



IPG KAMPUS TUN HUSSEIN ONN  
BATU PAHAT, JOHOR

# MS Access 2007 - Field Validation Rules



**Sumitra Kan Fong Kuen**  
**Jabatan Teknologi Pendidikan**  
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## Acknowledgement

This module is a sharing of information on Field Validation Rules for the beginners. It contains illustration which may guide the users along the practice sessions.

I would like to express my sincere thanks to all the IPGKTHO Educational Department Staff for giving me an opportunity to try out this module and had provided valuable feedback and suggestions, especially Dr. Tey Kien Huat, who had kindly and generously pointed out the mistakes and suggested way to do correction.

It's human to err. This module may contain errors and omission which were done unintentionally. A thousand apologies over the mistakes made and I am looking forwards to further comment and suggestion to improve on this module.

Thank you.

Sumitar Kan Fong Kuen  
16<sup>th</sup> August 2012

## Table of Contents

Acknowledgement.....	1
Learning Objectives .....	3
Microsoft Access .....	3
Restricting the type of data in a field.....	5
Example of Field Properties .....	5
• Allow Zero Length.....	5
• Field size .....	5
• Required .....	5
• Input mask .....	5
• Validation rules.....	5
Validation rules .....	5
Exercise .....	8
I. Building a table .....	8
Hints for setting of the field properties:.....	9
II. Create a Form .....	22
3a. Alternative 1: In Layout View.....	23
3b. Alternative 2: In Design View .....	26
III. Testing the Validation Rules .....	27
A. Testing the field validation rules in Design View.....	27
B. Testing the validation rules while entering the data.....	28
Bibliography.....	29
Index .....	30

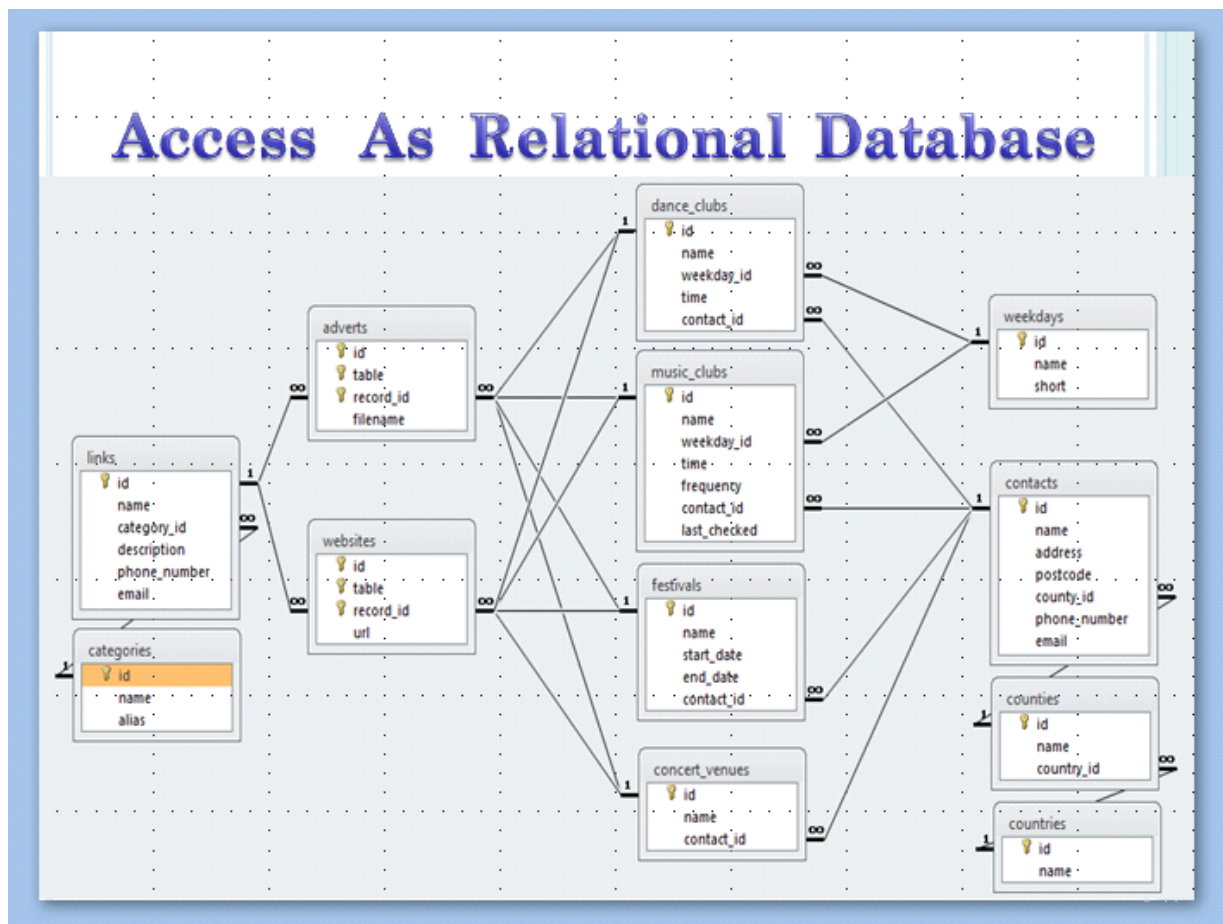
## Learning Objectives

This sharing focuses on the field validation rules which restrict the type of data to be entered into a particular field.

The exercise prepared for this sharing session focuses on adding validation rules in a field. We shall be creating a table and add validation rules that will restrict the type of data which may be entered into a particular field. A form shall be created to see how the validation rules affect the process of data entries.

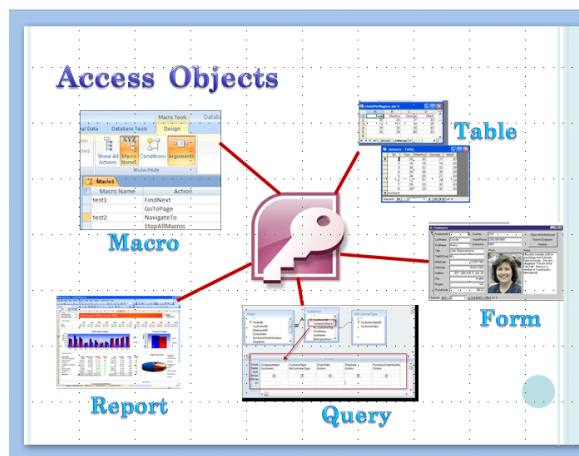
## Microsoft Access

It is a form of relational database which can store information in multiple related tables. If it is organized correctly, all these multiple tables can be treated as single storage area and pull information electronically from different tables in whatever order which meet your needs (Lambert, Lambert III, & Preppernau, 2007).



## MS Access 2007 - Field Validation Rules

Access consists of several objects which help to store, organize and retrieve information, such as the table, form, query, report and macros.



The table object is the core database object which main purpose is to store information. The type of data which can be assigned appropriately to each field may include:

	Data type	Details
1	Text	Use for enter all types of data (number, special character, text , special characters such as &, % , = and?) for information such as like names, article titles, zip codes, short descriptions, etc. Its field size is 255 characters in one cell.
2	Memo	Use for enter all types of data (number, text, special character, etc) But its field size is 65535 characters in one cells include space. For instance, long texts like article body text, blog posts, long descriptions. (Data types in Access)
3	Number	Enter only number types (0 to 9) not include space, we can not types text special Characters. Example: Quantity, size, length, weight, speed, scores, percentages
4	Auto number	<b>Its data</b> type will be update automatically we can not add any number in this list and we can not enter deleted number. It is by default the Primary key field.
5	Currency	This data types accept only number type data with \$ Rs . sign. Example: Price.
6	Date and Time	We can enter only date and time type data, Time format is (HH:MM:SS am/ pm), Date format is (MM-DD-YY). Examples are Birth date, order date, expiration date, creation date, subscription date
7	Hyperlinks	Hyper link field use for link other file / web page.
8	Yes/No	A Logical field can be displayed as Yes/No, True/False, or On/Off. It appears as checkbox.
9	OLE Object	Insert any picture or any other objects (such as a spread sheet, audio file, or video file) its file size is 1 GB in one cell OLE (Object linking embedded).
10	Attachment	Use for insert multiples file (multiple file formats such as images or spreadsheet) in one cell its file size is 2 GB round about.
11	Lookup Wizard	Links between two tables / query / fields by relationship use option lookup wizard.

### Restricting the type of data in a field

The data type settings restrict entries in a field to a specific type of data, such as text, numbers, or dates.

### Example of Field Properties

The field properties set to control input are:

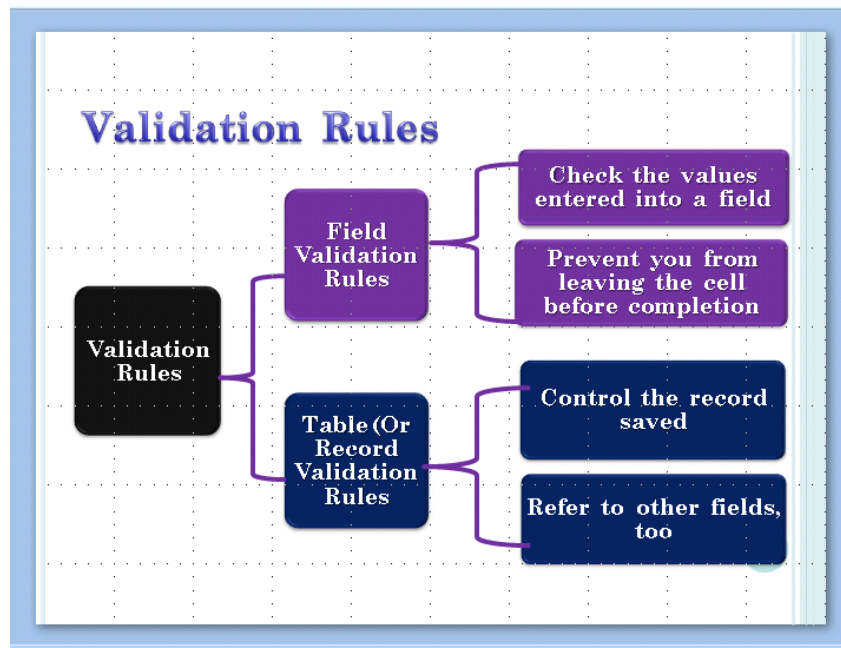
- **Allow Zero Length** – when set to “No”, the field cannot be blanked, i.e. no “” string value (Zero character).
- **Field size** – Set the maximum size allowed.
- **Required** – When set to “Yes”, ensures that every record will have a value in this field. Access will show an error message and won't insert the new record if you try to insert a new record that has no value for a required field.
- **Input mask** – It specifies that the field value must conform to the pattern set by the mask. *Example:*
- **Validation rules** – The expression establishes criteria that any new or changed value must meet.

### Validation rules

“A validation rule is an expression that can precisely define the information that will be accepted in one or several fields in a record.” (Lambert, Lambert III, & Preppernau, 2007)

There are two basic validation rules:

- **Field validation rules** - Use a field validation rule to check the value that you enter in a field when you leave the field.
- **Record (or table) validation rules** - Use a record validation rule to control when you can save a record (a row in a table). Unlike field validation rules, record validation rules refer to other fields in the same table. You create record validation rules when you need to check the values in one field against the values in another (Microsoft Office, 2012).



You can enter validation rules for all data types except for the AutoNumber, OLE Object, and Attachment data types, and for Number fields set to ReplicationID (Microsoft Office, 2012).

*Example of field validation rules:*

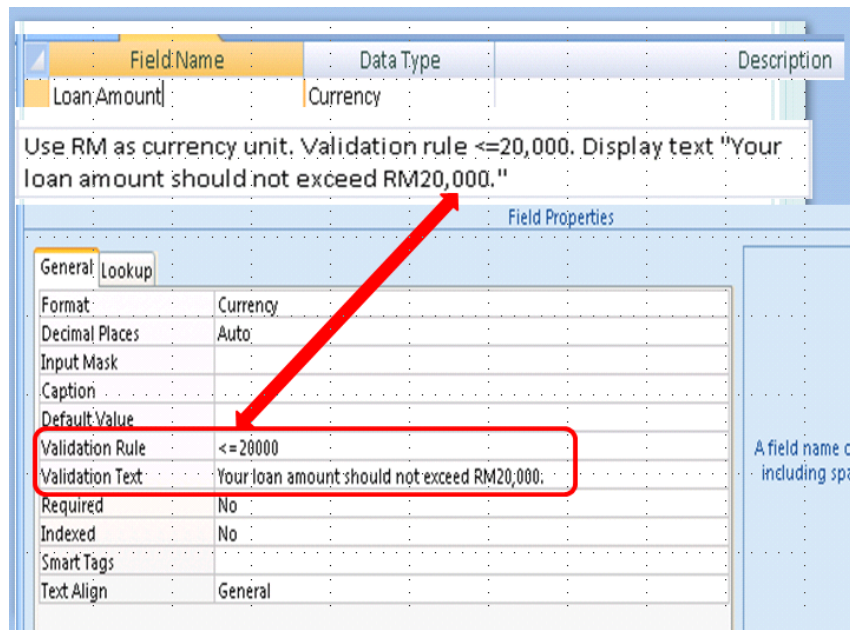
- **[Date2]>[Date1]** means Date 2 must be later than Date 1.
- **[Birth date]<=#01/01/2012#** meaning that you cannot enter a date later than or equal to 01/01/2012.
- **[Load amount]<=20,000** shall be imposing a control over the amount of loan which should be less than or equal to RM20,000.

The validation text (validation message) serves as a reminder for the user over what are the conditions imposed on them for a particular situation.

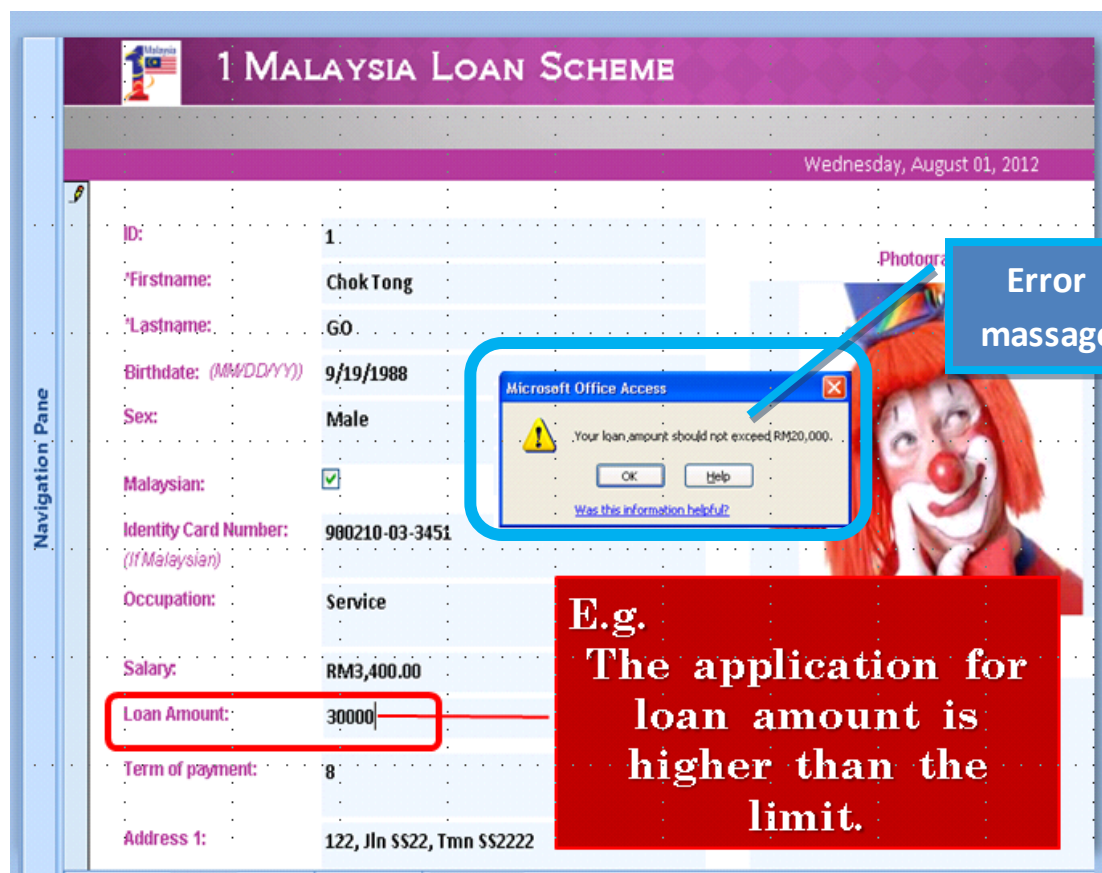
You can add rules to the table or form in Design View. The exercise prepared for this sharing focuses on adding validation rules in a field.

# MS Access 2007 - Field Validation Rules

Here is an example of validation rule applied to a field:



Example of Validation Rule and Validation Text for a field named as [Loan Amount]



When the data input infringes the validation rule, an error message is displayed, showing the predetermined validation text (rule).



## Exercise

1. Create a table and a form.
2. Testing on the data validation rules.

### I. Building a table and specifies its data type as well as the field properties.

1. Start the MS Access program and create a new database in your desired directory and folder.
2. Choose a blank database.
3. Let's build the following table with the fields as suggested in design mode and accept its name as default:

#### Note:

*You need not type the description into the description field.*

Field Name	Data Type	Description
ID	AutoNumber	Accept the default setting.
Firstname	Text	Filed size=35, Required, Do not allow zero length.
Lastname	Text	Field size=25, Required, Do not allow zero length.
Birthdate	Date/Time	Short date, in your form please state that the format is "MM/DD/YY".
Sex	Text	Use Look up Wizard and type the values as "Male" and "Female" which allows the user to choose from the drop down list.
Malaysian	Yes/No	Let the user click to check the box if he/she is a Malaysian.
Identity_Card_Number	Text	Use Input mask to specify format as "000000-00-0000". Label="If Malaysian, please enter your Identity Card Number."
Occupation	Text	1. Data Type=Text. 2. Create table named "Occupation" which provides options such as "Agricultural, Business, Education, Finance, Manufacturing, Medical, Military, Service, Others". 3. Lookup to table "Occupation".
Salary	Currency	Use RM as currency unit
Loan_Amount	Currency	Use RM as currency unit. Validation rule <=20,000. Display text "Your loan amount should not exceed RM20,000."

## MS Access 2007 - Field Validation Rules

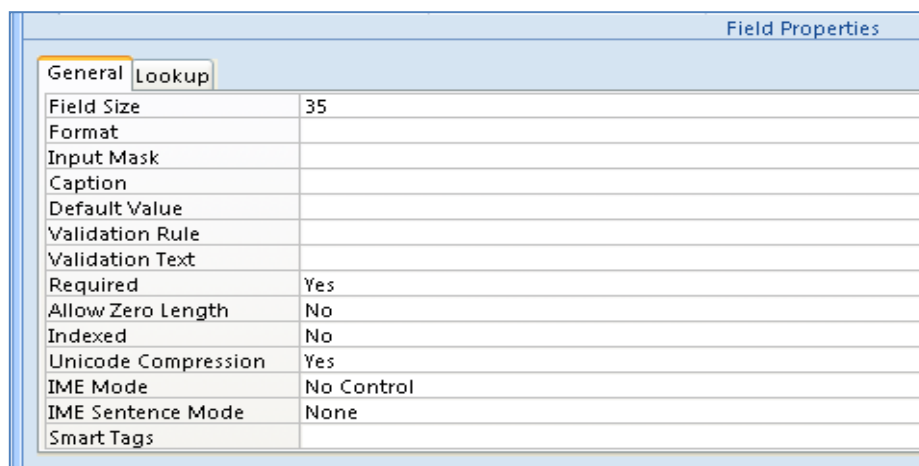
Field Name	Data Type	Description
Term_of_payment	Number	Validation rule <10. Display text " Your loan pay back period should be less than 10 years"
Address 1	Text	Field size=100, Required.
Town	Text	Required. Field size =40
State	Text	1. Data type="Text". 2. Create table named "States" which provide a drop down list that allows the user to choose from the Malaysian states. 3. Lookup to table "States".
Phone_number	Text	Required. Use Input mask to specify format as "000-0000000" You may also ignore the input mask so that the user may freely type any information as desired.
Photograph	Attachment	Required. Set the data type as "Attachment so that the users may insert more than one photograph.
Attachment	Attachment	Set the data type as "Attachment so that the users may attach more than one document or folders. You may state in your form what are the type of document required.

**Note:**

*The field name should not contain space, use underscore to separate 2 words or phrases if necessary.*

### Hints for setting of the field properties:

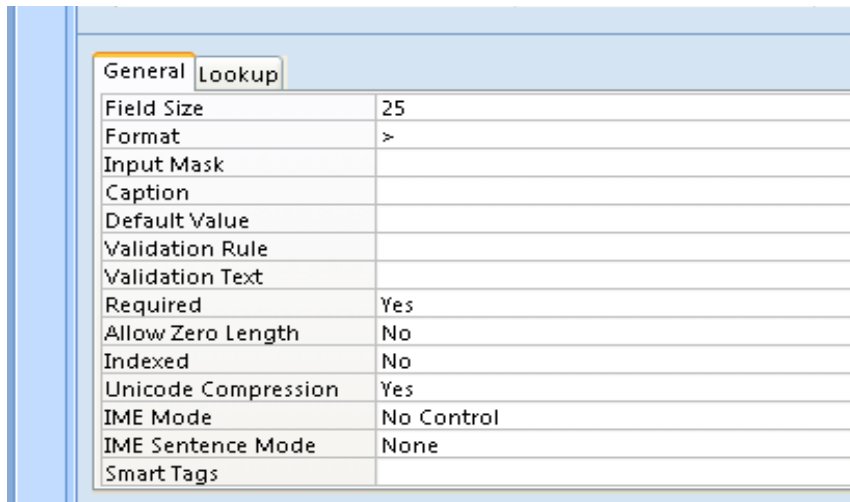
1. Field name: **ID**, Data type: Autonumber.  
Accept the default settings.
2. Field name: **FirstName**, Data type: Text.



## MS Access 2007 - Field Validation Rules

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3. Field name: **LastName**, Data type: Text.

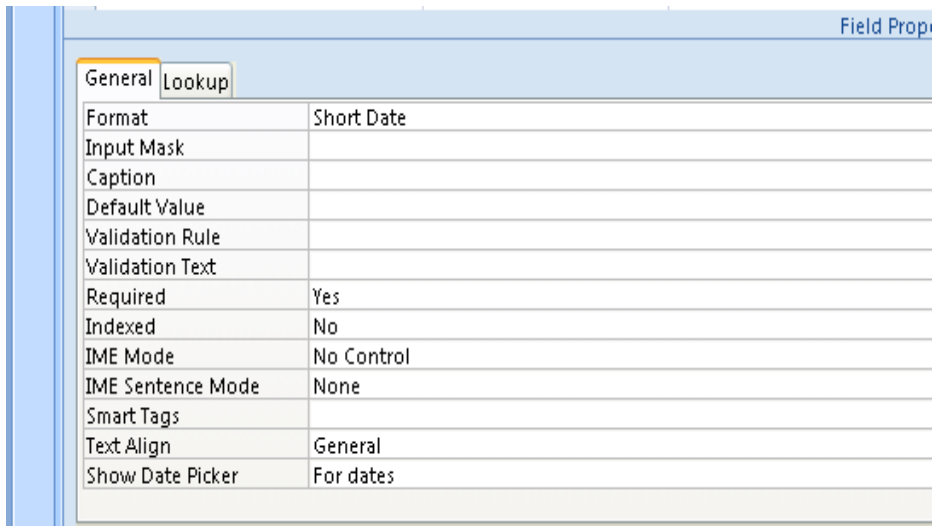


General		Lookup
Field Size	25	
Format	>	
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	Yes	
Allow Zero Length	No	
Indexed	No	
Unicode Compression	Yes	
IME Mode	No Control	
IME Sentence Mode	None	
Smart Tags		

**Note:**

*in the "Format" properties, symbol ">" will print the characters in Uppercase, symbol "<" will result in Lowercases. Leaving it blank than it will accept the value as it is without any alteration.*

4. Field name: **BirthDate**, Data type: Date & Time.

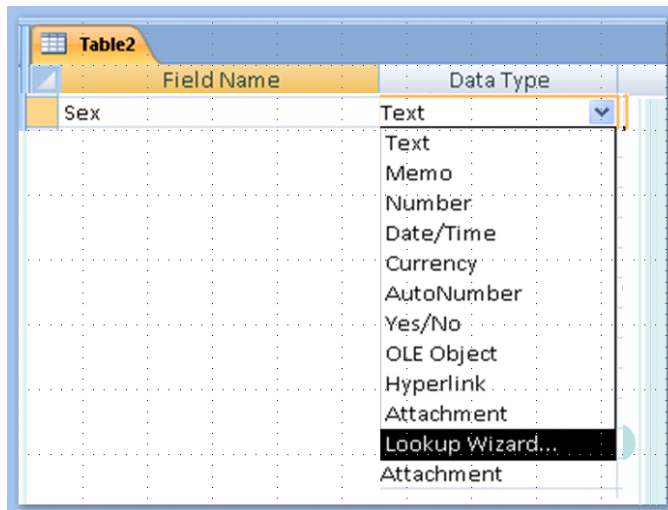


General		Lookup
Format	Short Date	
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	Yes	
Indexed	No	
IME Mode	No Control	
IME Sentence Mode	None	
Smart Tags		
Text Align	General	
Show Date Picker	For dates	

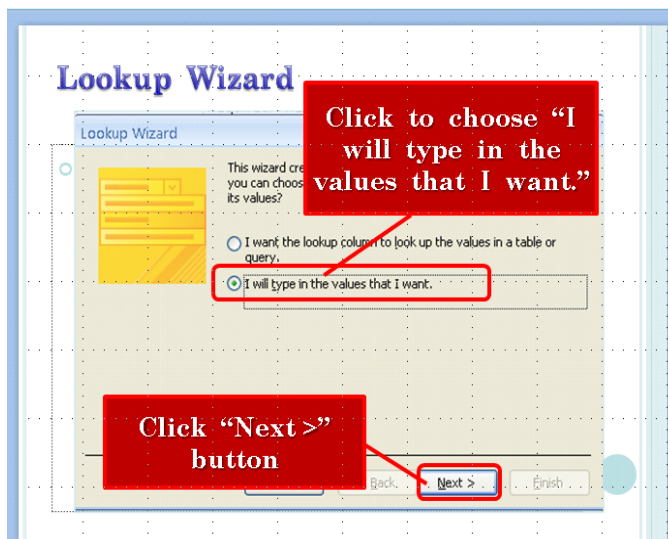
Later on, you need to state in the form that the input values shall be in the format of "MM/DD/YY".

5. Field name: **Sex**, Data type: Text/Lookup Wizard, type the inputs.  
5.1 Choose the data type as "Lookup Wizard".

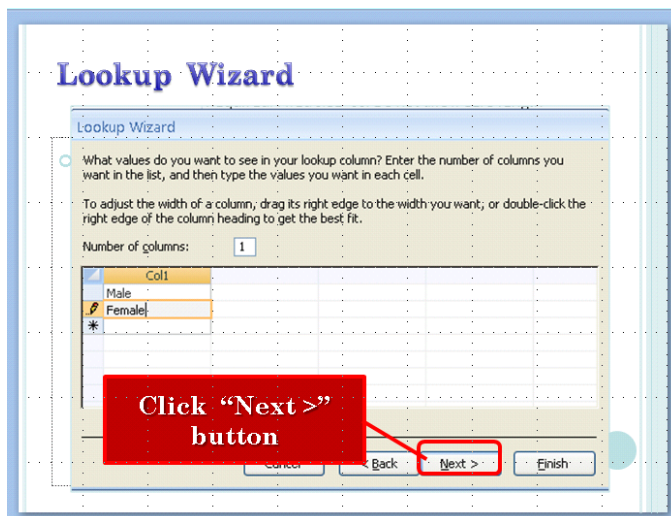
## MS Access 2007 - Field Validation Rules



5.2 When the Lookup Wizard dialog box is displayed, choose “I will type in the values that I want”. After that, click the “Next >” button.

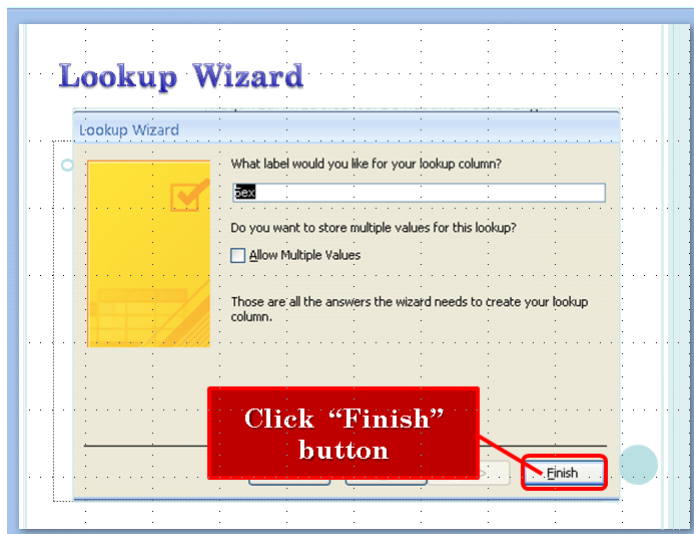


4.3 Accept the values provided and click the “Next >” button.



## MS Access 2007 - Field Validation Rules

4.4 Accept the default value and click “Finish”.

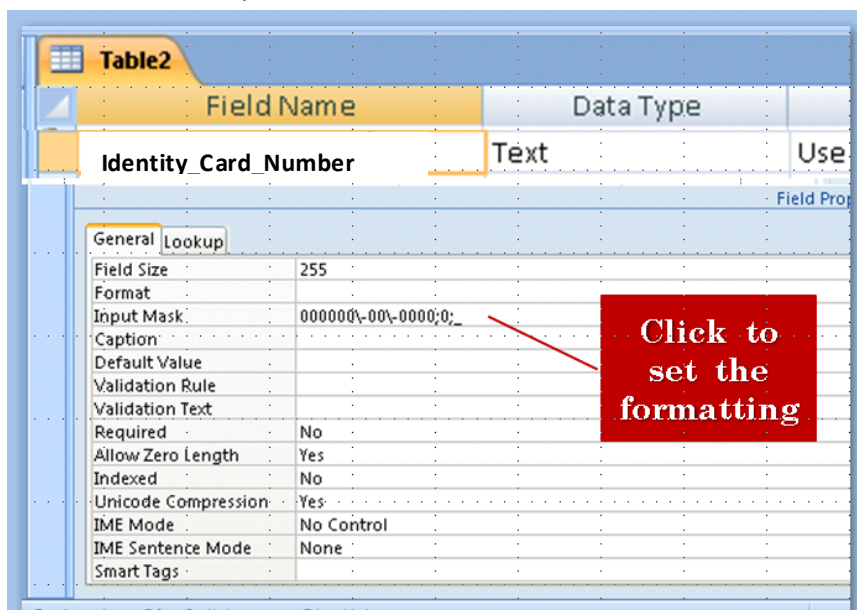


4.5 Save table.

6. Field name: **Malaysian**, Data type: Yes/No.

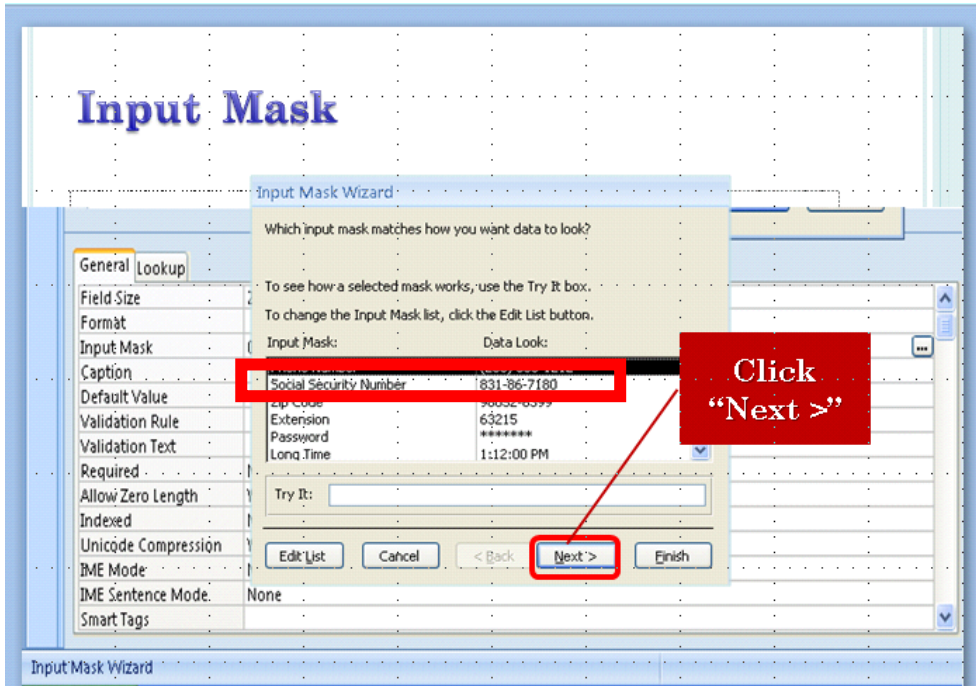
7. Field name: **Identity\_Card\_Number**, Data type: Text with input mask.

6.1 On the Field Properties Panel, click on the build button at the end of the Input Mask field.

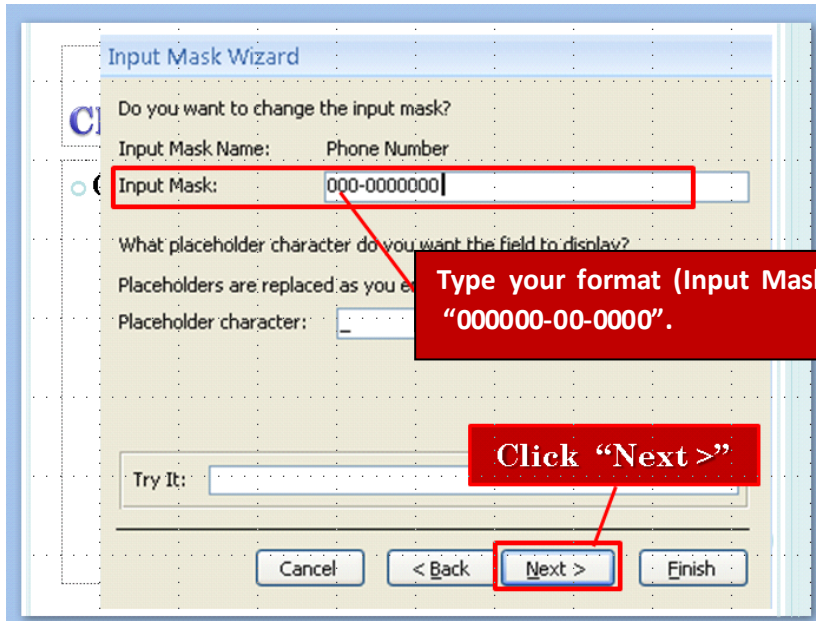


## MS Access 2007 - Field Validation Rules

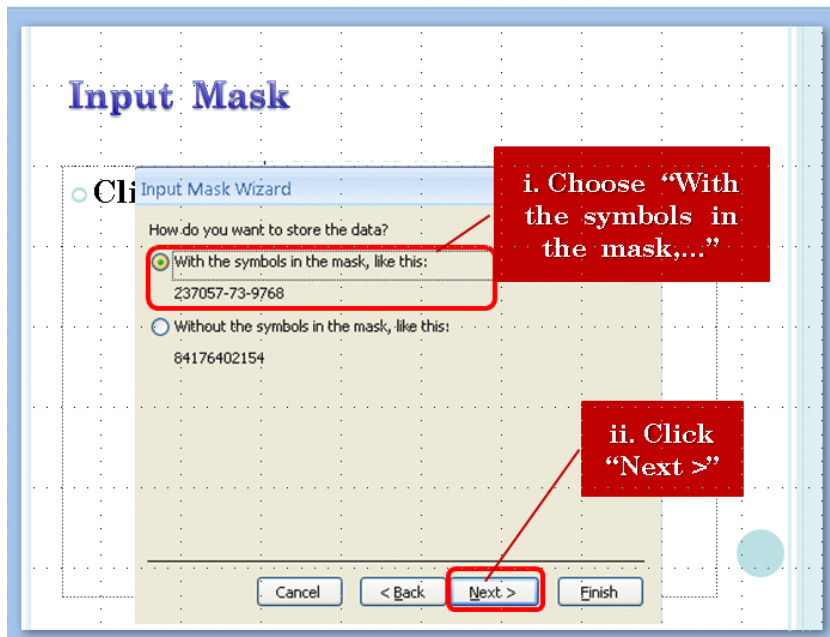
6.2 When the Input Mask Wizard dialog box appeared, click to choose “Social Security Number” and then click the “Next >” button.



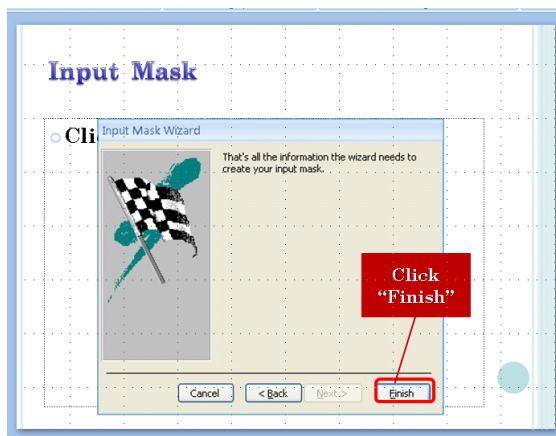
6.3 Type the format that you have specified into the space provided for Input Mask.



6.4 Click to choose the alternative where to format of the data is “with the symbols in the mask...”.



6.5 Click the "Finish" button.



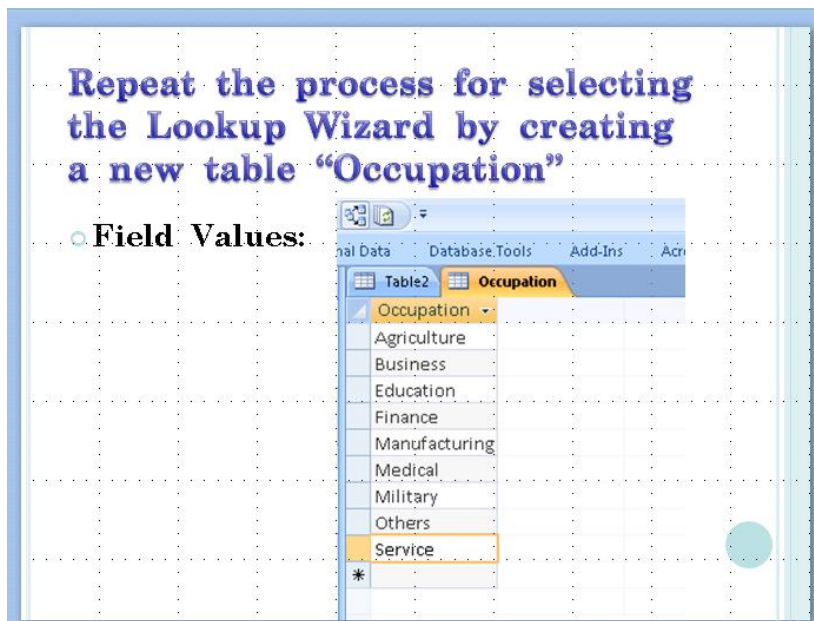
**Note:**

***You may state in the form created later by using a label "If Malaysia" so that only our citizens will need to key in the information of their identity card.***

8. Field name: **Occupation**, Data type: Text/Lookup Wizard, lookup a table named "Occupation" and then save the table.
  - 8.1 Initially accept the data type as Text.
  - 8.2 Create a new table named "Occupation"
  - 8.3 In the design view, accept ID as the default setting.
  - 8.4 Add a new field named Occupation.
  - 8.5 Switch to Datasheet View, in the field named "Occupation", type the values:
    - Agriculture
    - Business
    - Education
    - Finance
    - Manufacturing

## MS Access 2007 - Field Validation Rules

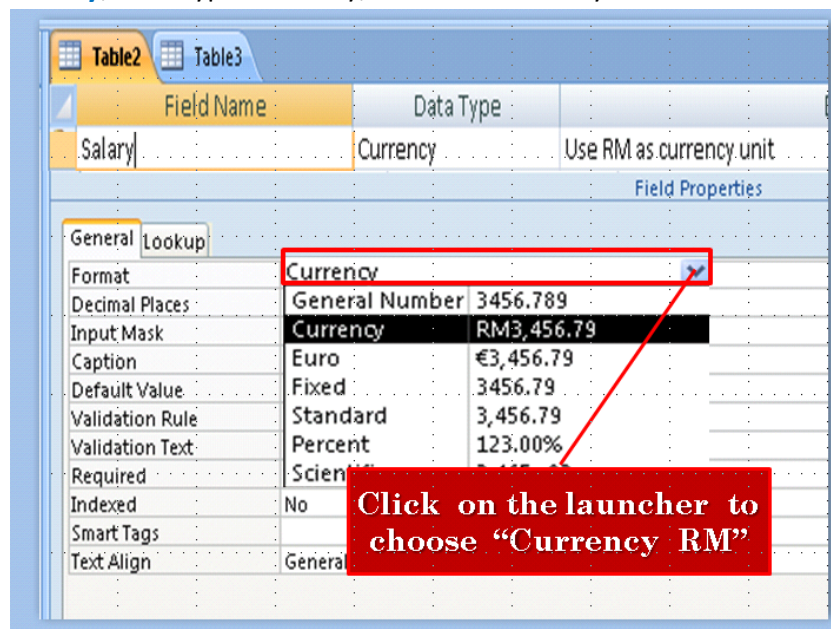
- Medical
- Military
- Service
- Others



8.6 Save and close the new table.

8.7 Go back to Table1 in design view. In the field named Occupation, click on the data type to select Lookup Wizard. Repeat the process until completion.

9. Field name: **Salary**, Data type: Currency, use RM as currency unit.

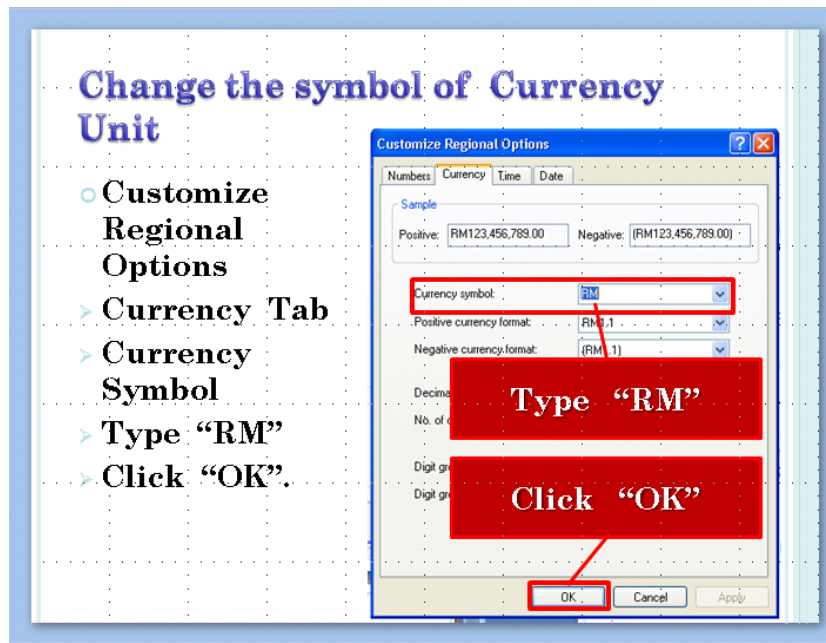


*Note:* If the "RM" currency unit is not available, you need to set the currency unit in "RM", by carrying out the following steps:



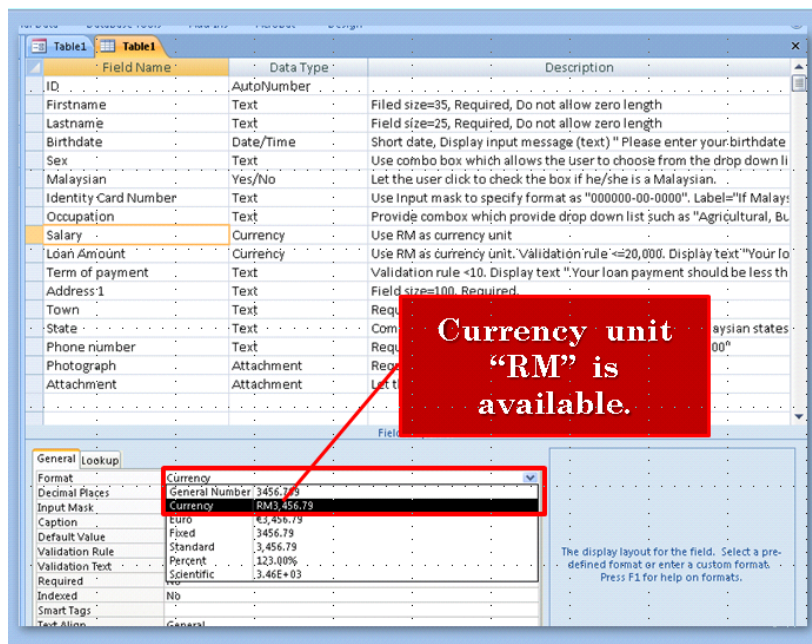
# MS Access 2007 - Field Validation Rules

9.1 Control Panel > Regional and Language Options > “Regional Option” Tab > Click on the “Customize” button.



9.2 Type the “RM” symbol into the “Currency symbol” option.

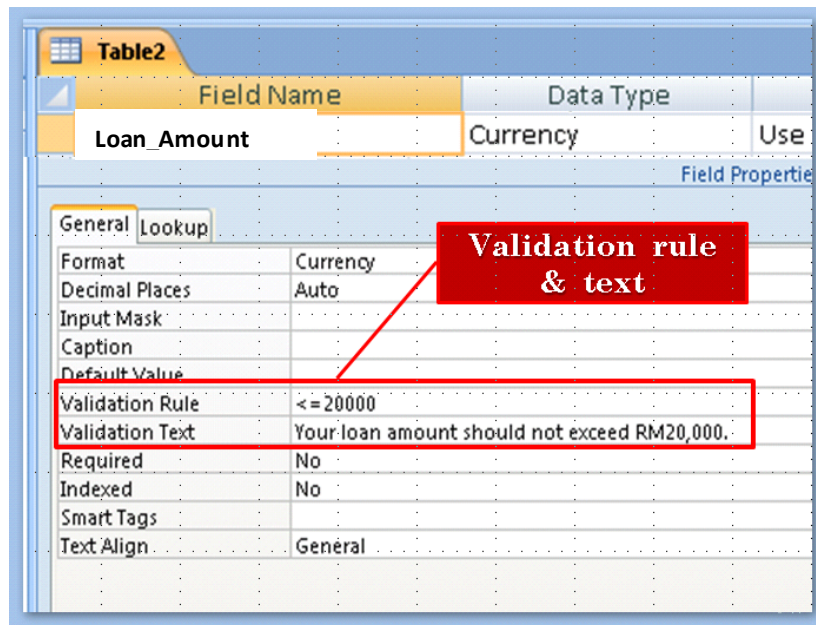
9.3 Click the “OK” button.



The currency unit in “RM” should be available.

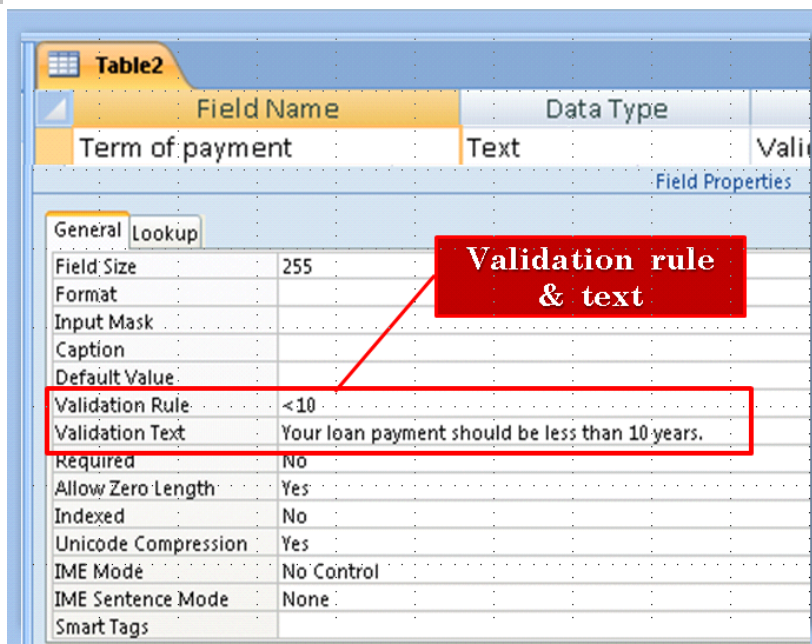
## MS Access 2007 - Field Validation Rules

10. Field name: **Loan\_Amount**, Data type: Currency. Impose validation rule.



In the Field Properties panel, type in the validation rule and the validation text.

11. Field name: **Term\_of\_payment**, Data type: Numbers. Impose validation rule



In the Field Properties panel, type in the validation rule and the validation text.

12. Field name: **Address1**, Data type: Text.  
Field properties: Required. Field size: 100.

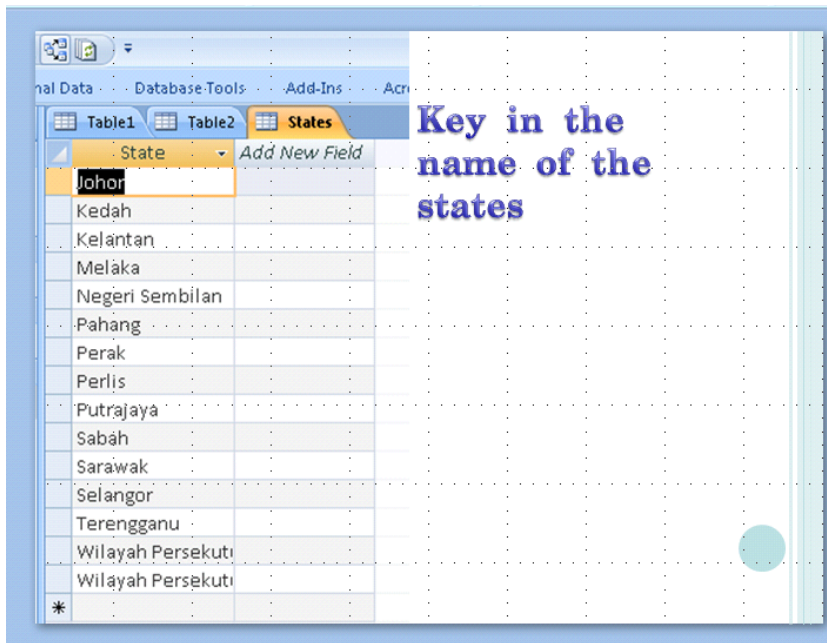
13. Field name: **Town**, Data type: Text.  
Field properties: Required. Field size: 40.

14. Field name: **State**, Data type: Text/ Lookup Wizard, lookup a table named "State".

14.1 Let the field name "State" with the default data type as "text". Create a new table named "State".

14.2 In the Design View, accept field named ID as default and add a new field named "State".

14.3 In the Datasheet View, key in the details.



14.4 Save and close the table.

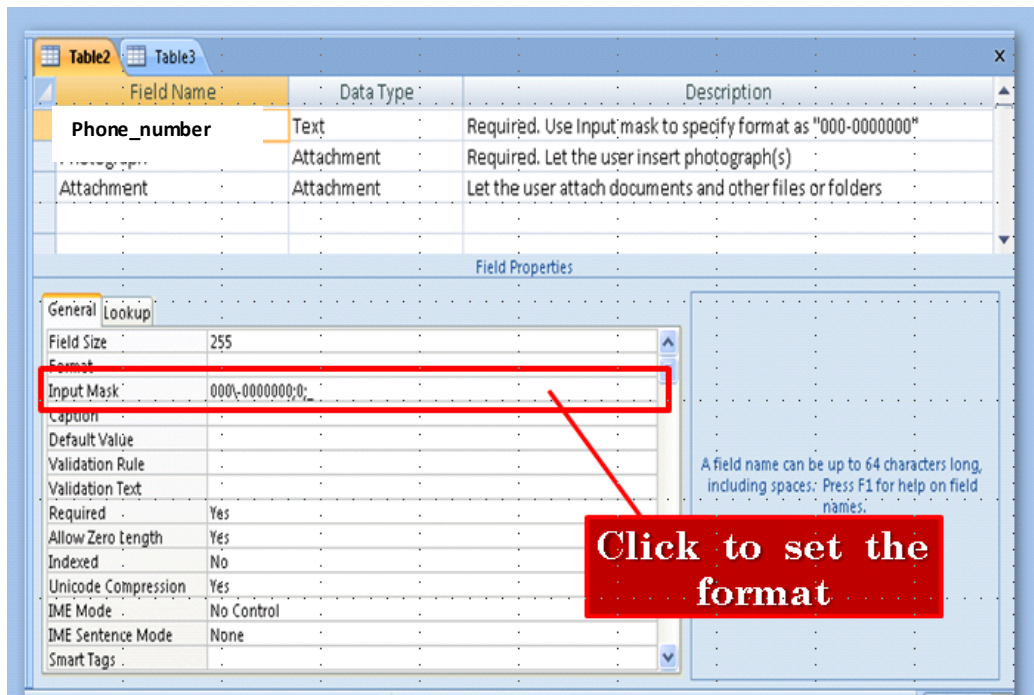
14.5 Back Table1, in the data type column, choose "Lookup Wizard" to lookup to the table named "States".

15. Field name: **Phone\_number**, Data type: Text with input mask

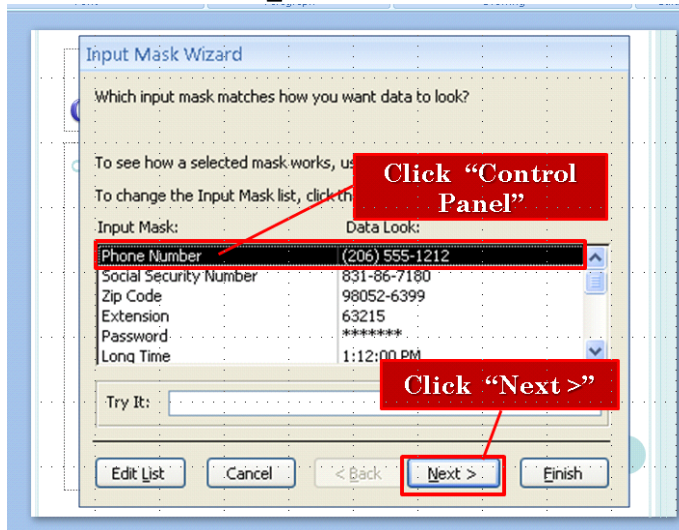
**Note:** You may ignore the input mask properties so that the users may key in data in any format.

## MS Access 2007 - Field Validation Rules

15.1 In the Field Properties panel, click on the row besides the field “Input Mask”.

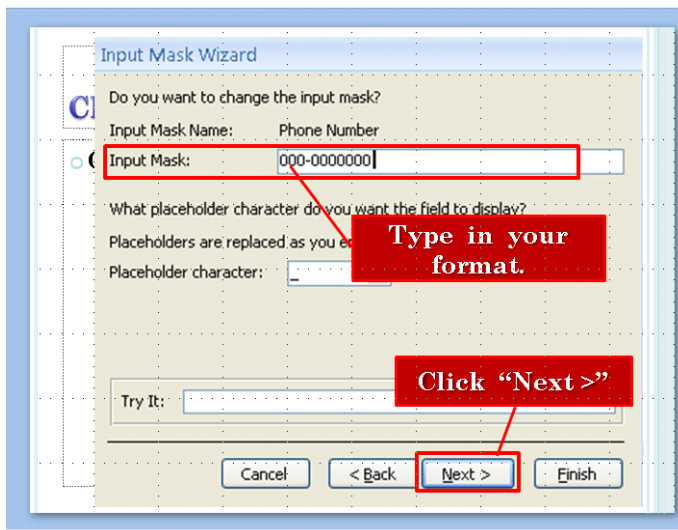


15.2 Select “Phone\_Number” and click the “Next >” button.

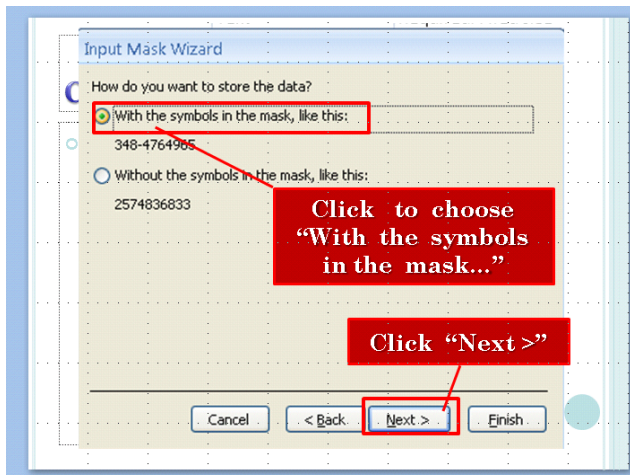


## MS Access 2007 - Field Validation Rules

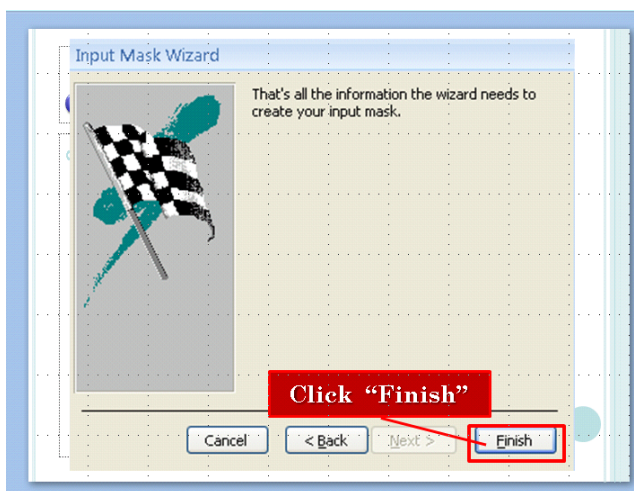
15.3 Type the format required in the field of “Input Mask”.



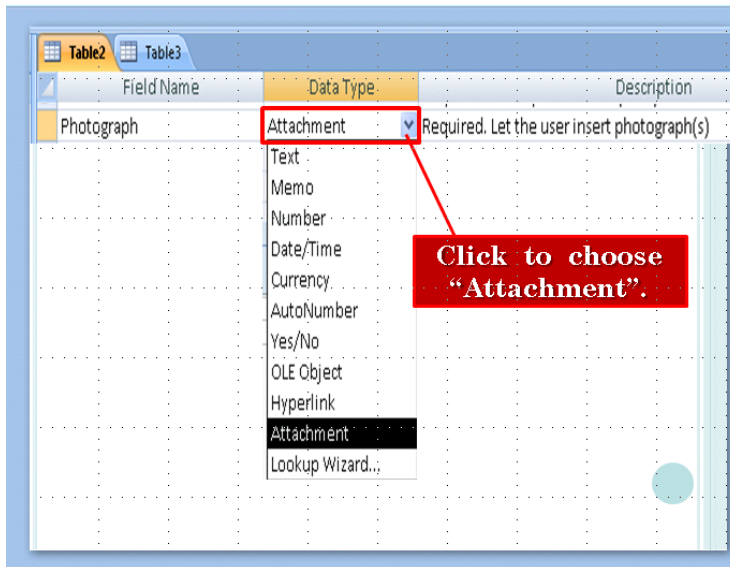
15.4 Select “...to store data ... with the symbols in the mask..”



15.5 Click the “Finish” button.



16. Field name: **Photograph**, Data type: Attachment.



Choose the data type as "Attachment".

17. Field name: **Attachment**, Data type: Attachment.  
Repeat the same procedure as above.

## II. Create a Form

Let's choose the automated-form creation tool to create a simple form.

1. In the navigation panel on the left, highlight the main table which contains all the fields which you have created.
2. On the menu bar, "Create" Tab > "Forms" group tools > click "Form".
3. Change the formatting and add **labels** to clarify the required some of the fields such as the format for the BirthDate, Term\_of\_payment in years, etc.

The screenshot displays the Microsoft Access 2007 interface in Form Design view. The ribbon includes 'Home', 'Create', 'External Data', 'Database Tools', 'Add-Ins', 'Acrobat', 'Format', and 'Arrange'. The 'Form Layout Tools' task pane is active, showing options for 'Labels', 'Report', 'Blank Report', 'Report Wizard', 'Report Design', 'Query Wizard', 'Query Design', and 'Macro'. The main window shows a form titled 'Table2' with the following fields and controls:

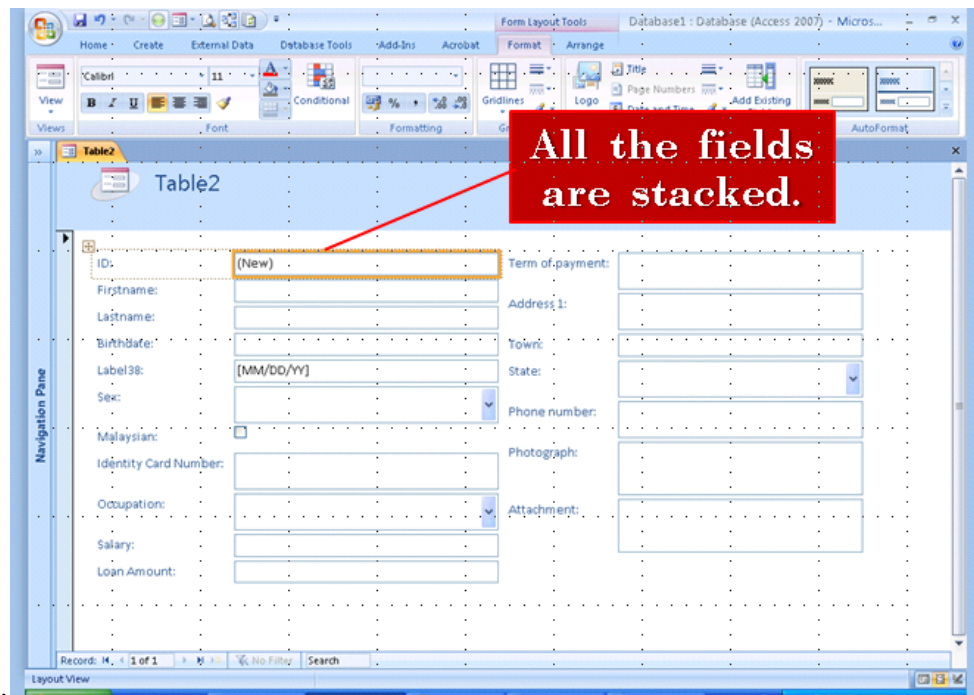
ID:	(New)	Term of payment:	
Firstname:		Address 1:	
Lastname:		Town:	
Birthdate:		State:	
Label38:	[MM/DD/YY]	Phone number:	
Sex:		Photograph:	
Malaysian:	<input type="checkbox"/>	Attachment:	
Identity Card Number:			
Occupation:			
Salary:			
Loan Amount:			

At the bottom, the status bar shows 'Record: 1 of 1', 'No Filter', and a search box.

## 3a. Alternative 1: In Layout View

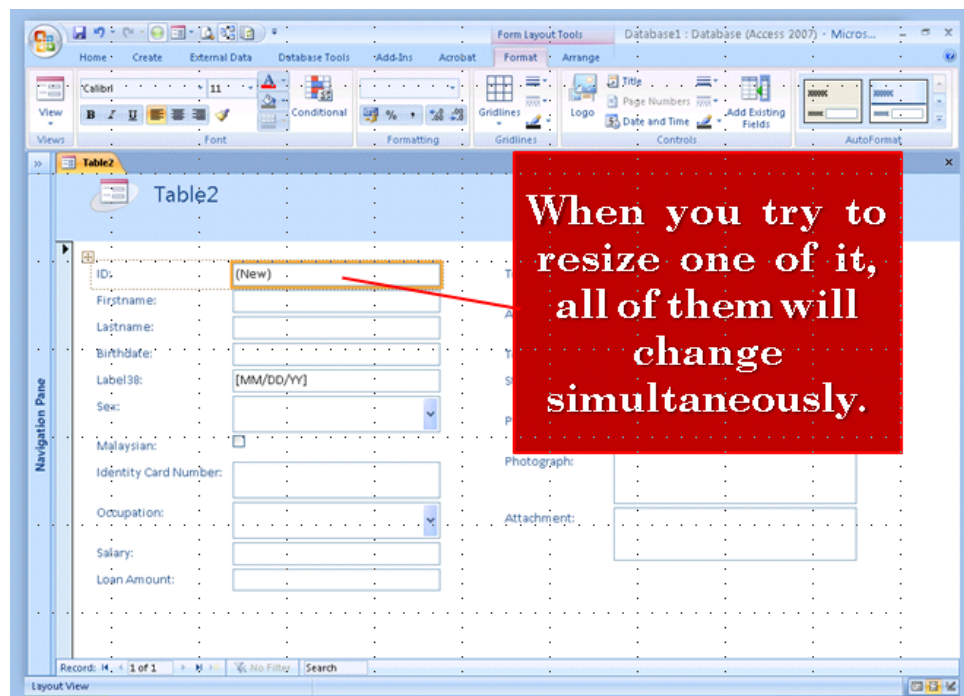
The simplest way to alter the layout is to switch to Layout View.

By default, all the fields are stacked as a single unit. If you try to resize one column, the other column will also be affected.



i.

The “stacked effect” means that all the fields are group collectively a one unit.



ii.

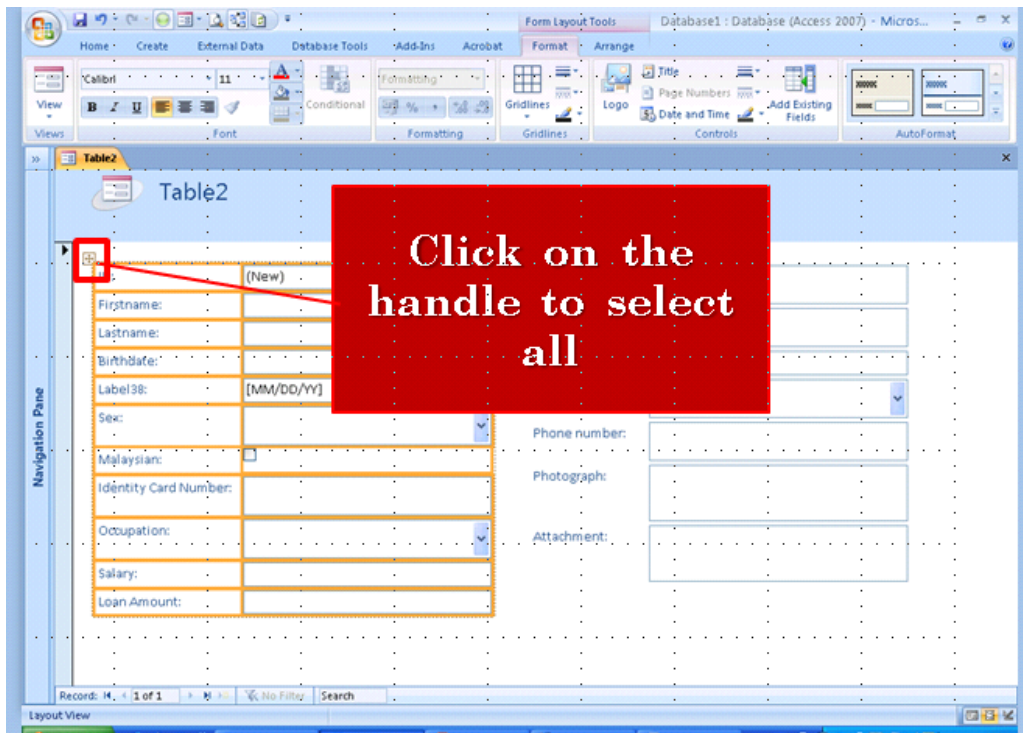
When you try to resize any field, the sizes of all the other fields will be changed, too.



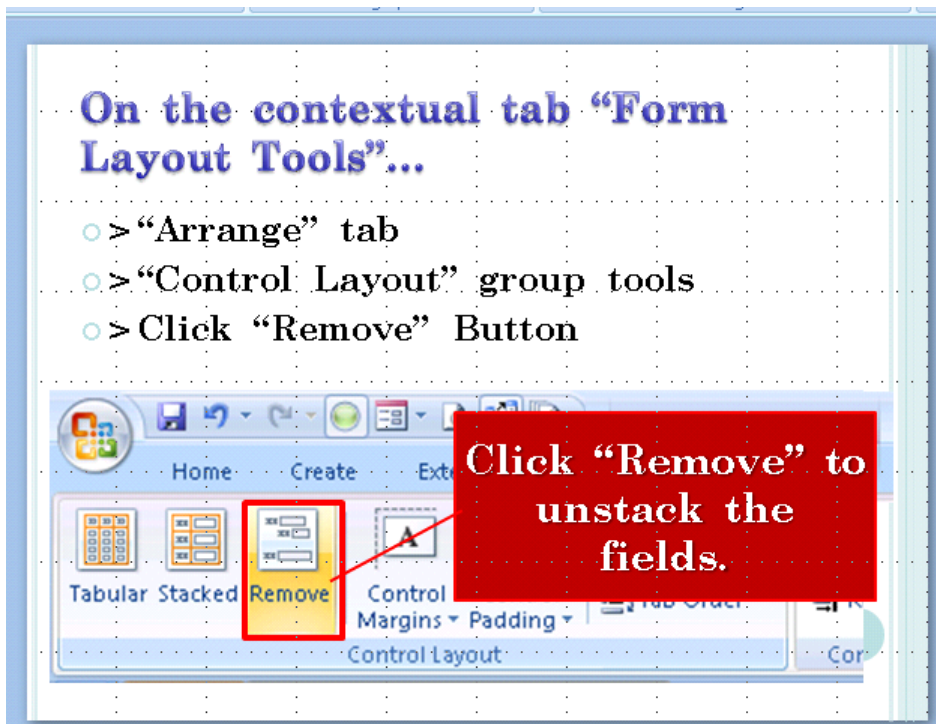
## MS Access 2007 - Field Validation Rules

You may have remove the “stacked” effect through the following steps:

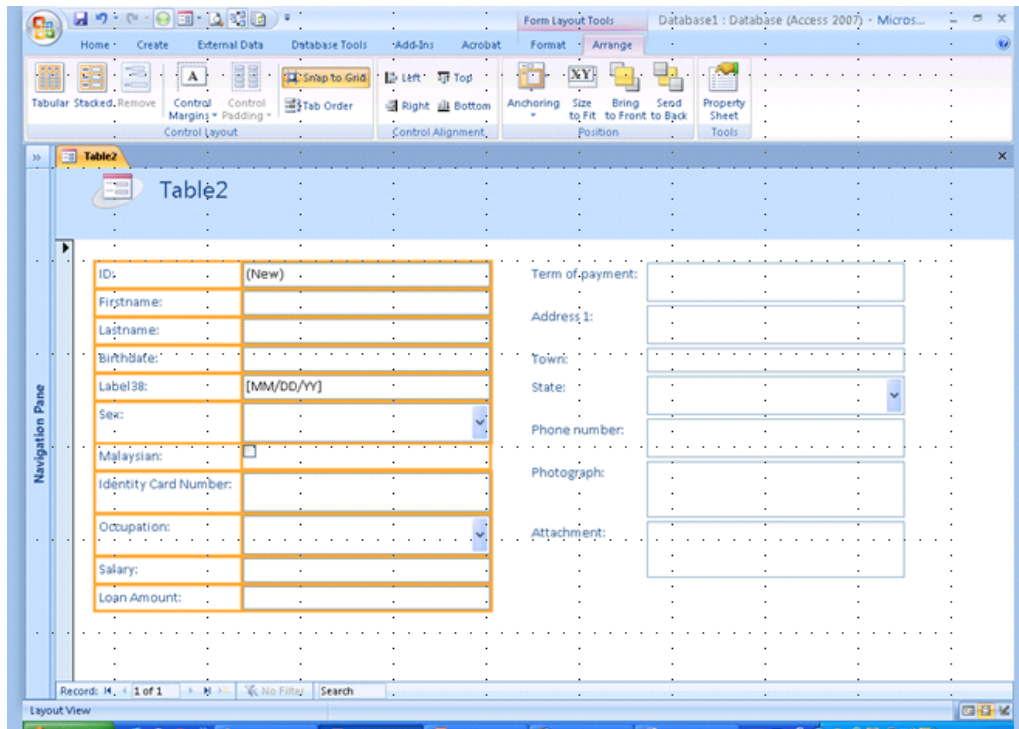
1. Click on the handle of the form to select the fields which were stacked as a single unit.



2. On the contextual tab “Form Layout Tools”, under the “Control Layout” group tools, click to choose the “Remove” button.

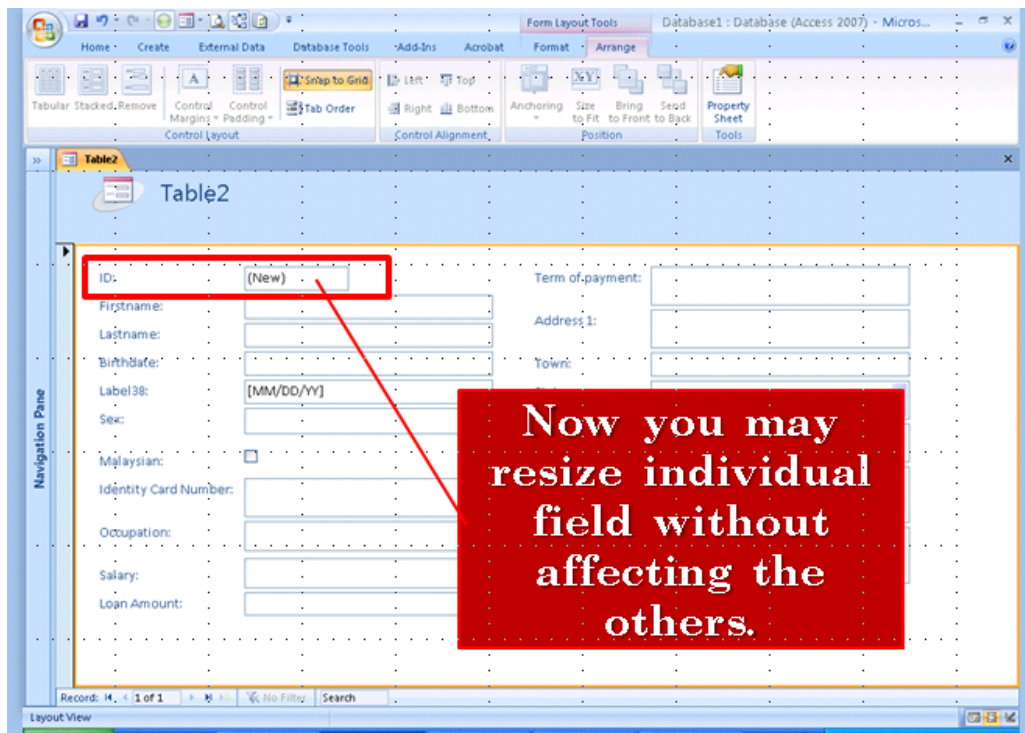


## MS Access 2007 - Field Validation Rules



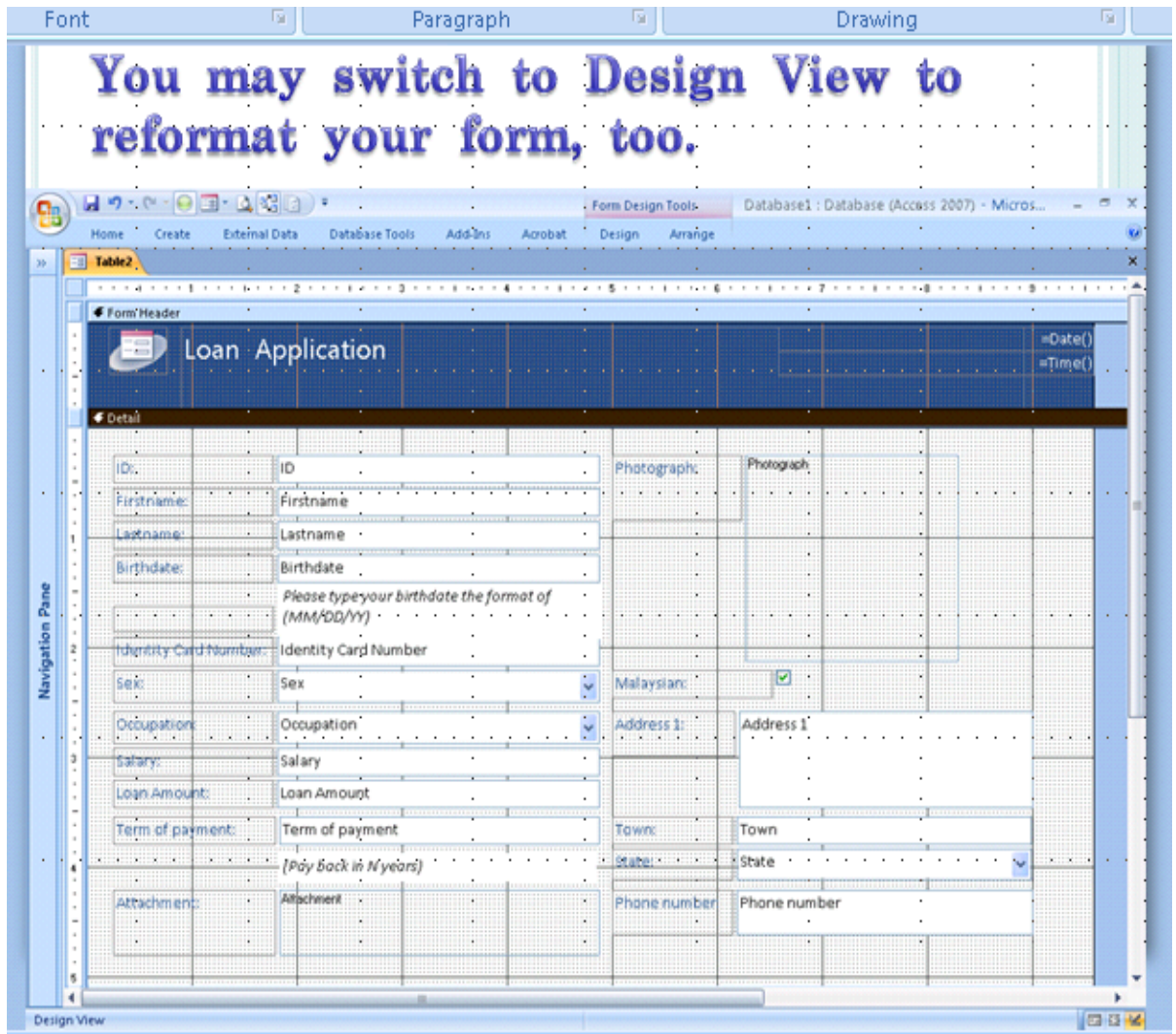
The yellow colour (highlight) indicates that the fields are selected.

You may move and resize individual field freely for they are no longer bound as one unit.



## 3b. Alternative 2: In Design View

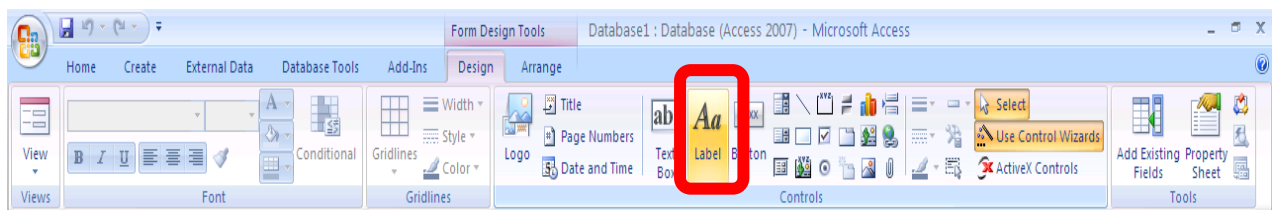
Another alternative is to do the alteration in the Design View. Do include explanation to assist the users for keying in the required information.



**Note:**

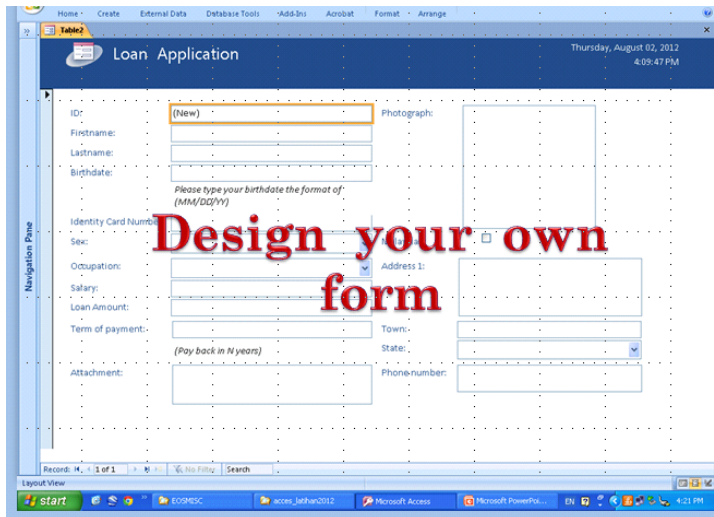
You may use the “Label” button to create a label (to include a statement or guide in the form).

- Procedure: Form Design Tools > Design Tab > Controls Group Tool > Click “Label” button.



- Place the label on the desired location and type your text.

# MS Access 2007 - Field Validation Rules



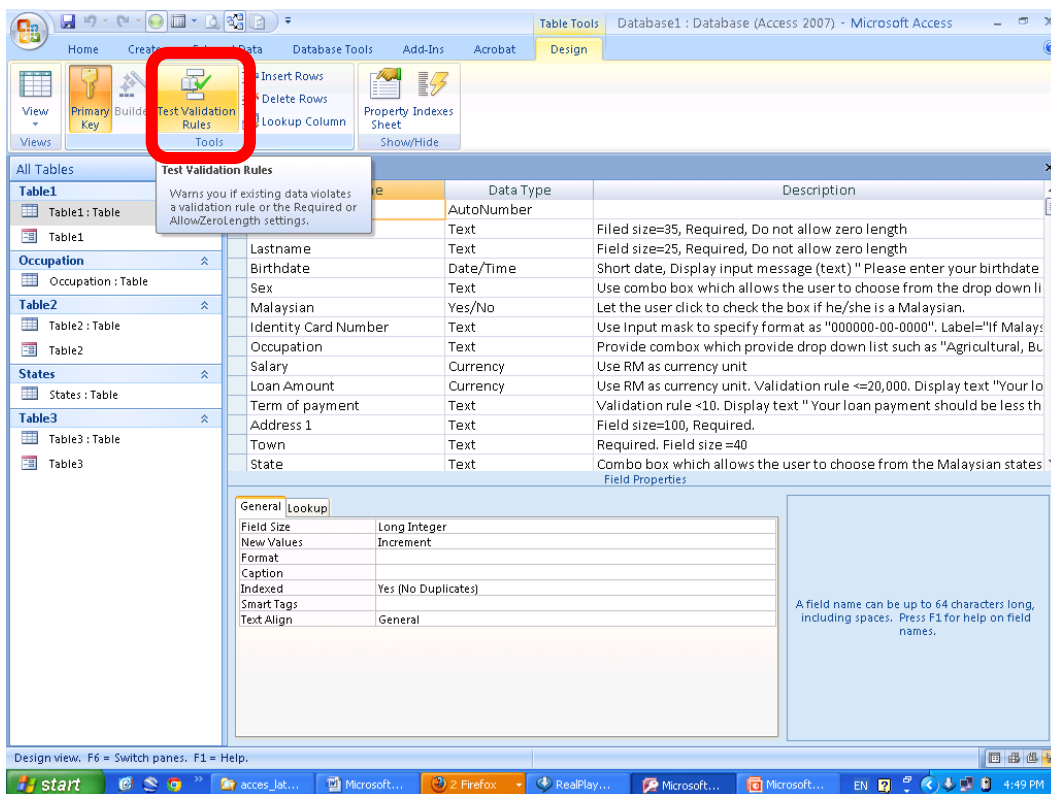
Save the form. Close the form object.

## III. Testing the Validation Rules

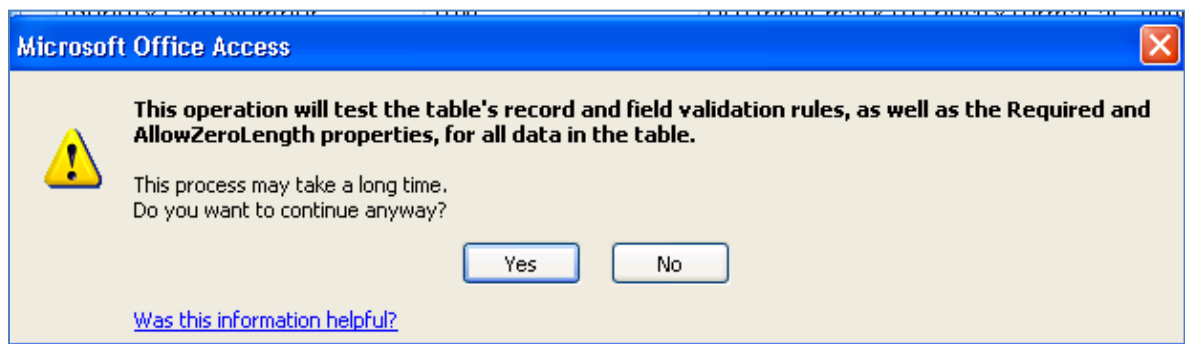
### A. Testing the field validation rules in Design View.

Condition: You need to open the table in Design View and it had already contained multiple records.

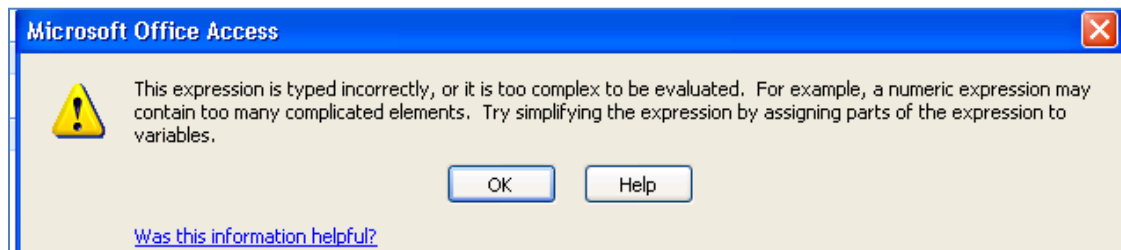
1. Open the table that contains your validation rules in Design View.
2. On the **Design** tab, in the **Tools** group, click **Test Validation Rules**.



- Click **Yes** to close the alert message and start the test.



- If prompted to save your table, Click **Yes**.
- You might see a variety of other alert messages as you proceed. Read the instructions in each message, and then click **Yes** or **No**, as appropriate, to complete or stop the testing.



### B. Testing the validation rules while entering the data

- Reopen the form.
- Try keying in the data, and do try to enter the wrong data type or format and see the effect of validation rules and the display of the validation text.

*“A man's errors are his portals of discovery.”*

**James Joyce**

May you enjoy this sharing session.

Thank you!

### Bibliography

Browne, A. (n.d.). *Microsoft Access Tips for xBase developers: Data type in Access*. Retrieved August 3, 2012, from Allen Browne's Database and Training: <http://allenbrowne.com/xbase-05.html>

Cox, Joyce; Preppernau, Joan & Online Training Solutions Inc. (2008). *Microsoft Certified Application Specialist Study Guide 2007 Microsoft Office System Edition*. Washington: Microsoft Press.

*Data types in Access*. (n.d.). Retrieved August 3, 2012, from Tekstenuileg.net: <http://en.tekstenuileg.net/articles/software/access-data-types>

Khor, B. C. (2012). *How to manage your money*. Yong Peng: Khor & Sons.

Lambert, S., Lambert III, M. D., & Preppernau, J. (2007). *Step by step Microsoft Office Access 2007*. Washington: Microsoft Press.

*Microsoft Office Access 2007 What is data type? How many types of data type?* (2011, July 29). Retrieved July 26, 2012, from Computer Course Online: <http://computercours.blogspot.com/2011/07/microsoft-office-access-2007-what-is.html>

Microsoft Office. (2012). *Create a validation rule to validate data in a field*. Retrieved August 3, 2012, from <http://office.microsoft.com/en-us/access-help/create-a-validation-rule-to-validate-data-in-a-field-HA010096312.aspx>

Microsoft Office. (2012). *Create an expression*. Retrieved August 3, 2012, from <http://office.microsoft.com/en-us/access-help/create-an-expression-HA010106175.aspx?CTT=5&origin=HA010096312>

## Index

### A

Allow Zero Length, 5  
Attachment, 4, 6, 21  
automated-form creation tool, 22  
AutoNumber, 6

### C

Currency, 4, 15, 16, 17

### D

Data type, 4, 9  
Datasheet View, 14, 18  
design view, 14, 15

### F

field, 3, 4, 5, 6, 7, 8, 9, 12, 14, 15, 18, 19, 20, 25, 27, 29  
Field Properties, 5, 12, 17, 19  
Field size, 5, 17  
field validation rules, 3, 5, 6  
[Field validation rules](#), 5  
form, 3, 4, 6, 8, 10, 14, 22, 24, 27, 28

### L

Layout View, 23  
Lookup Wizard, 4, 10, 11, 14, 15, 18

### M

macros, 4

### O

OLE Object, 4, 6

### Q

query, 4

### R

[Record \(or table\) validation rules](#), 5  
relational database, 3  
report, 4  
Required, 5, 17

### T

table, 3, 4, 5, 6, 8, 12, 14, 15, 18, 22, 27, 28  
tables, 3, 4

### V

Validation rules, 5  
validation text, 6, 7, 17, 28