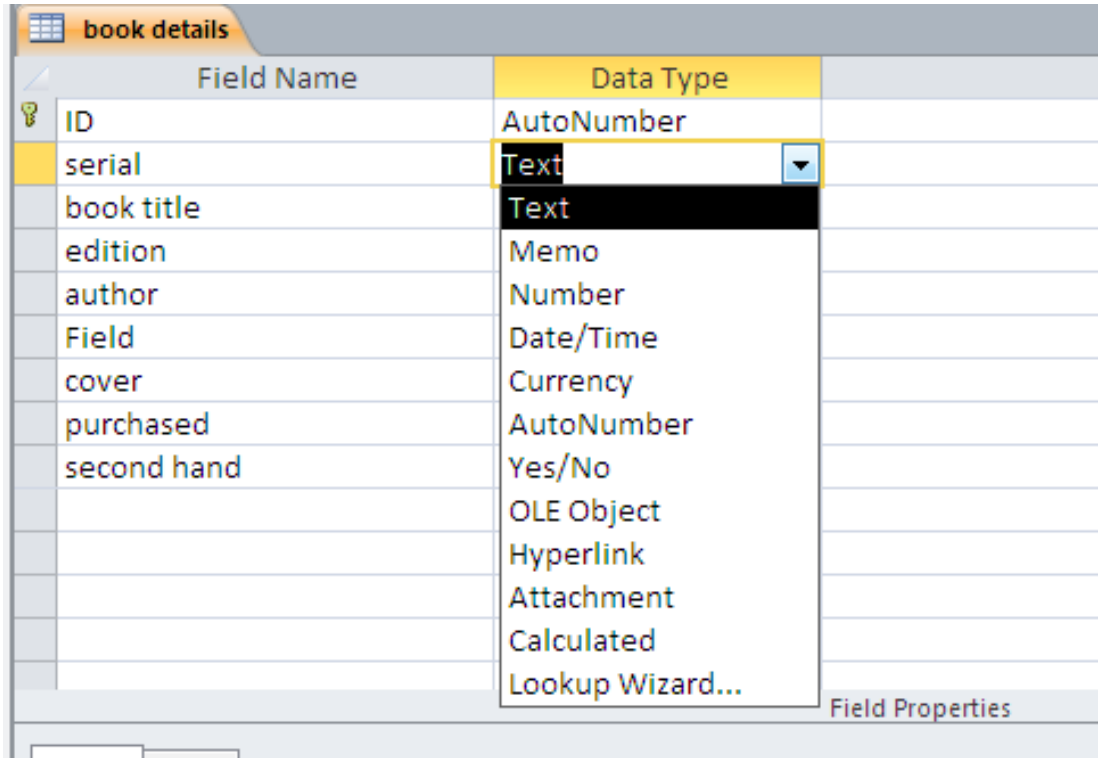


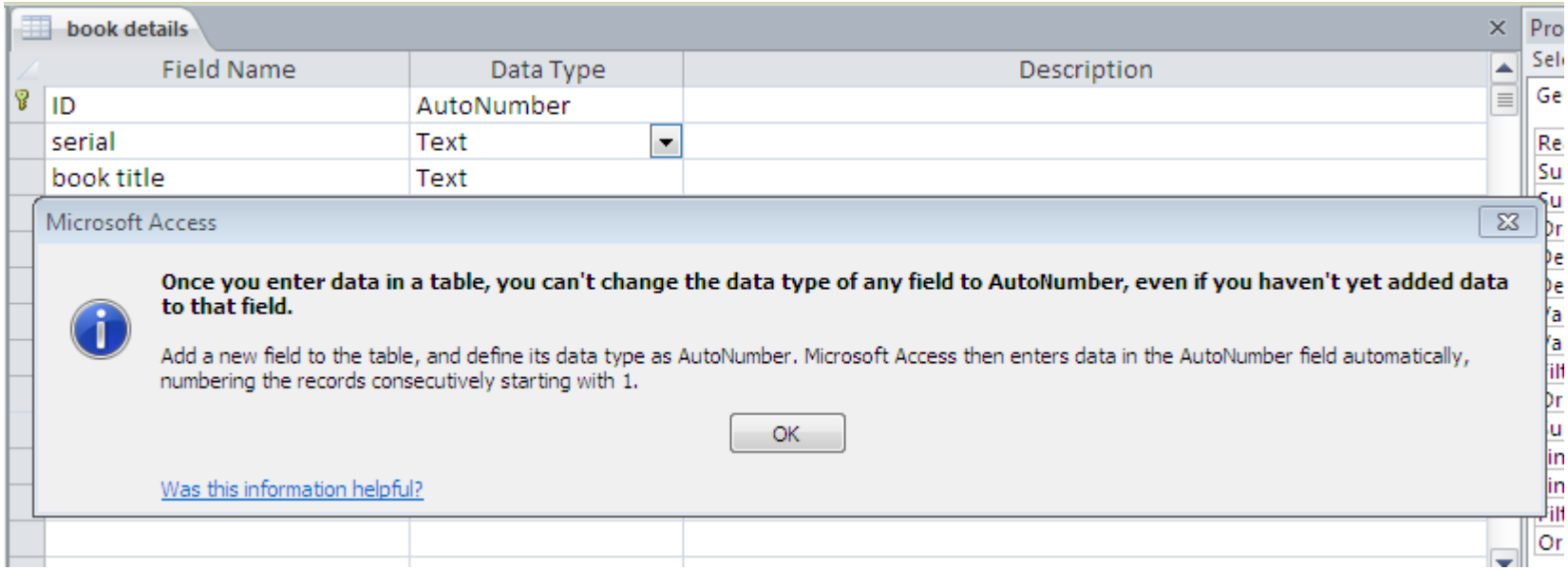
Table Tools
book store : Database (A
File
Home
Create
External Data
Database Tools
Acrobat
Fields
Table
View
Views
Text
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Add & Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Properties
All Access Objects
Search...
Tables
book details
Save
Close
Close All
Design View
Datasheet View
PivotTable View
PivotChart View
author
book title
john lawson
design of experiment
ruchi goyal
financial accounting
statistical modeling
the goal


book store : Database (Access 2007 - 2010) - Microsoft Access
Table Tools
File
Home
Create
External Data
Database Tools
Acrobat
Design
View
Primary Key
Builder
Test Validation Rules
Insert Rows
Delete Rows
Modify Lookups
Property Sheet
Indexes
Create Data Macros
Rename/Delete Macro
Relationships
Object Dependencies
Views
Tools
Show/Hide
Field, Record & Table Events
Relationships
All Access Objects
Search...
Tables
book details
book details
Field Name
Data Type
Description
ID
AutoNumber
serial
Text
book title
Text
edition
Number
author
Text
Field
Text
cover
Attachment
purchased
Date/Time
second hand
Yes/No
Field Properties
General
Lookup
Field Size
255
Format
Input Mask
Caption
Default Value
Validation Rule
Validation Text
Required
No
Allow Zero Length
Yes
Indexed
No
Unicode Compression
Yes
IME Mode
No Control
IME Sentence Mode
None
Smart Tags
A field name can be up to 64 characters long, including spaces. Press F1 for help on field names.
Property Sheet
Selection type: Table Properties
General
Read Only When Disconnecti
No
Subdatasheet Expanded
No
Subdatasheet Height
0cm
Orientation
Left-to-Right
Description
Default View
Datasheet
Validation Rule
Validation Text
Filter
Order By
Subdatasheet Name
[Auto]
Link Child Fields
Link Master Fields
Filter On Load
No
Order By On Load
Yes

We can rename and modify our fields :



We want to set the field ID as a text and serial as an autonumber



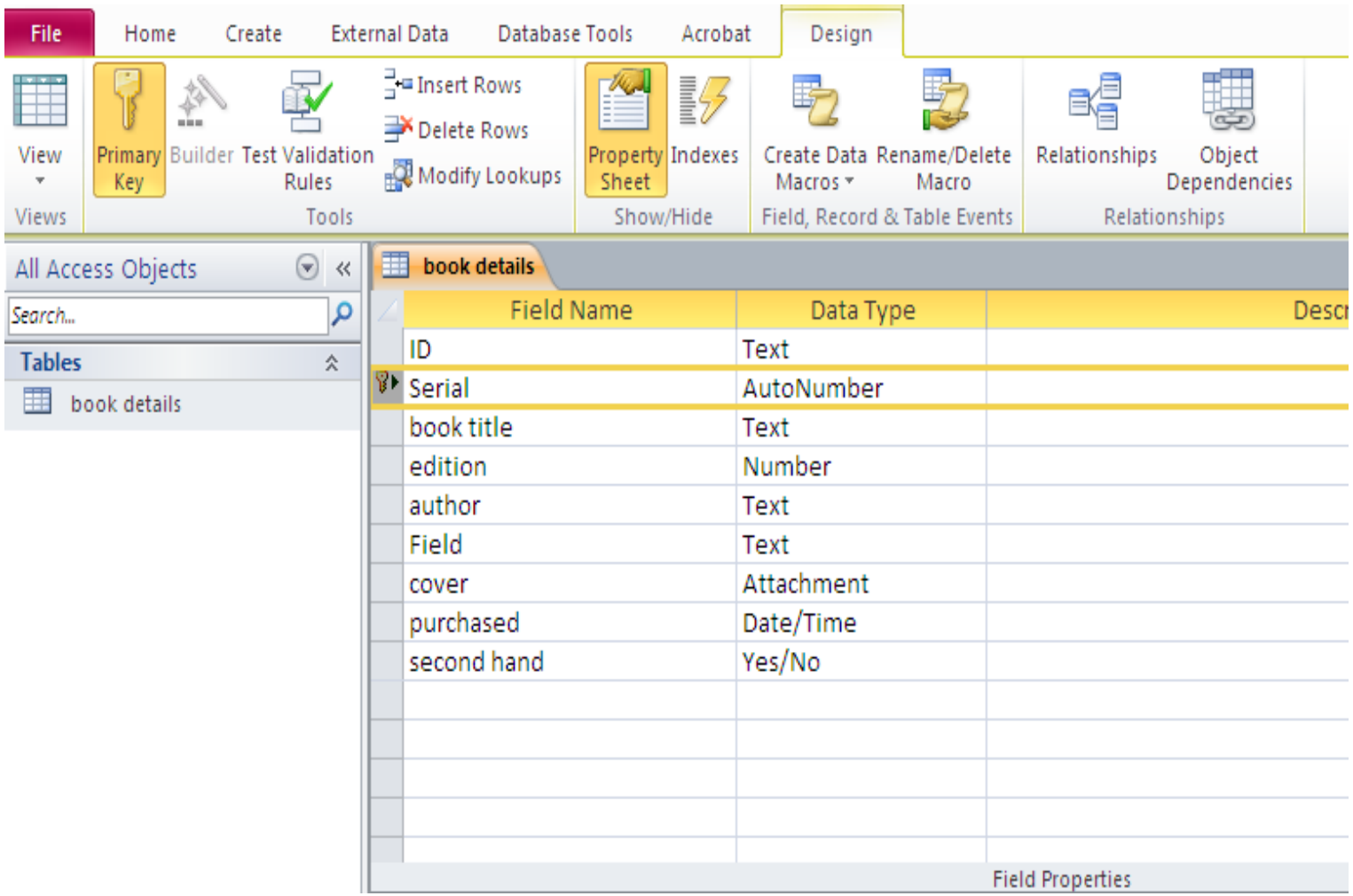
So , we will rename the field «ID» to «serial» and vice versa.
We can permutate the order of our fields by drag.

book details

Field Name	Data Type	Des
Serial	AutoNumber	
ID	Text	
book title	Text	
edition	Number	
author	Text	
Field	Text	
cover	Attachment	
purchased	Date/Time	
second hand	Yes/No	

Field Properties

primary key


File
Home
Create
External Data
Database Tools
Acrobat
Design
View
Primary Key
Builder
Test Validation Rules
Insert Rows
Delete Rows
Modify Lookups
Property Sheet
Indexes
Create Data Macros
Rename/Delete Macro
Relationships
Object Dependencies
Views
Tools
Show/Hide
Field, Record & Table Events
Relationships
All Access Objects
Search...
Tables
book details
book details
Field Name
Data Type
ID
Text
Serial
AutoNumber
book title
Text
edition
Number
author
Text
Field
Text
cover
Attachment
purchased
Date/Time
second hand
Yes/No
Field Properties

PRIMARY KEY (PRIMARY KEYWORD)

A primary key, also called a primary keyword, is a special relational database table column (or combination of columns) designated to uniquely identify all table records.

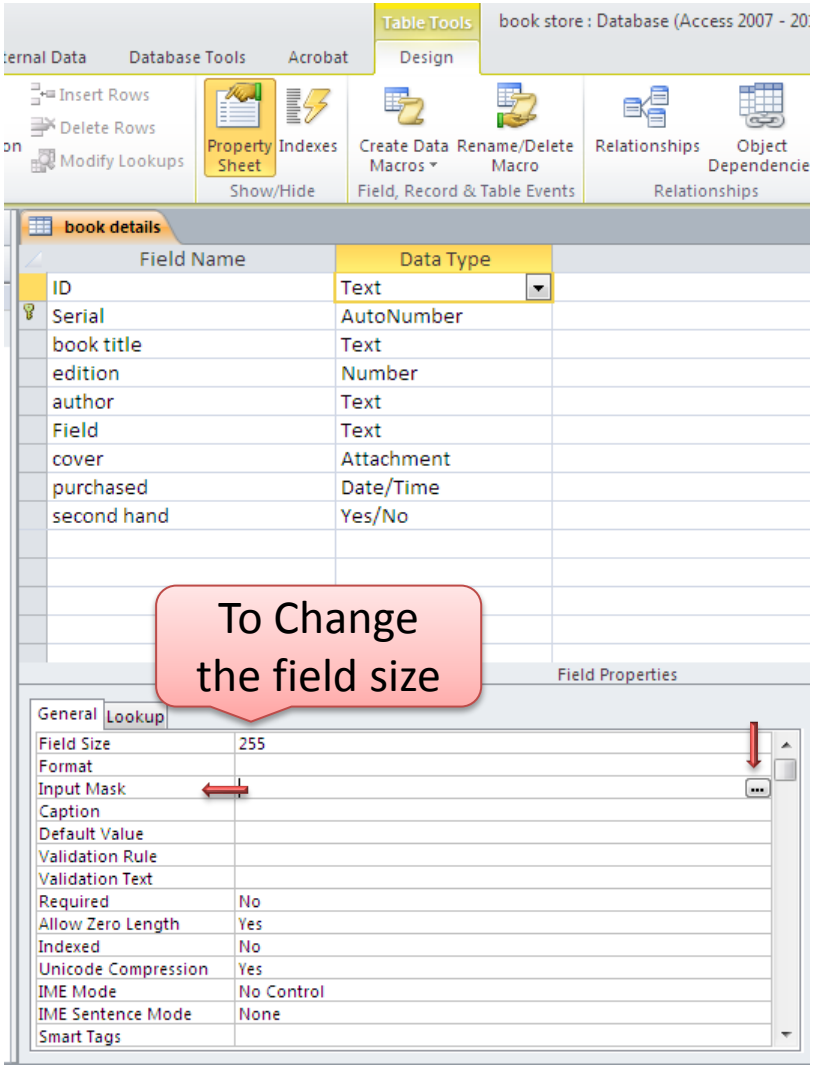
It is a unique identifier, such as a driver license number, telephone number (including area code), or vehicle identification number (VIN).

A relational database must always have one and only one primary key.

A primary key's main features are:

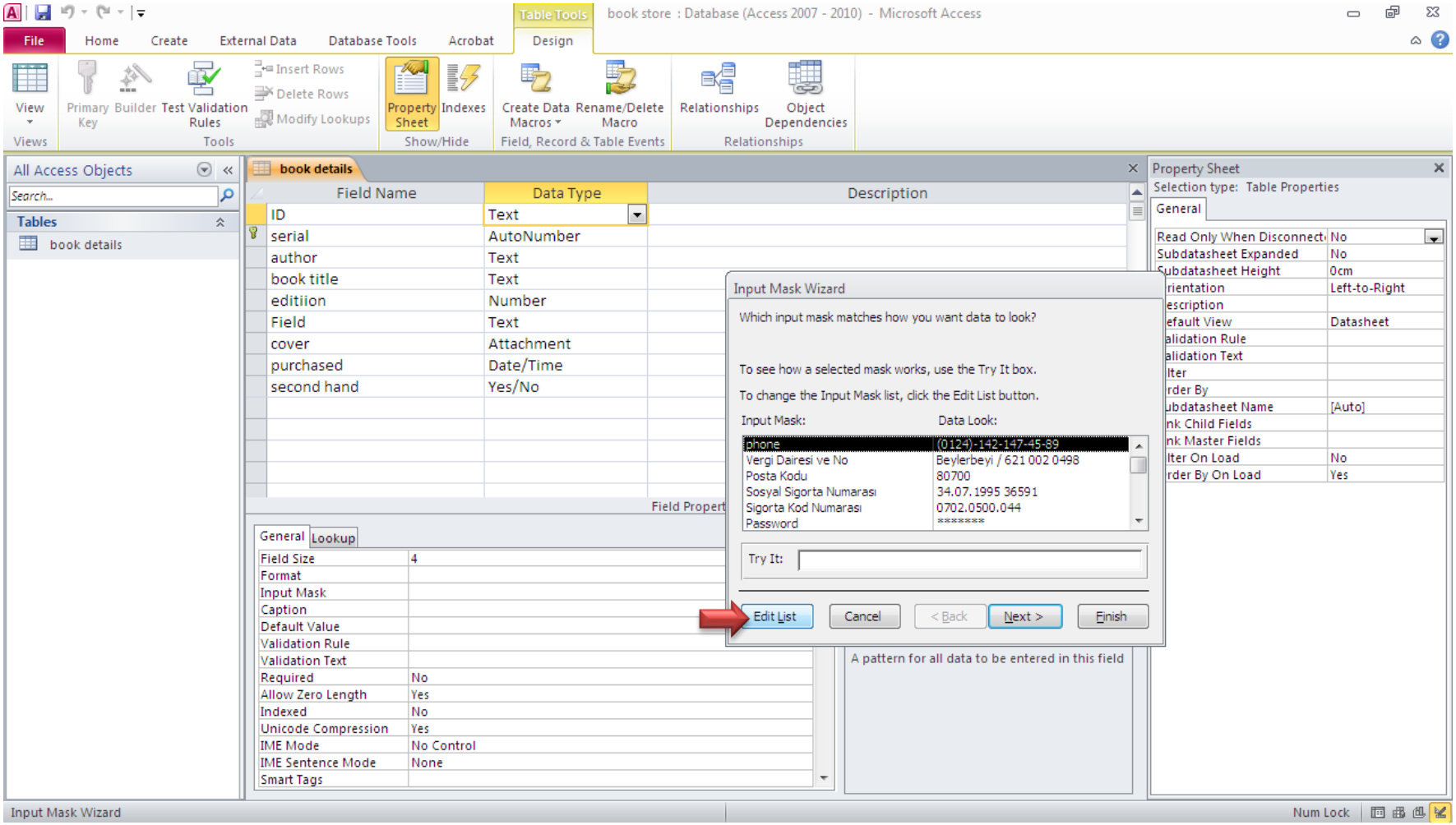
- It must contain a unique value for each row of data (record).
- It cannot contain null values.
- A primary key is either an existing table column or a column that is specifically generated by the database according to a defined sequence.

Input masks

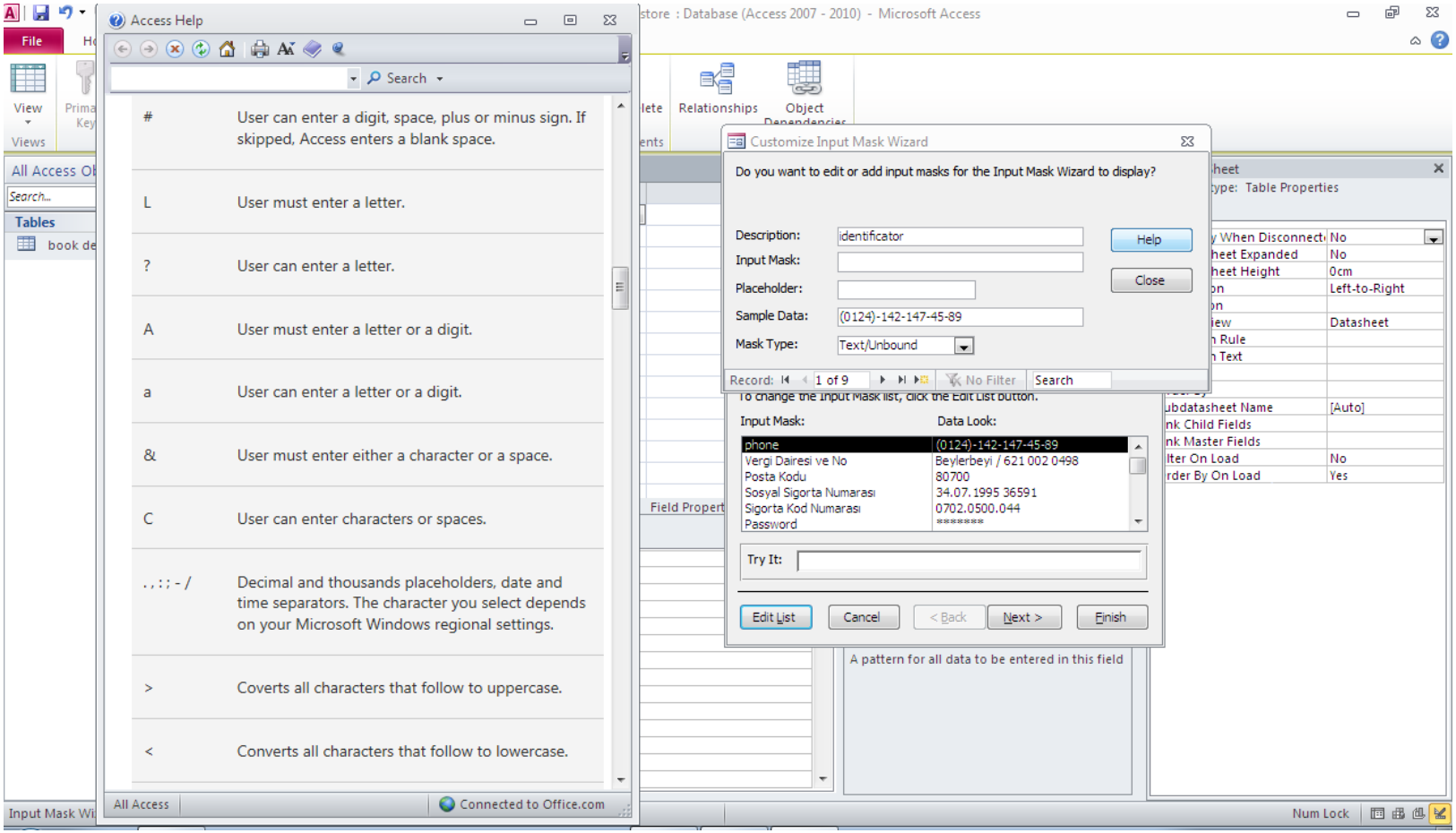


You can use an input mask to validate data by forcing users to enter values in a specific way. For example, an input mask can force users to enter dates in a European format, such as 2007.04.14.
Or to enter a text containing 2 capital letter and 2 numbers....

First click on «imput mask»
Then click on the «...» that appear


book store : Database (Access 2007 - 2010) - Microsoft Access
Table Tools
File
Home
Create
External Data
Database Tools
Acrobat
Design
View
Primary Key
Builder
Test Validation Rules
Insert Rows
Delete Rows
Modify Lookups
Property Sheet
Indexes
Create Data Macros
Rename/Delete Macro
Relationships
Object Dependencies
Views
Tools
Show/Hide
Field, Record & Table Events
Relationships
All Access Objects
Search...
Tables
book details
book details
Field Name
Data Type
Description
ID
Text
serial
AutoNumber
author
Text
book title
Text
editiion
Number
Field
Text
cover
Attachment
purchased
Date/Time
second hand
Yes/No
Field Propert
General
Lookup
Field Size
4
Format
Input Mask
Caption
Default Value
Validation Rule
Validation Text
Required
No
Allow Zero Length
Yes
Indexed
No
Unicode Compression
Yes
IME Mode
No Control
IME Sentence Mode
None
Smart Tags
A pattern for all data to be entered in this field
Input Mask Wizard
Which input mask matches how you want data to look?
To see how a selected mask works, use the Try It box.
To change the Input Mask list, click the Edit List button.
Input Mask:
Data Look:
phone
(0124)-142-147-45-89
Vergi Dairesi ve No
Beylerbeyi / 621 002 0498
Posta Kodu
80700
Sosyal Sigorta Numarası
34.07.1995 36591
Sigorta Kod Numarası
0702.0500.044
Password
****
Try It:
Edit List
Cancel
< Back
Next >
Finish
Property Sheet
Selection type: Table Properties
General
Read Only When Disconnect
No
Subdatasheet Expanded
No
Subdatasheet Height
0cm
rientation
Left-to-Right
escription
efault View
Datasheet
alidation Rule
alidation Text
lter
rder By
ubdatasheet Name
[Auto]
nk Child Fields
nk Master Fields
lter On Load
No
rder By On Load
Yes
Input Mask Wizard
Num Lock

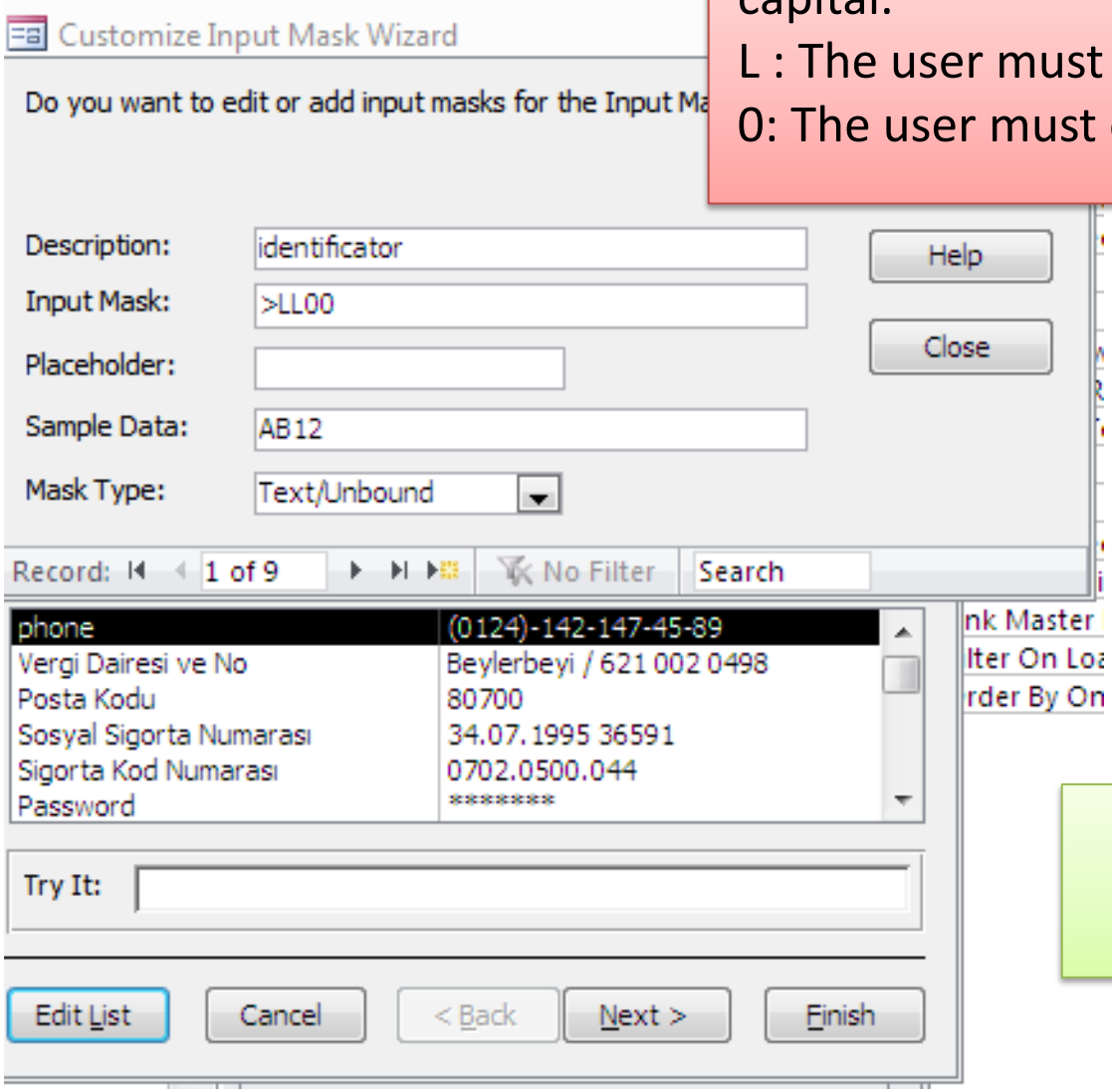
Press «Help» to see how to input your mask



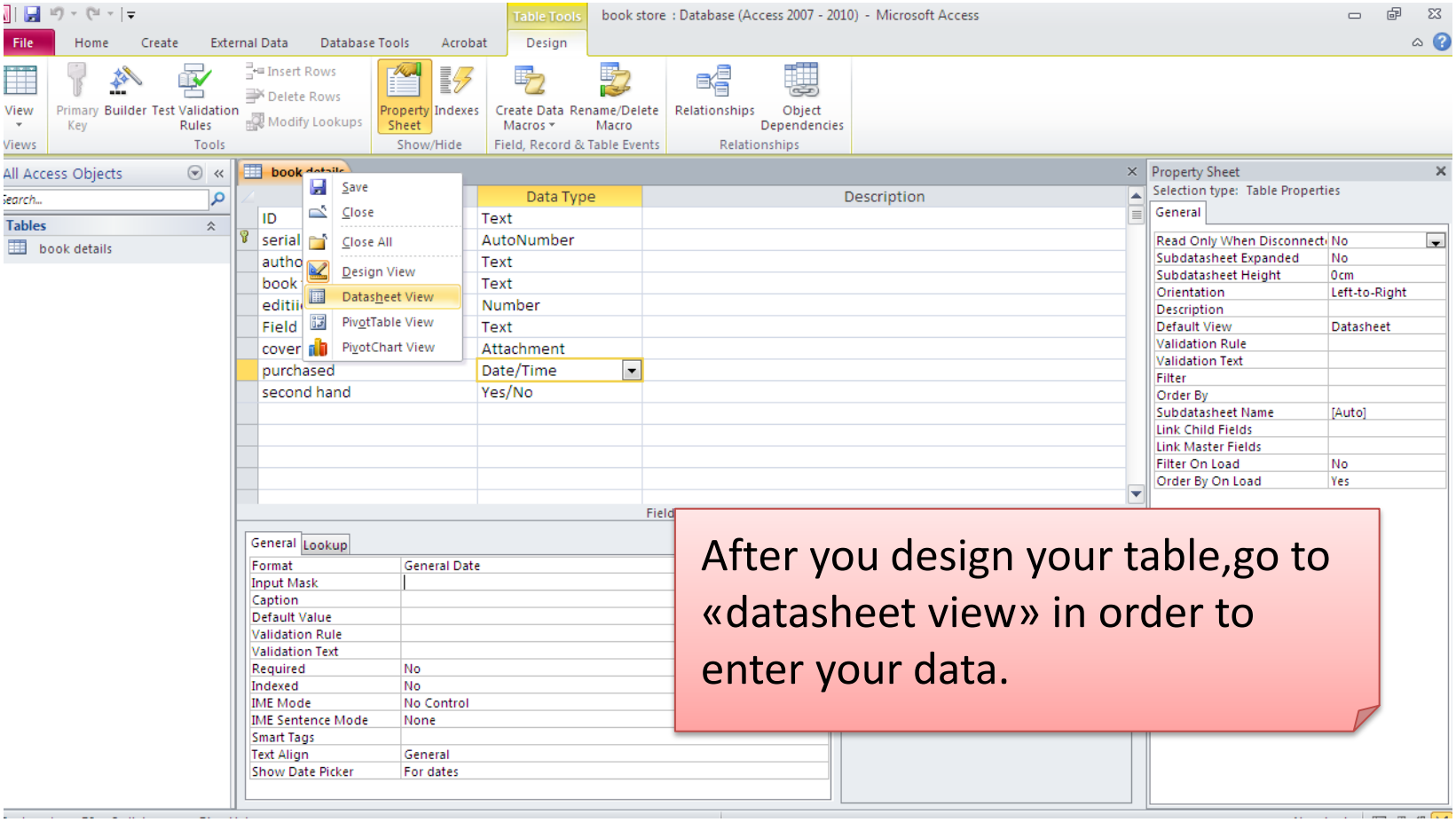
Character	Explanation
0	User must enter a digit (0 to 9).
9	User can enter a digit (0 to 9).
#	User can enter a digit, space, plus or minus sign. If skipped, Access enters a blank space.
L	User must enter a letter.
?	User can enter a letter.
A	User must enter a letter or a digit.
a	User can enter a letter or a digit.
&	User must enter either a character or a space.

C	User can enter characters or spaces.
. , : ; - /	Decimal and thousands placeholders, date and time separators. The character you select depends on your Microsoft Windows regional settings.
>	Coverts all characters that follow to uppercase.
<	Converts all characters that follow to lowercase.
!	Causes the input mask to fill from left to right instead of from right to left.
\	Characters immediately following will be displayed literally.
""	Characters enclosed in double quotation marks will be displayed literally.

> : the following caracters are capital.
L : The user must enter a letter
0: The user must enter a number



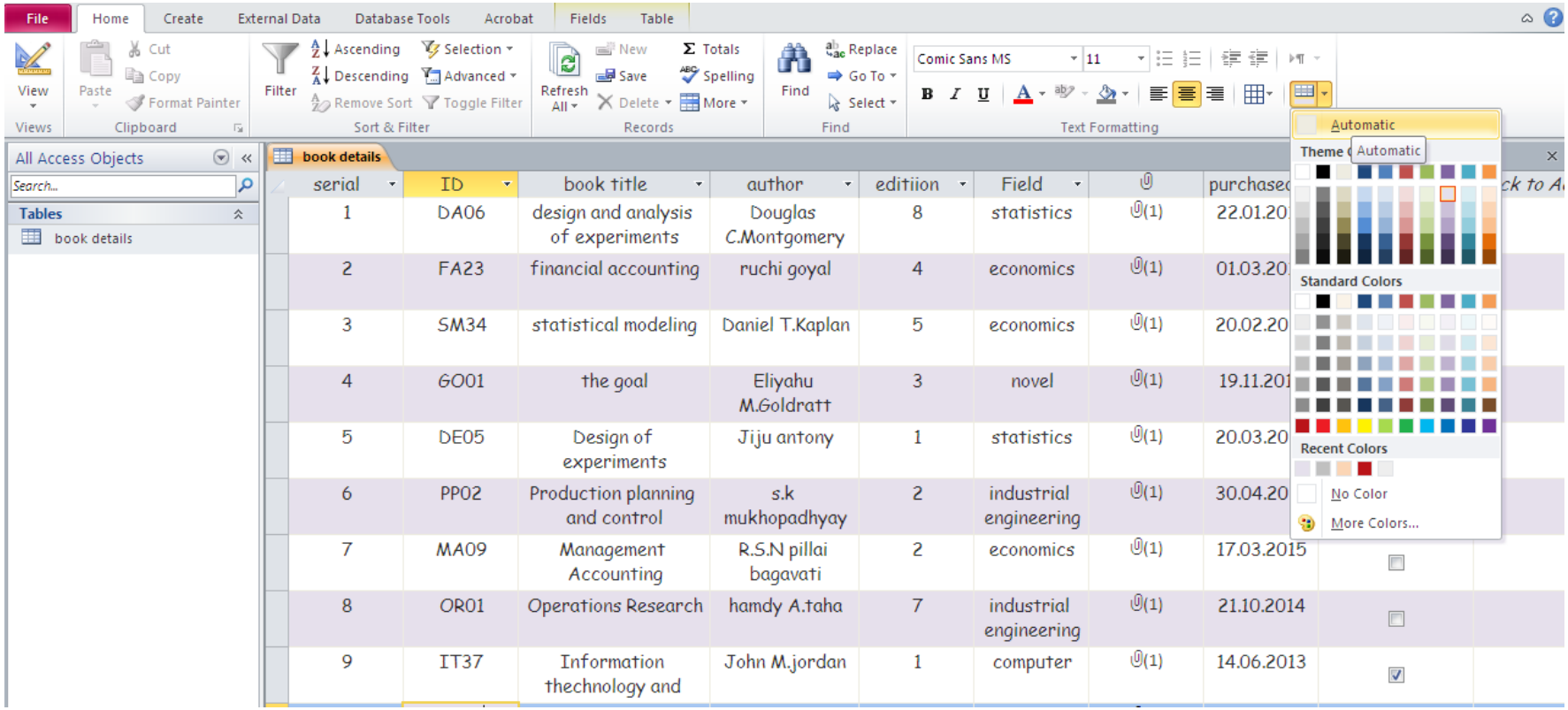
When you input your mask press close and finish


book store : Database (Access 2007 - 2010) - Microsoft Access
Table Tools
File
Home
Create
External Data
Database Tools
Acrobat
Design
Property Sheet
Indexes
Create Data Macros
Rename/Delete Macro
Relationships
Object Dependencies
All Access Objects
Tables
book details
Save
Close
Close All
Design View
Datasheet View
PivotTable View
PivotChart View
Data Type
Description
ID
Text
serial
AutoNumber
Text
Text
Number
Text
Attachment
purchased
Date/Time
second hand
Yes/No
General
Lookup
Format
General Date
Input Mask
Caption
Default Value
Validation Rule
Validation Text
Required
No
Indexed
No
IME Mode
No Control
IME Sentence Mode
None
Smart Tags
Text Align
General
Show Date Picker
For dates
Property Sheet
Selection type: Table Properties
General
Read Only When Disconnect
No
Subdatasheet Expanded
No
Subdatasheet Height
0cm
Orientation
Left-to-Right
Description
Default View
Datasheet
Validation Rule
Validation Text
Filter
Order By
Subdatasheet Name
[Auto]
Link Child Fields
Link Master Fields
Filter On Load
No
Order By On Load
Yes
After you design your table,go to «datasheet view» in order to enter your data.

book details

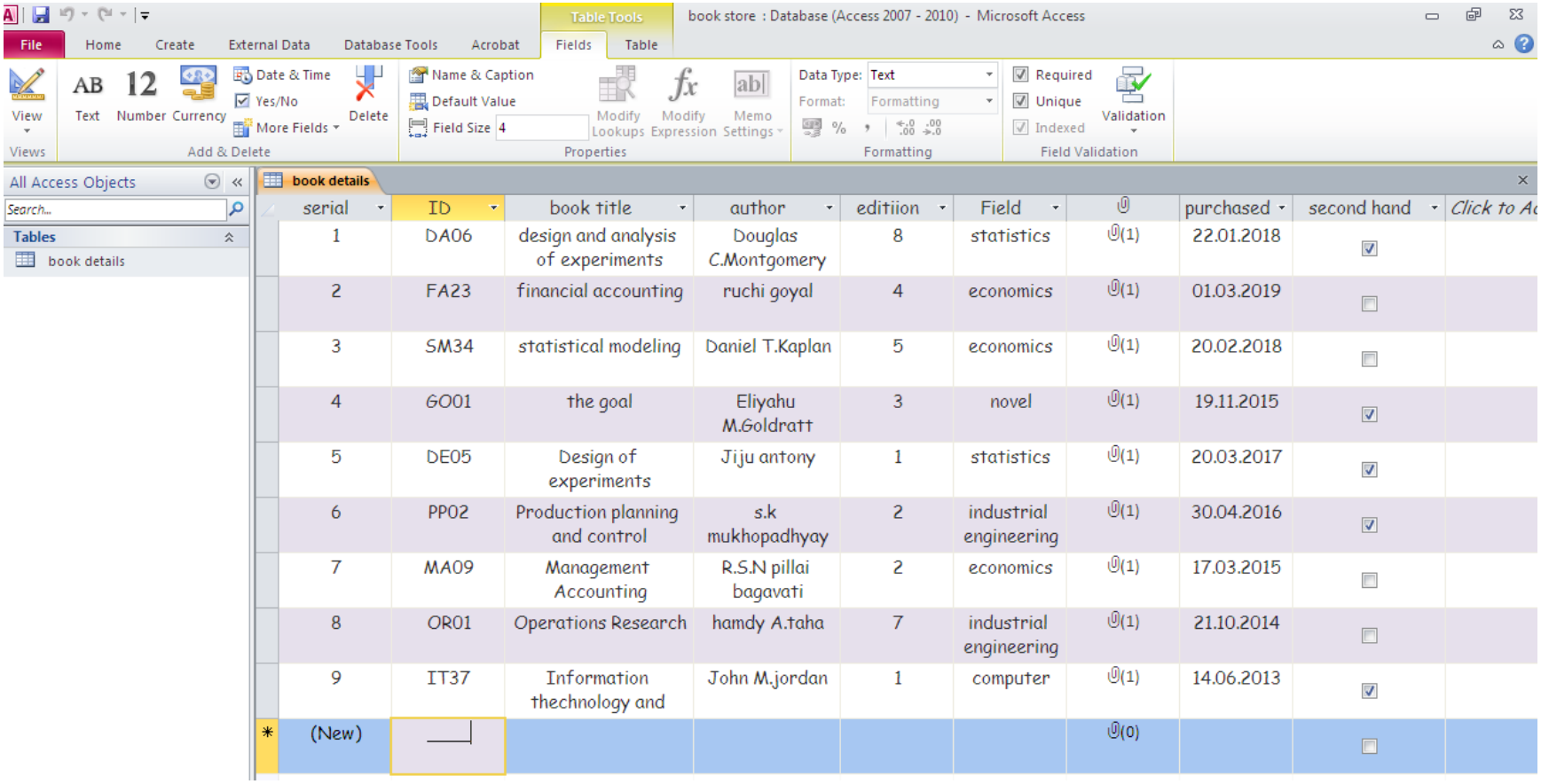
serial	ID	author	book title	editiion	Field	(1)	purchased	second hand
1	____	john lawson	design of experiment	5	statistics	(1)	12.03.1987	☐
2		ruchi goyal	financial accounting			(0)	01.03.2019	☑
3			statistical modeling			(0)		☐
4			the goal		novel	(0)		☐
(New)						(0)		☐

Format

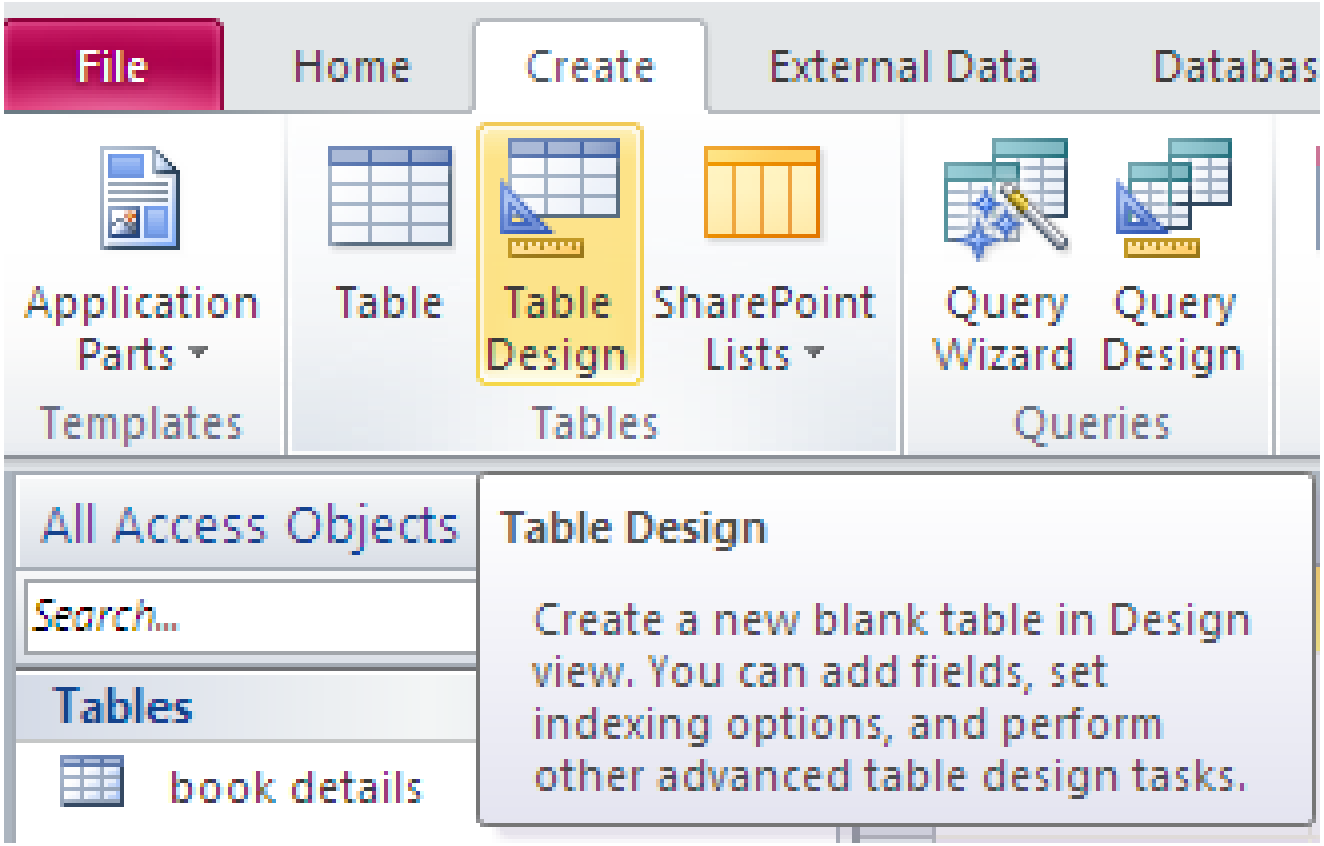


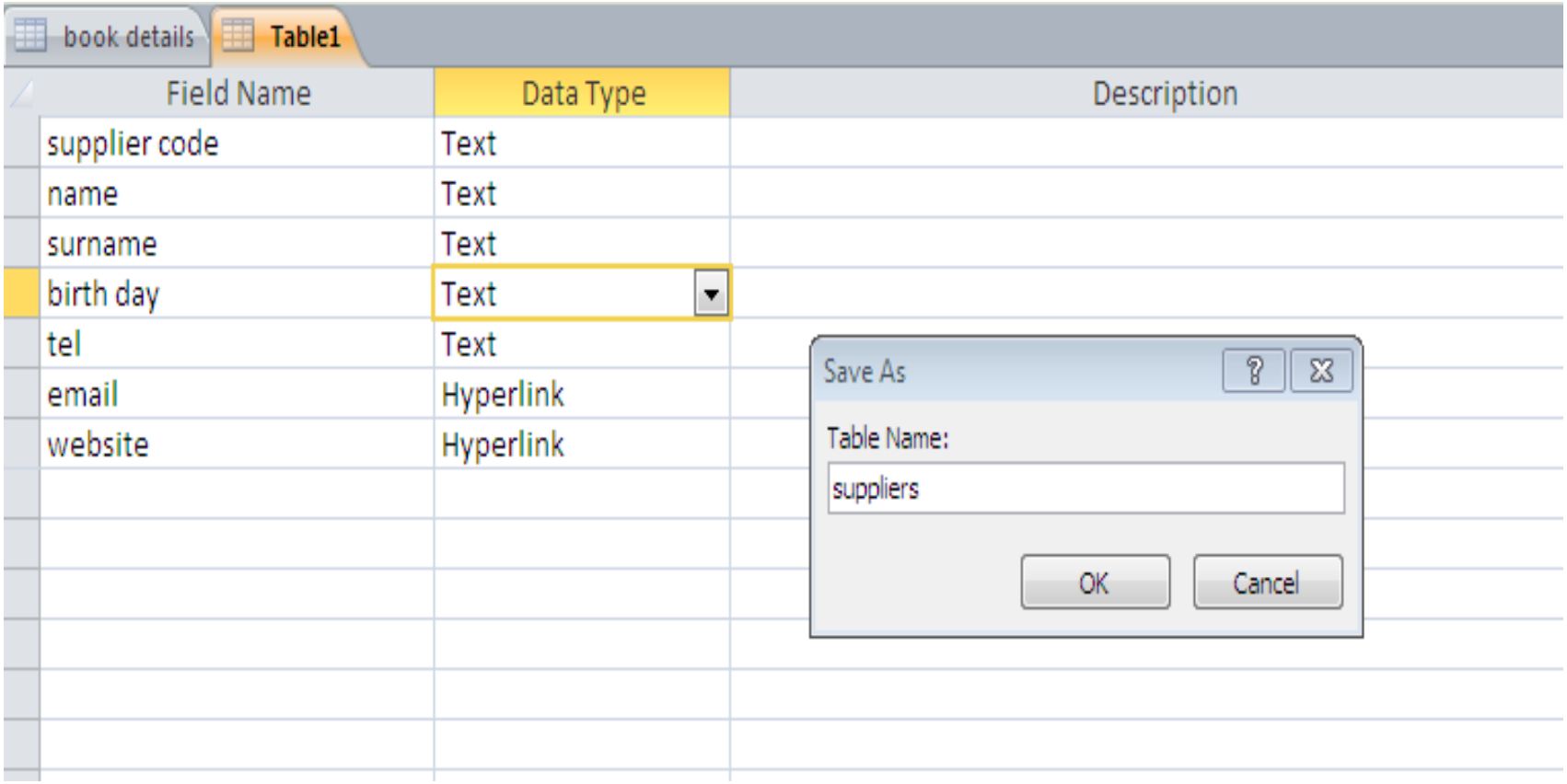
serial	ID	book title	author	editiion	Field	purchased
1	DA06	design and analysis of experiments	Douglas C.Montgomery	8	statistics	22.01.20
2	FA23	financial accounting	ruchi goyal	4	economics	01.03.20
3	SM34	statistical modeling	Daniel T.Kaplan	5	economics	20.02.20
4	GO01	the goal	Eliyahu M.Goldratt	3	novel	19.11.201
5	DE05	Design of experiments	Jiju antony	1	statistics	20.03.20
6	PP02	Production planning and control	s.k mukhopadhyay	2	industrial engineering	30.04.20
7	MA09	Management Accounting	R.S.N pillai bagavati	2	economics	17.03.2015
8	OR01	Operations Research	hamdy A.taha	7	industrial engineering	21.10.2014
9	IT37	Information thechnology and	John M.jordan	1	computer	14.06.2013

We continue filling the table

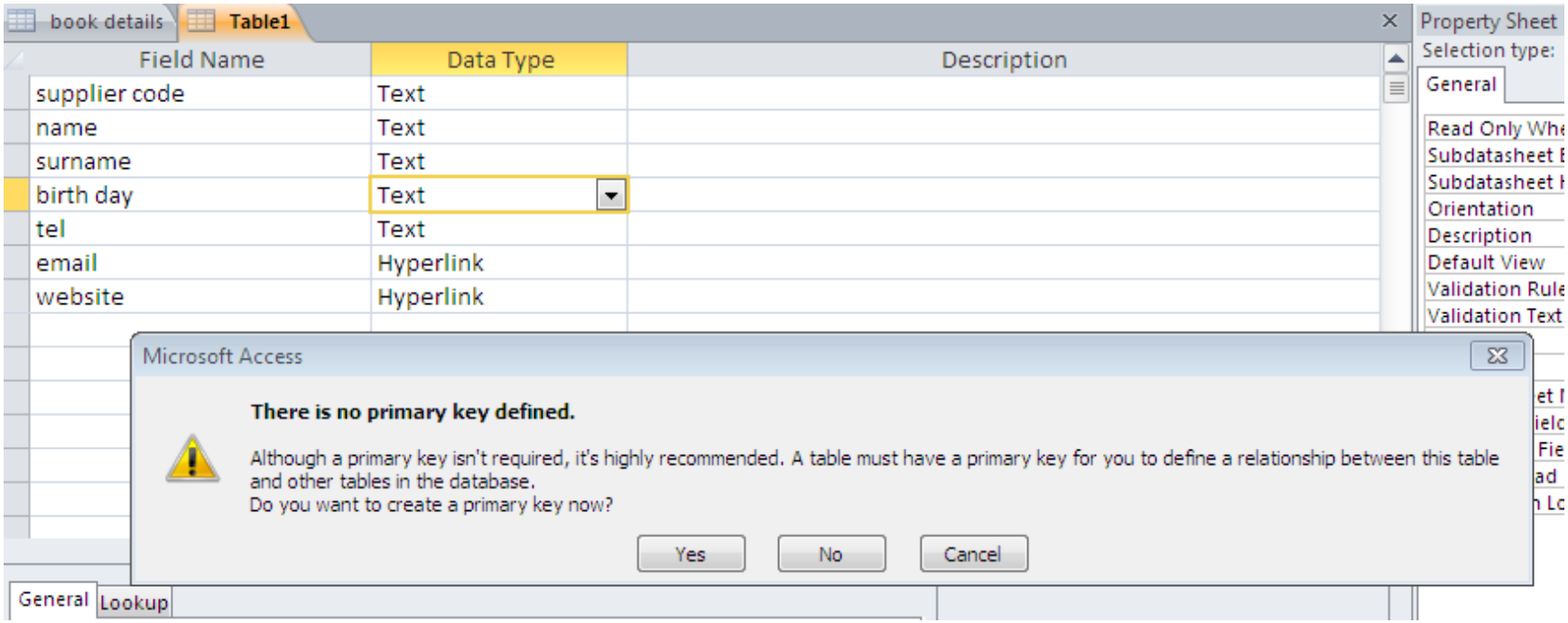


Now ,let's create a new table: suppliers

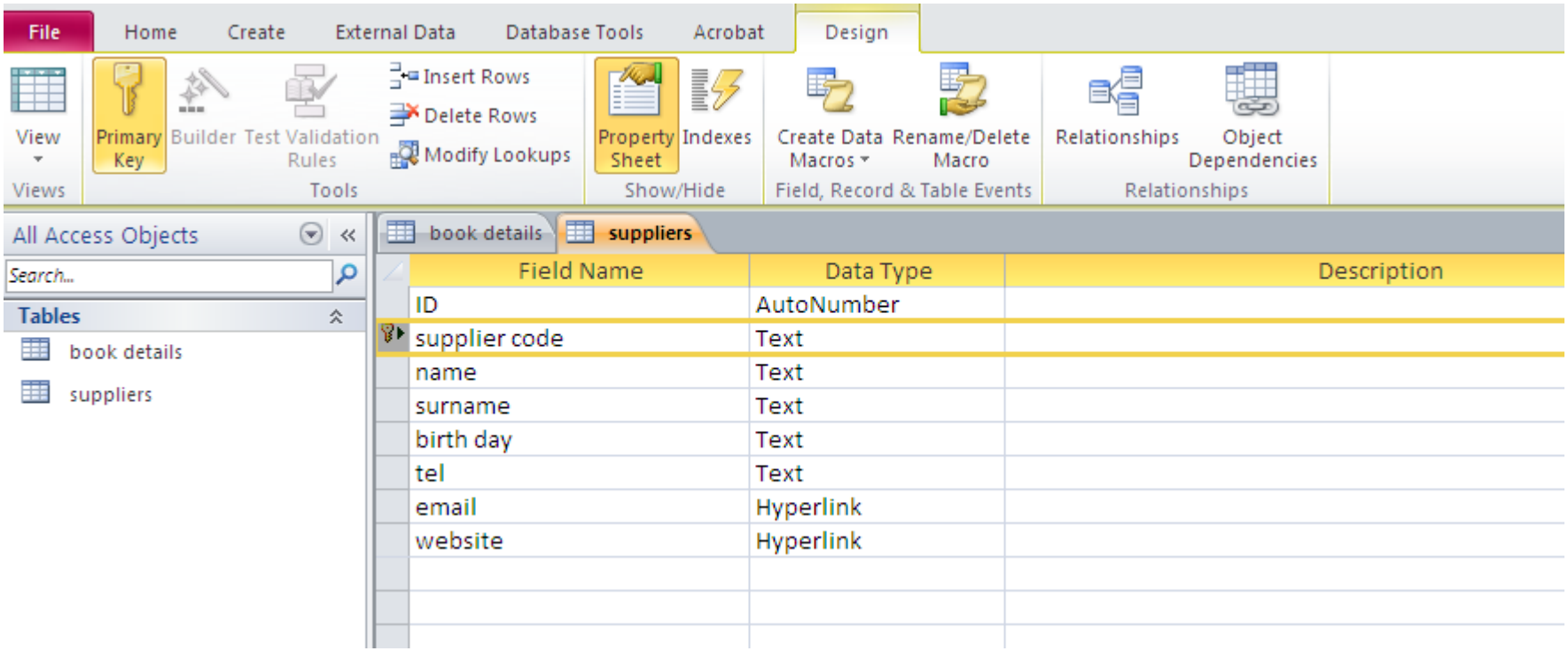



book details
Table1
Field Name
Data Type
Description
supplier code
Text
name
Text
surname
Text
birth day
Text
tel
Text
email
Hyperlink
website
Hyperlink
Save As
Table Name:
suppliers
OK
Cancel

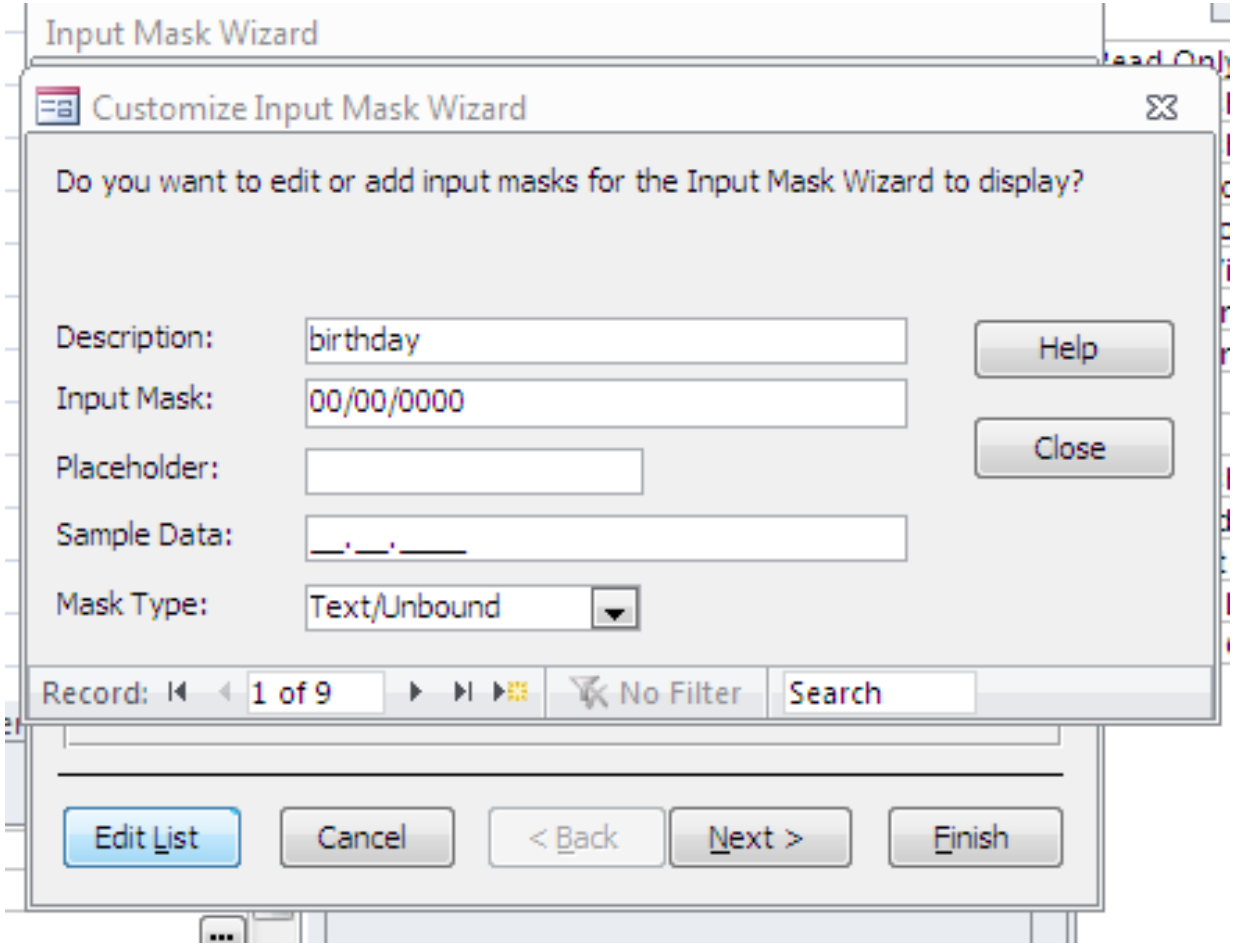
And chose its primary key



The primary key is : supplier code

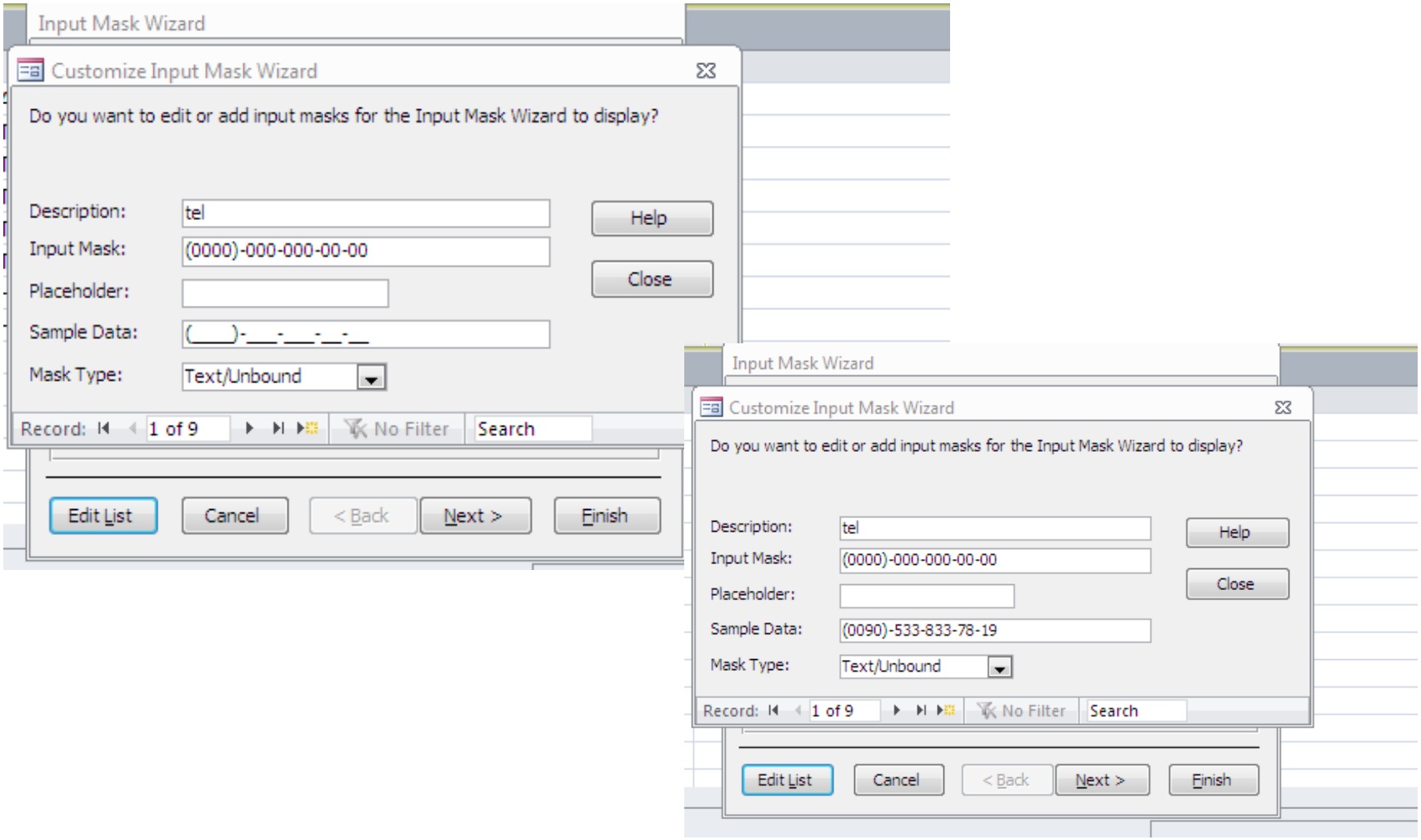


Mask for birthday



But it is recommanded to use the type «date» for dates .
(This is just an example to make you familiarized with masks)

Mask for telephone

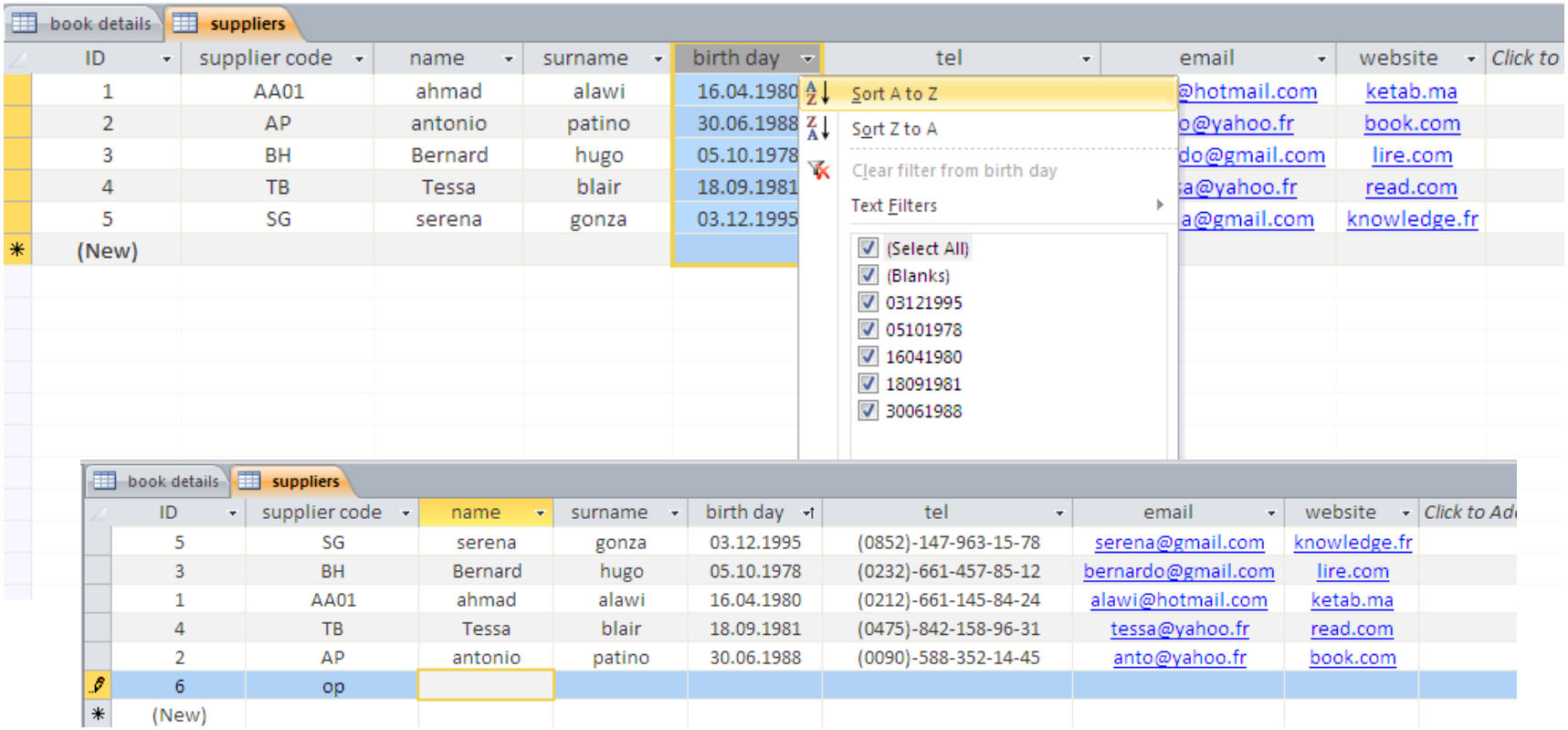


And input data

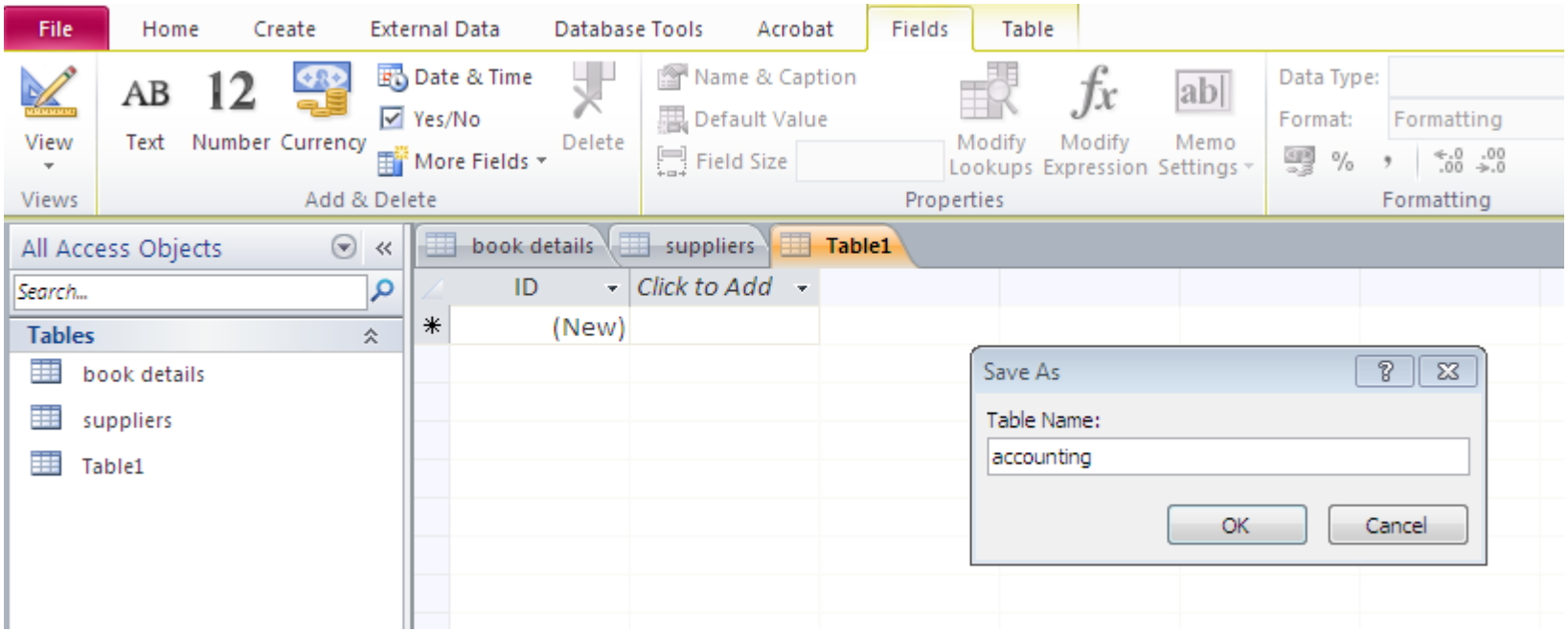
book details | suppliers

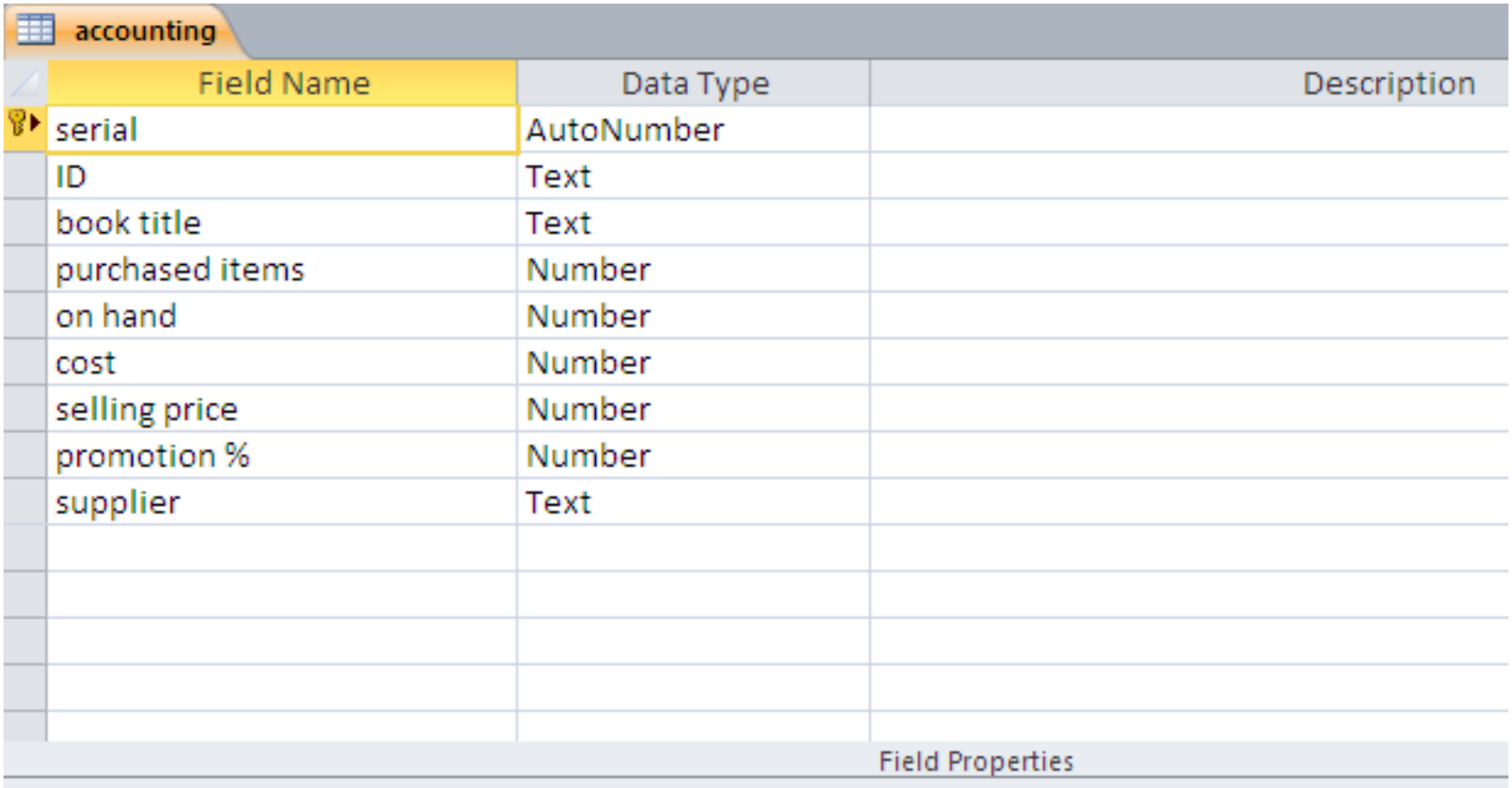
ID	supplier code	name	surname	birth day	tel	email	website	Click to Ad
1	AA01	ahmad	alawi	16.04.1980	(0212)-661-145-84-24	alawi@hotmail.com	ketab.ma	
2	AP	antonio	patino	30.06.1988	(0090)-588-352-14-45	anto@yahoo.fr	book.com	
3	BH	Bernard	hugo	05.10.1978	(0232)-661-457-85-12	bernardo@gmail.com	lire.com	
4	TB	Tessa	blair	18.09.1981	(0475)-842-158-96-31	tessa@yahoo.fr	read.com	
5	SG	serena	gonza	03.12.1995	(0852)-147-963-15-78	serena@gmail.com	knowledge.fr	
(New)								

Sort records

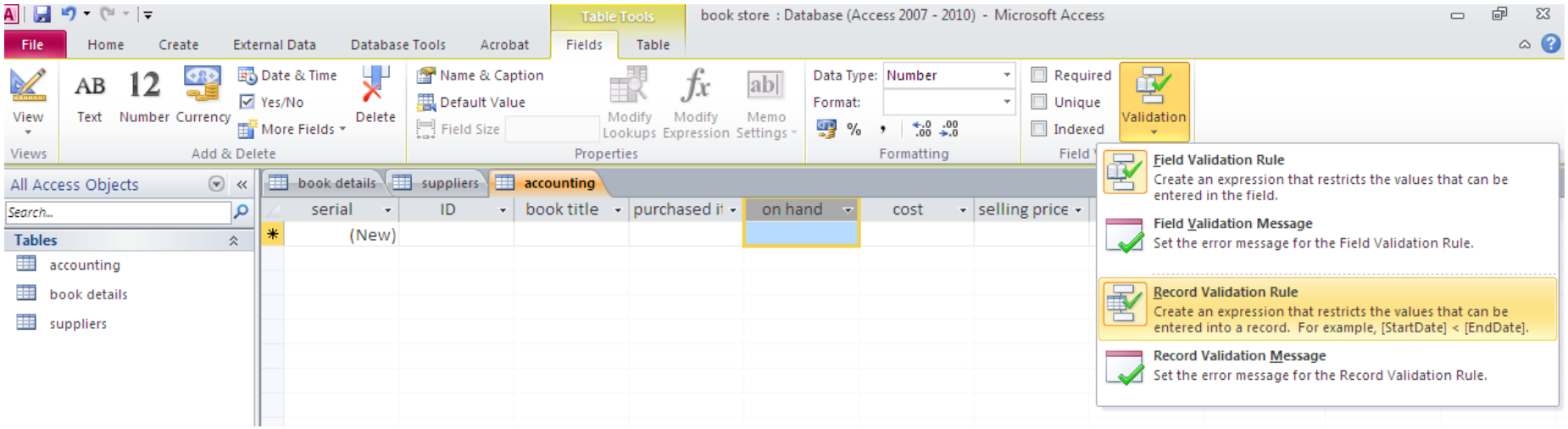


New Table : accounting




accounting
Field Name
Data Type
Description
serial
AutoNumber
ID
Text
book title
Text
purchased items
Number
on hand
Number
cost
Number
selling price
Number
promotion %
Number
supplier
Text
Field Properties

Record validation rule and message



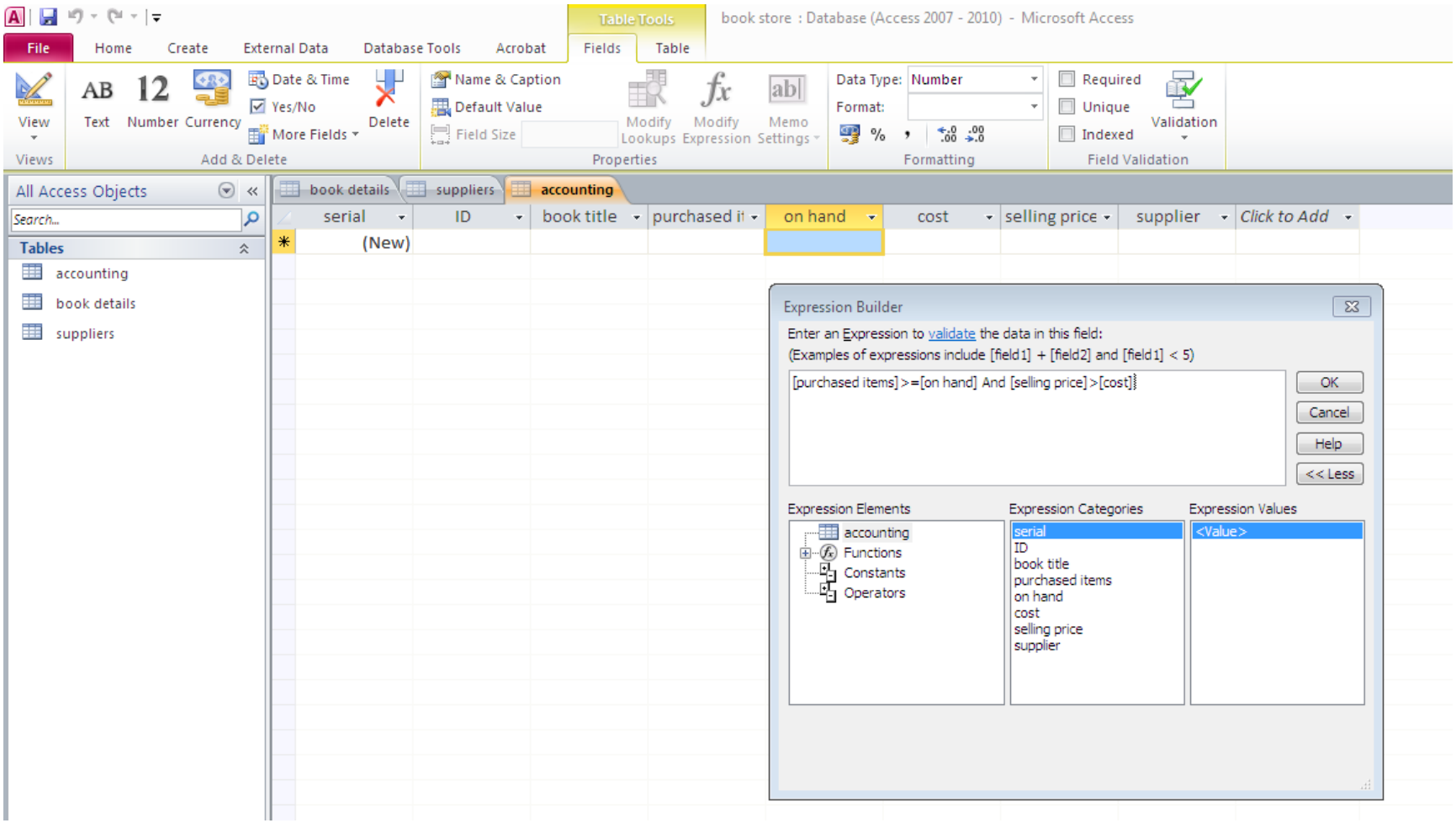
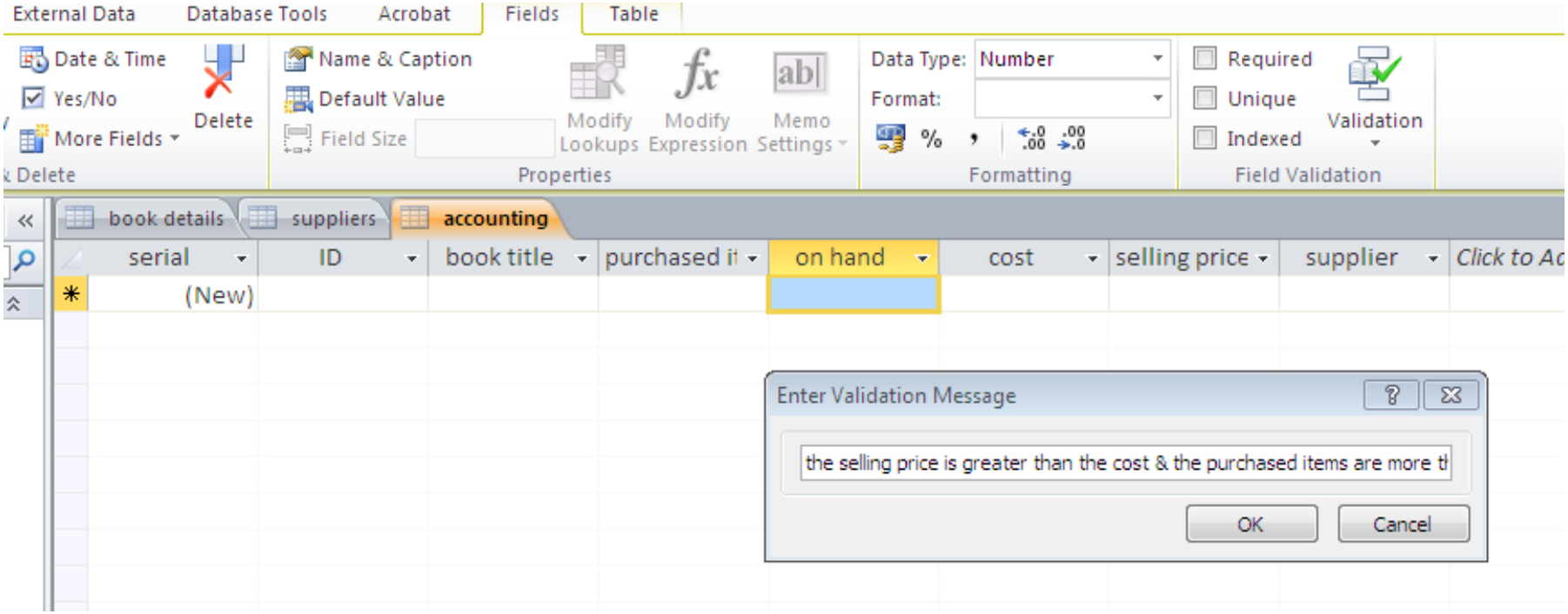
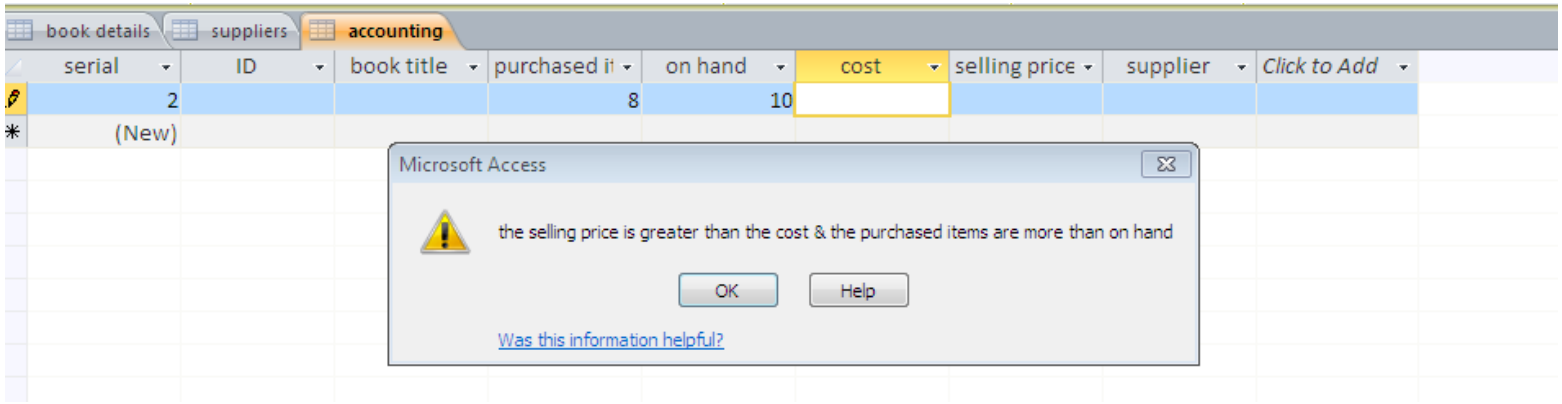
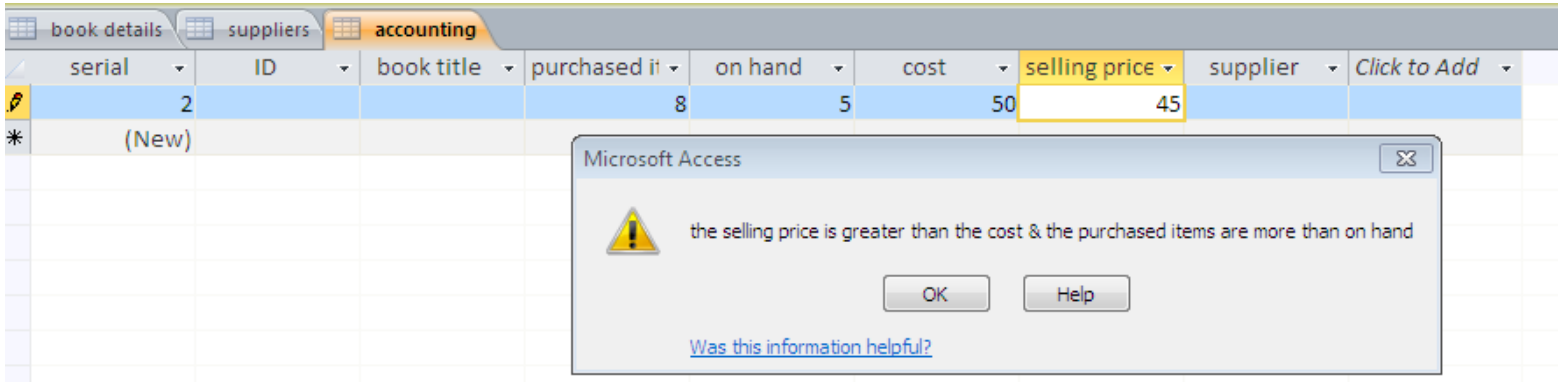


Table Tools
book store : Database (Access 2007 - 2010) - Microsoft Access
File
Home
Create
External Data
Database Tools
Acrobat
Fields
Table
View
Text
Number
Currency
Date & Time
Yes/No
More Fields
Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Data Type: Number
Format:
Required
Unique
Indexed
Validation
Views
Add & Delete
Properties
Formatting
Field Validation
All Access Objects
Search...
Tables
accounting
book details
suppliers
book details
suppliers
accounting
serial
ID
book title
purchased it
on hand
cost
selling price
supplier
Click to Add
(New)
Expression Builder
Enter an Expression to validate the data in this field:
(Examples of expressions include [field1] + [field2] and [field1] < 5)
[purchased items]>=[on hand] And [selling price]>[cost]
OK
Cancel
Help
<< Less
Expression Elements
Expression Categories
Expression Values
accounting
Functions
Constants
Operators
serial
ID
book title
purchased items
on hand
cost
selling price
supplier
<Value>


External Data
Database Tools
Acrobat
Fields
Table
Date & Time
Yes/No
More Fields
Delete
Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Properties
Data Type: Number
Format:
Formatting
Required
Unique
Indexed
Validation
Field Validation
book details
suppliers
accounting
serial
ID
book title
purchased it
on hand
cost
selling price
supplier
Click to Ad
(New)
Enter Validation Message
the selling price is greater than the cost & the purchased items are more th
OK
Cancel

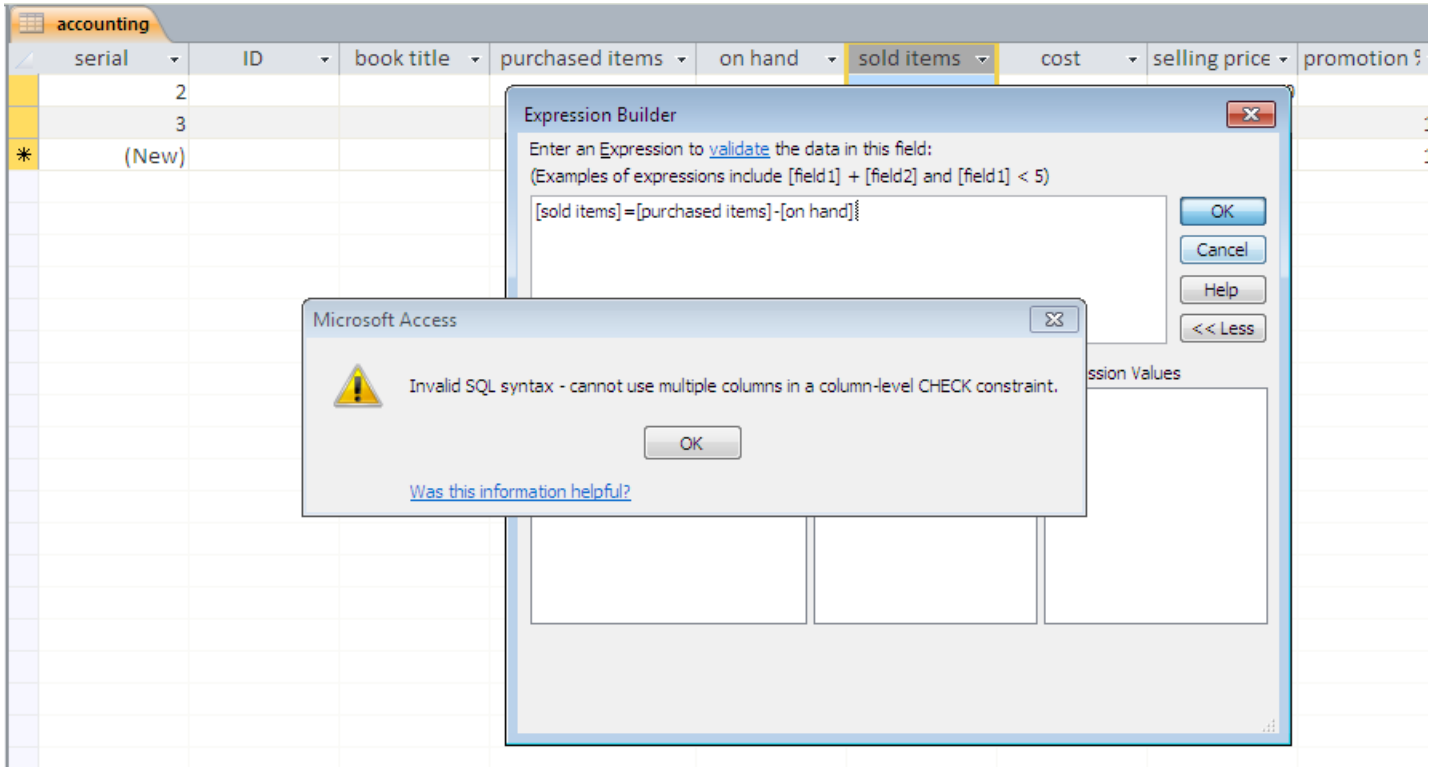
When a record violates the validation rule





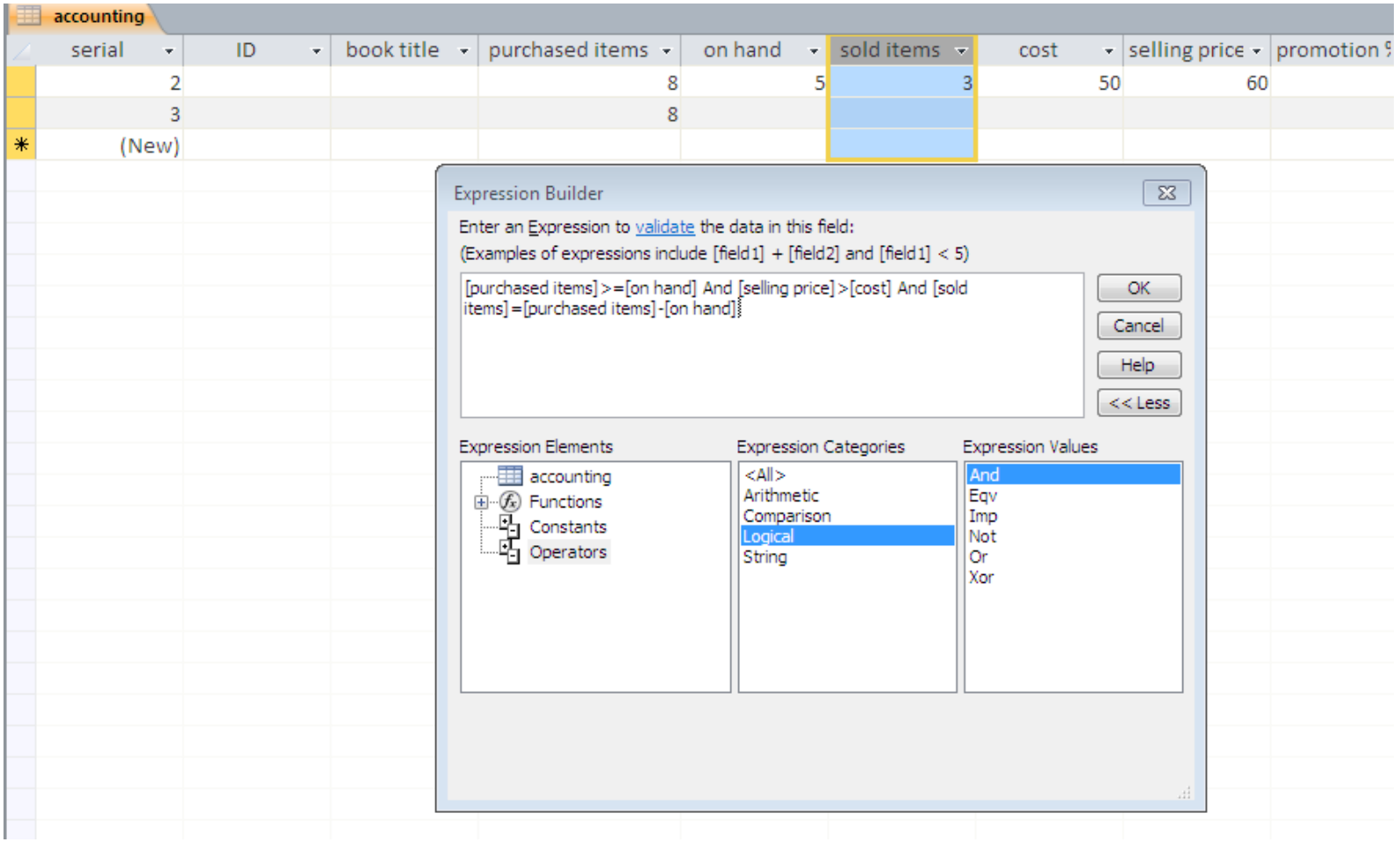
Difference between Field validation rule and Record validation rule ???

Let's insert a new field « sold items » , we want to be sure that the total of purchased items is equal to the sold items and on hand ones.
Let's put this condition in the Field validation rule

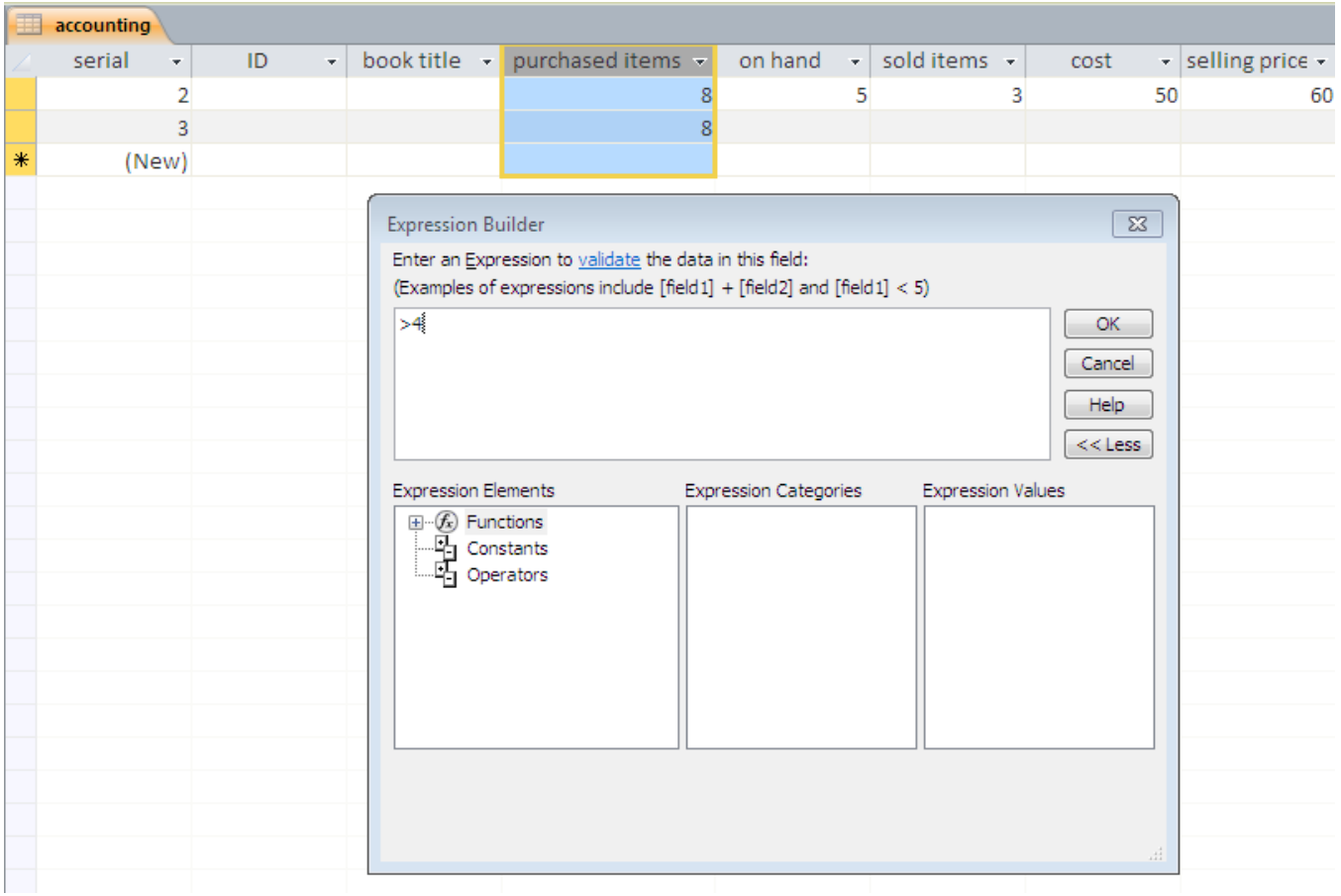


- In the Field validation rule we can set a condition for the current field only.
- If we want to impose a rule using more than one field ,we use the Record validation rule.

In the Record validation rule, we add our new condition

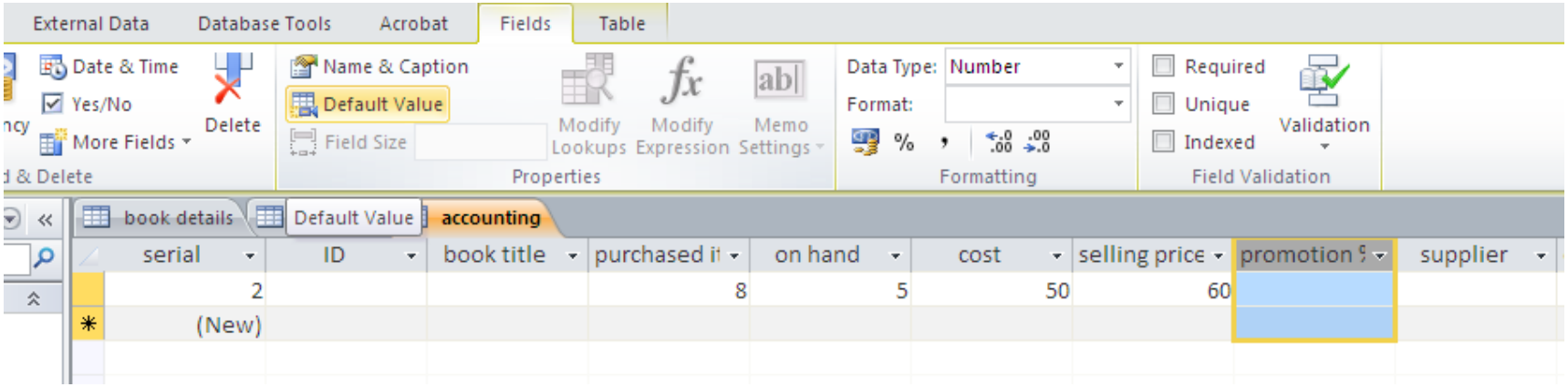

accounting
serial
ID
book title
purchased items
on hand
sold items
cost
selling price
promotion
2
8
5
3
50
60
3
8
(New)
Expression Builder
Enter an Expression to validate the data in this field:
(Examples of expressions include [field1] + [field2] and [field1] < 5)
[purchased items]>=[on hand] And [selling price]>[cost] And [sold items]=[purchased items]-[on hand]
OK
Cancel
Help
<< Less
Expression Elements
accounting
Functions
Constants
Operators
Expression Categories
<All>
Arithmetic
Comparison
Logical
String
Expression Values
And
Eqv
Imp
Not
Or
Xor

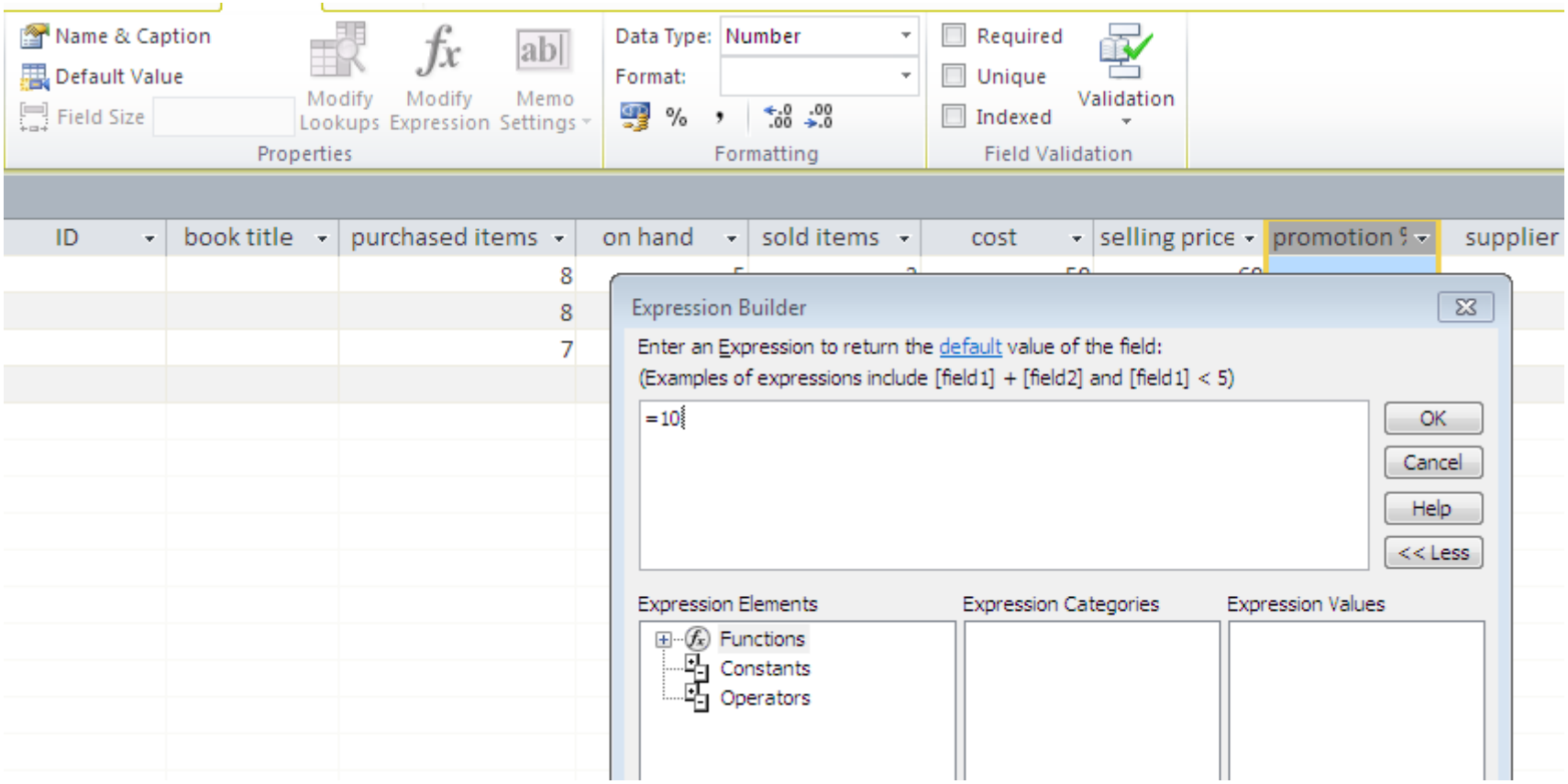
We can add other restrictions :

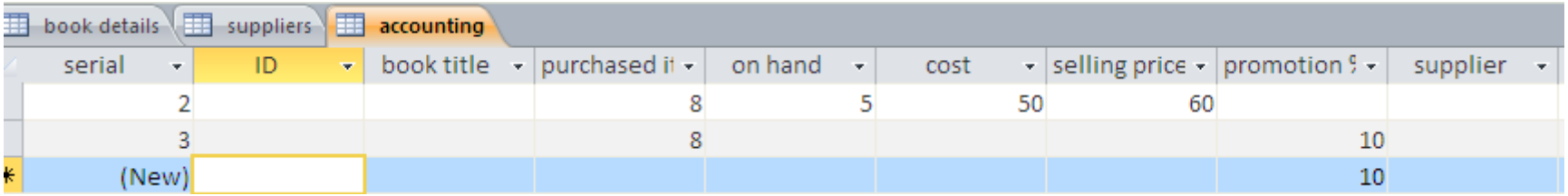


Add a default value

- Add a new field « promotion » with default value , chose the value desired .
- when we create a new record ,the value of «promotion» is automatically insered




Name & Caption
Default Value
Field Size
Modify Lookups
Modify Expression
Memo Settings
Properties
Data Type: Number
Format:
Formatting
Required
Unique
Indexed
Validation
Field Validation
ID
book title
purchased items
on hand
sold items
cost
selling price
promotion
supplier
8
8
7
Expression Builder
Enter an Expression to return the default value of the field:
(Examples of expressions include [field1] + [field2] and [field1] < 5)
=10
OK
Cancel
Help
<< Less
Expression Elements
Expression Categories
Expression Values
Functions
Constants
Operators



book details | suppliers | accounting

serial	ID	book title	purchased it	on hand	cost	selling price	promotion %	supplier
2			8	5	50	60		
3			8				10	
(New)							10	