
CL1000-INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGIES

Lab Task # 7 MS ACCESS Manual

MICROSOFT ACCESS is a Database Management System offered by Microsoft. It uses the Microsoft Jet Database Engine and comes as a part of the Microsoft Office suite of application.

Microsoft Access offers the functionality of a database and the programming capabilities to create easy to navigate screens (forms). It helps you analyze large amounts of information, and manage data efficiently.

Important Terms and Basic Objects

Database File:
It is a file that stores the entire database. The database file is saved to your hard drive or other storage devices.

Datatypes:

Datatypes are the properties of each field. Every field has one datatype like text, number, date, etc.

Table

- A Table is an object which stores data in Row & Column format to store data.
- A Table is usually related to other tables in the database file.
- Each column must have Unique name
- We can also define Primary Key in a table.

Query

- Queries answer a question by selecting and sorting and filtering data based on search criteria.
- Queries show a selection of data based on criteria (limitations) you provide.
- Queries can pull from one or more related Tables and other Queries.
- Types of Query can be SELECT, INSERT, UPDATE,

DELETE. Form

- A form is a database object that you can use to create a user interface for a database application.
- Forms help you to display live data from the table. It mainly used to ease the process of data entry or editing.

Report

- A report is an object in desktop databases primarily used for formatting, calculating, printing, and summarizing selected data
- You can even customize the report's look and feel.

MS Access Datatypes:

MS Access common data types are listed below:

Type of Data	Description	Size
Short Text	Text, including numbers which does not need calculation. (e.g., Mobile numbers).	Up to 255 characters.
Long Text	This data type is used for lengthy text or alphanumeric data.	Maximum 63,999 characters.
Number	Numeric data type used for storing mathematical calculations.	1, 2, 4, 8, and 16 bytes.
Date/Time	Store Date/time for the years 100 through 9999.	8 bytes.
Currency	It allows you to store currency values and numeric data with one to four decimal places.	8 bytes.
Auto Number	Assign a unique number or assigned by Microsoft Access when any new record is created. Usually used as the primary key	Four bytes (16 bytes if it is set as a Replication ID).
Yes/No	It only stores logical values Yes and No.	1 bit
Attachment	It stores files, such as digital photos. Multiple files can be attached per record.	Up to 2 GB Data can be stored.
OLE objects	OLE objects can store audio, video, other Binary Large Objects.	Up to 2 GB data can be stored.
Hyperlink	Text or combinations of text and numbers stored. That text is used as hyperlink address.	Each part of a Hyperlink data type allows you to store a maximum 2048 characters.
Calculated	Helps you to create an expression that uses data from one or more fields.	You can create an expression which uses data from one or more fields.

How to Start Microsoft Access

Note: We assume you have the latest Microsoft Access installed which comes bundled with Microsoft Office 365 package.

There are two ways to Start MS Access.

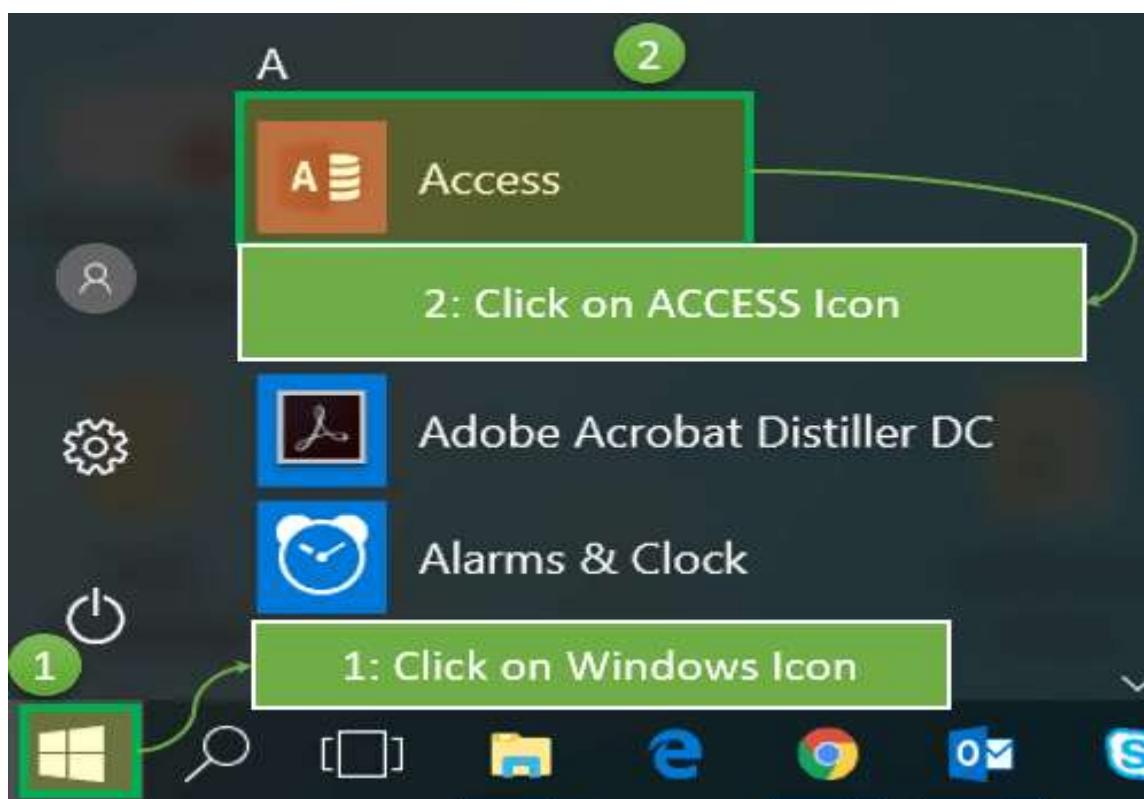
1. From Windows, 'Start' button.
2. From Desktop, Right Click > 'New' option.

Let's have a look of starting MS ACCESS using both

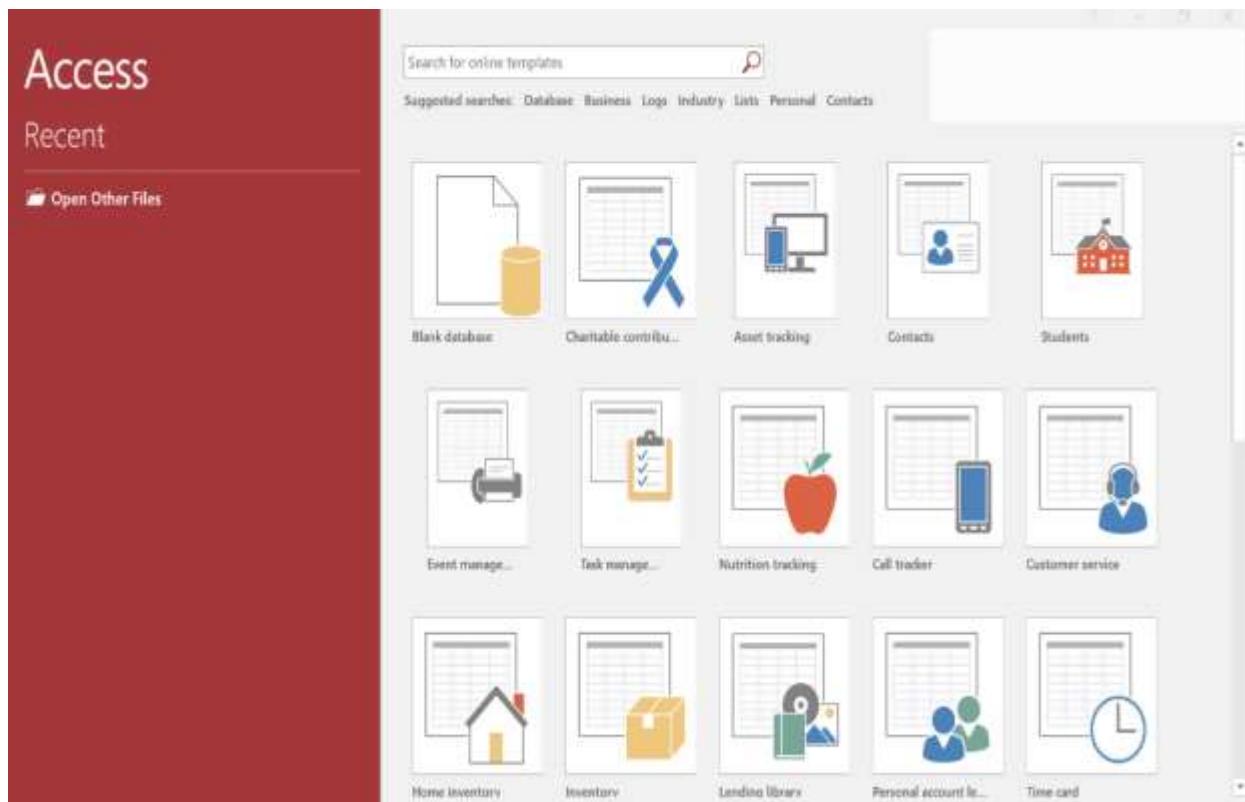
the ways: Option 1) From Windows, Start button.

Step 1) Click on the 'Windows' icon. You will find the list of installed programs.

Step 2) Check and click on Access Icon.

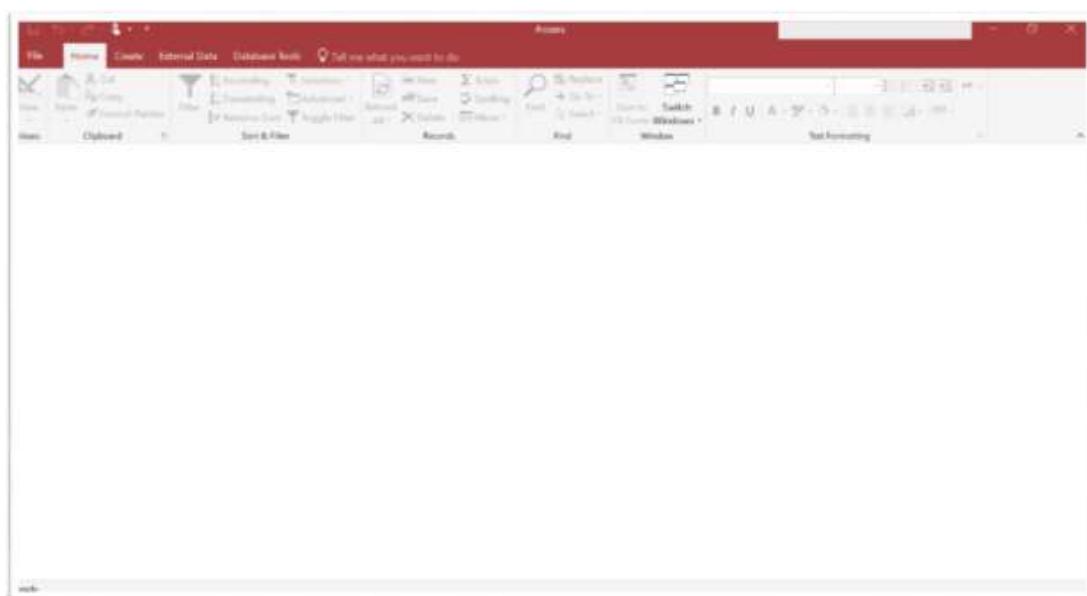


Step 3) MS Access Application window will appear.



Steps 4) Press 'Esc'.

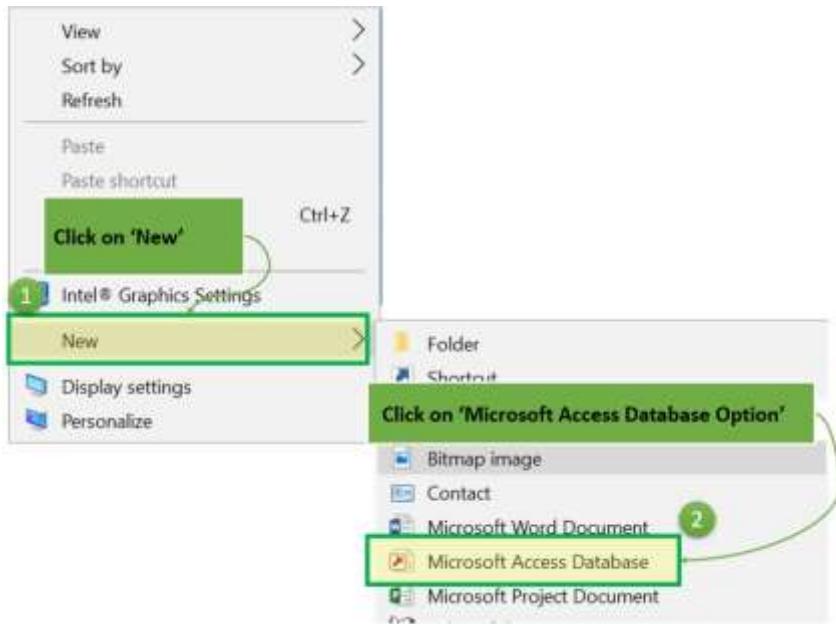
Result: This will open the MS ACCESS windows application



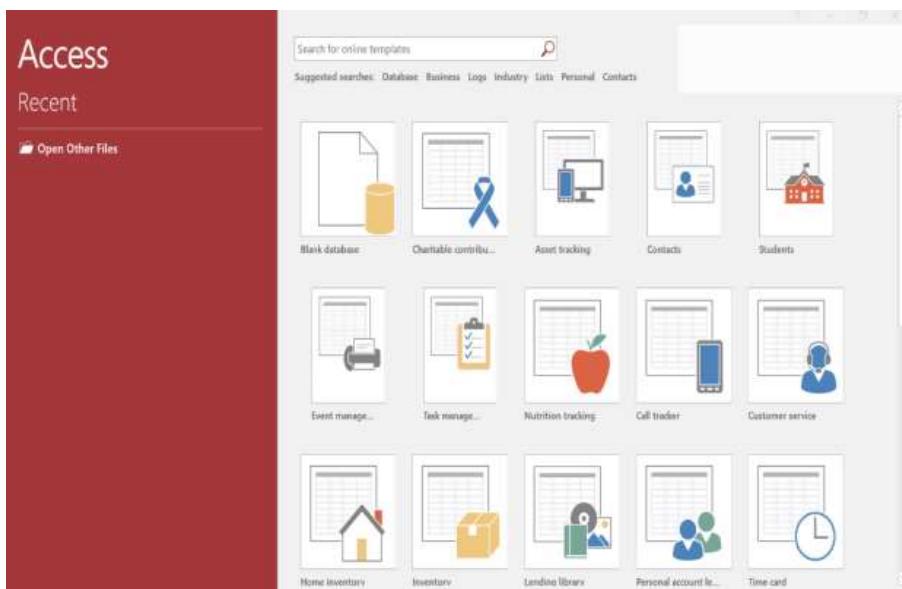
Option 2) From Desktop, 'New' option.

Step 1) Right Click from Desktop and Click 'New'

Step 2) Click on 'Microsoft Access Database Option'

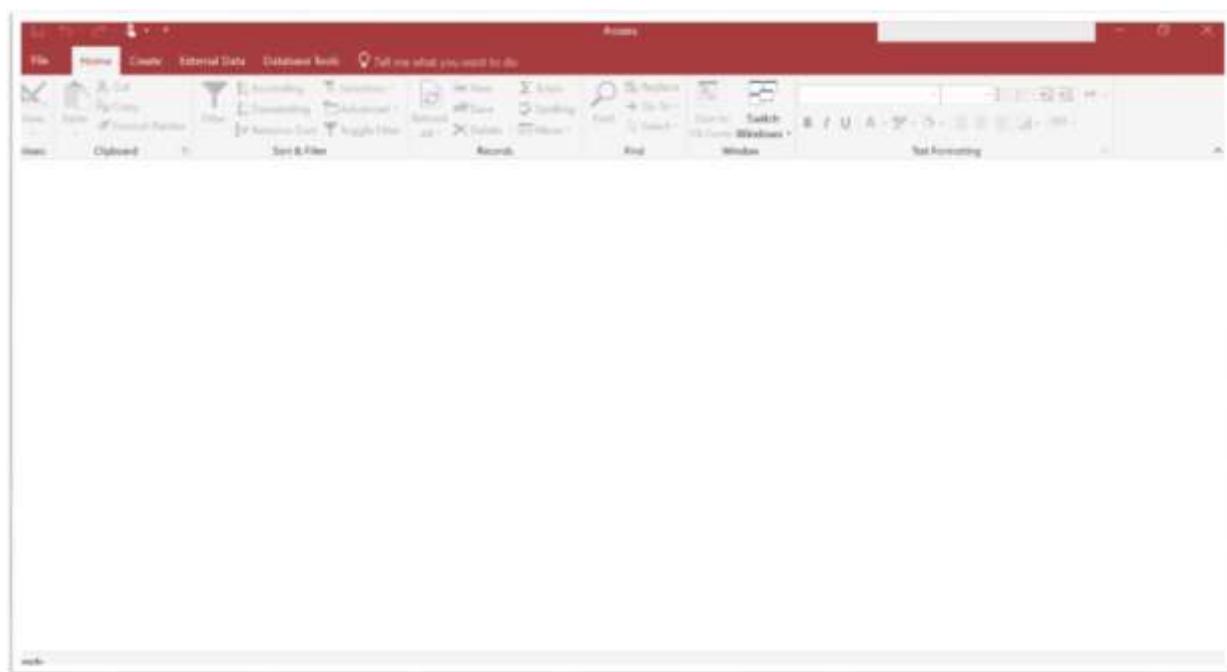


Step 3) Below MS Access Application window will appear



Step 4) Press 'Esc'

Result: This will open the MS ACCESS windows application



How to Create a Database

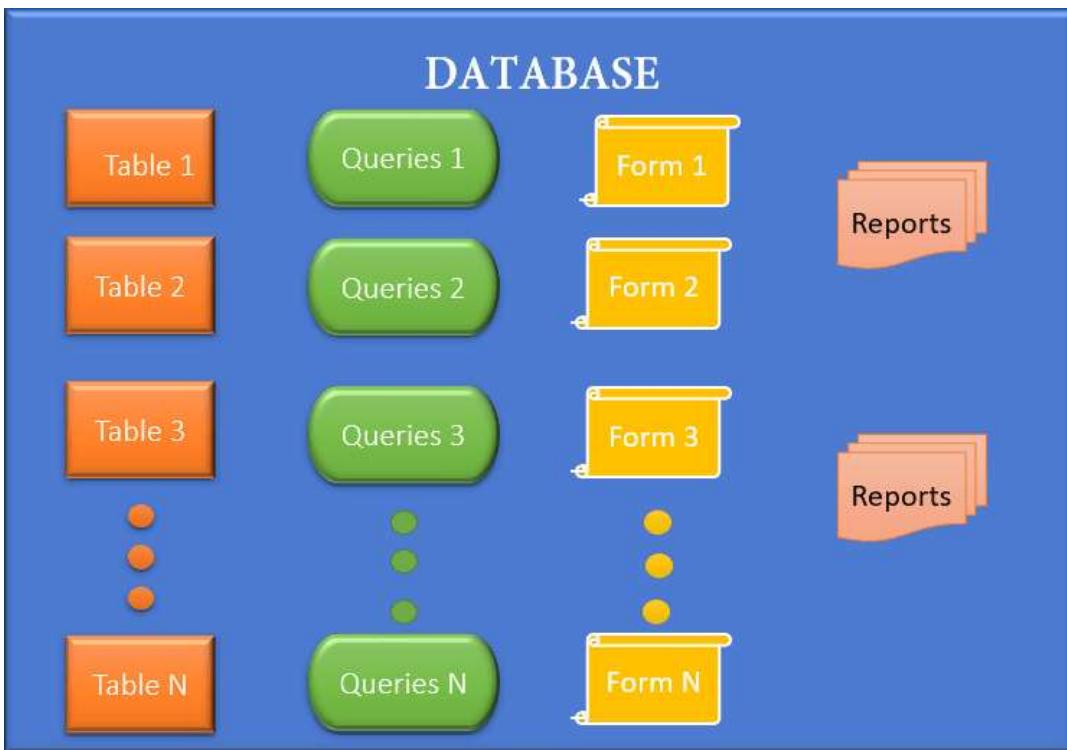
Before we create Database, lets quickly understand the holistic picture of what Database is, with particular reference to MS ACCESS.

Let's, start with a few examples in real life:

- We have Bookcase where Books resides,
 - We have i-pods where we have a collection of music & cases are countless.

Similarly, we have MS Access Database is a kind of home for all your tables, queries, Forms, Reports, etc. in MS-ACCESS which are interlinked.

Technically, Database store the data in a well-organized manner for easy access and retrieval.



There are two ways to create Database in SQL ACCESS:

1. Create Database from Template
2. Create a Blank

Database Let's go into

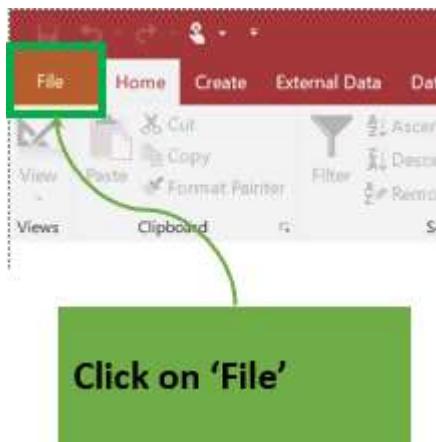
the detail of each:

Create Database from Template

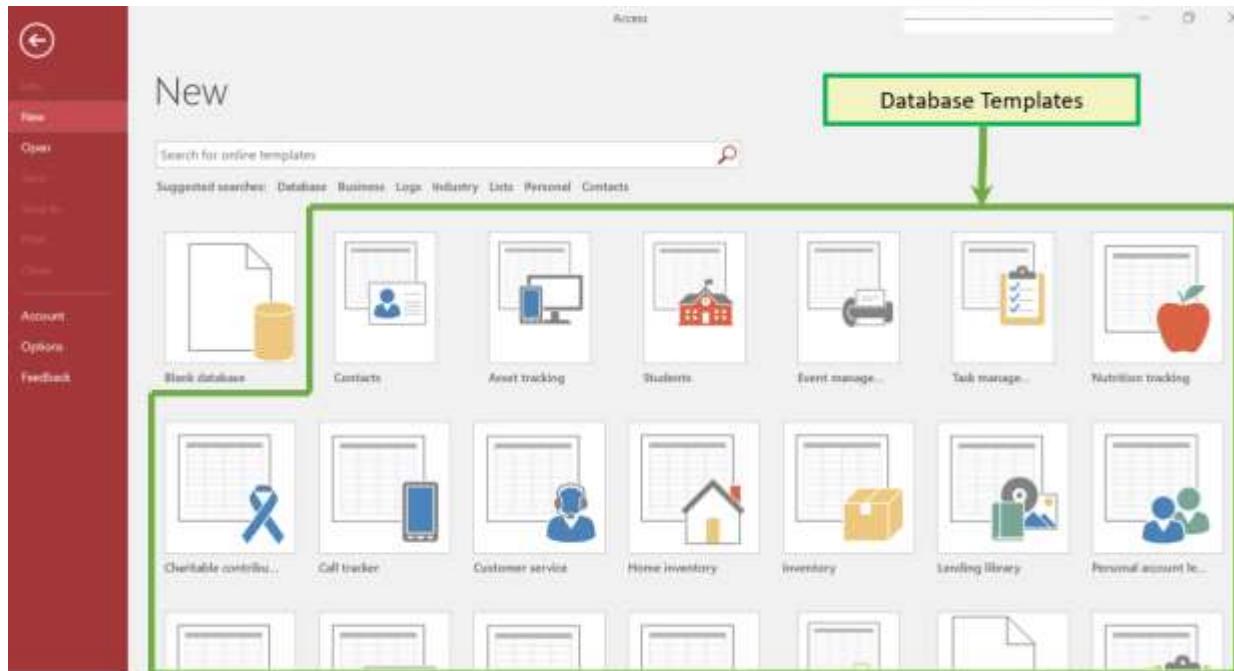
- There are many situations where we need to start with some readymade database template for given requirements.
- MS Access provides many ready to use templates for such types of databases requirements where the data structure is already defined.
- You can keep customizing the template structure further as per our requirement.
- MS ACCESS Database template example includes Contacts, Student, Time tracking, etc.

Steps to create Database from Template

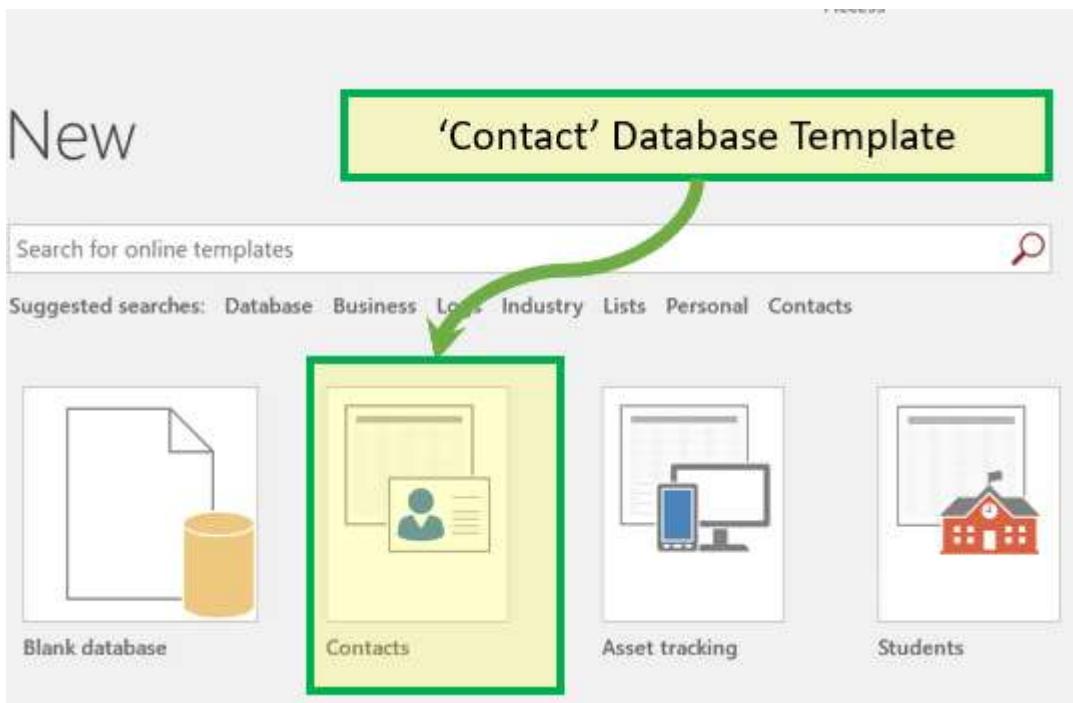
Step 1) With MS ACCESS application open, Click on File.



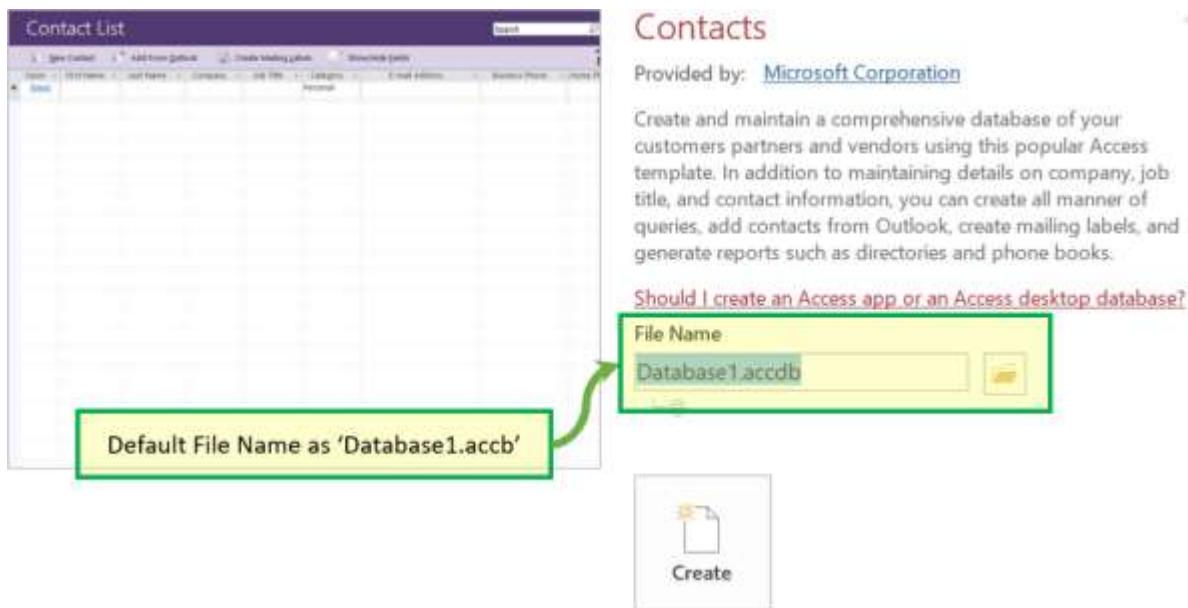
Result: The below window will appear. All the **Database templates** are displayed below.



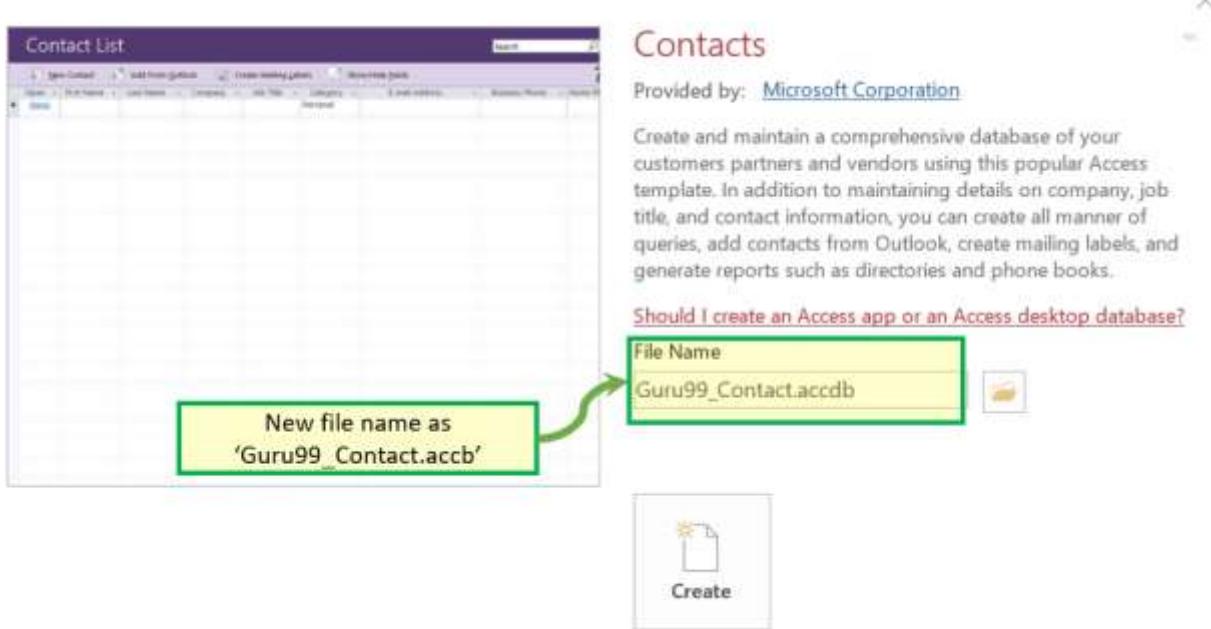
Step 2) We can select any template by clicking on it. Click on **Contact Template** for further reverence.



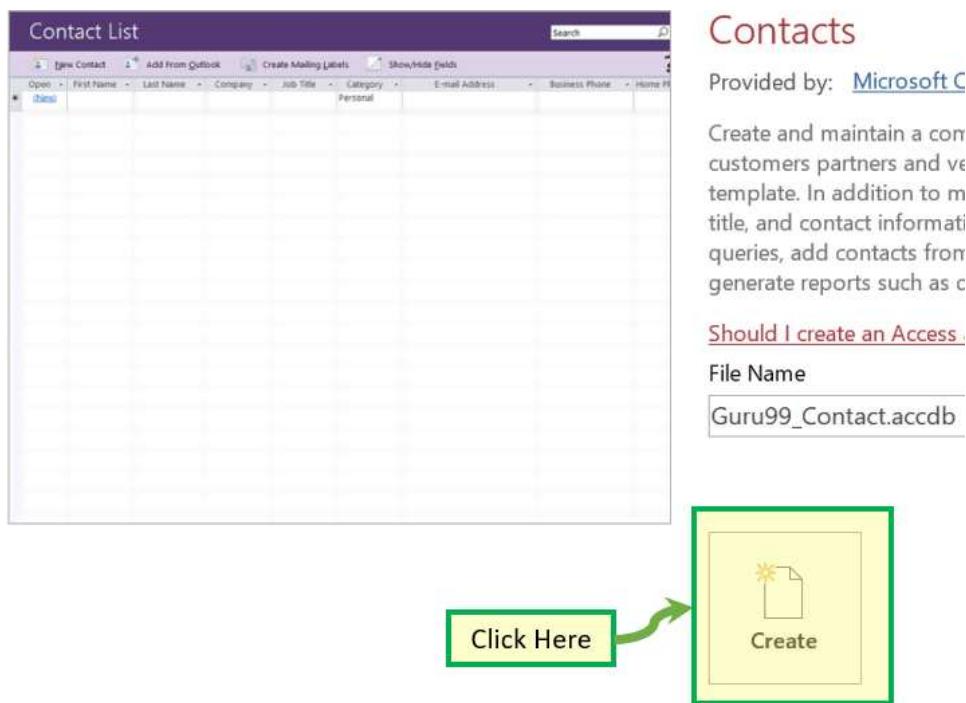
Step 3) File name box will appear with the default file name.



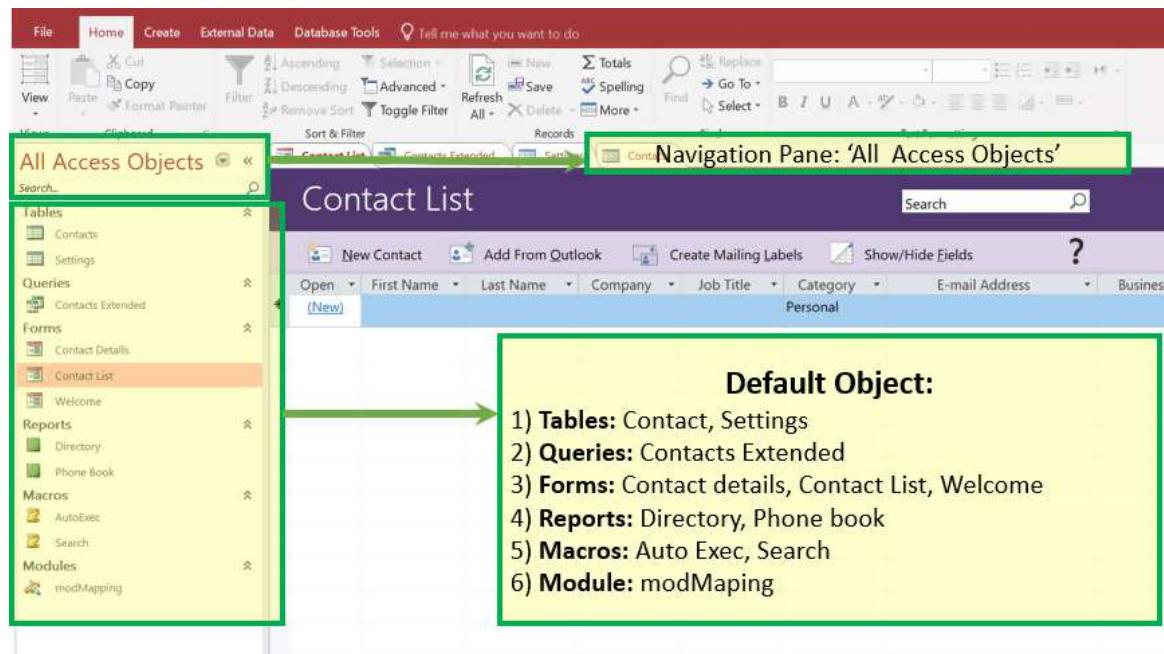
Step 4) Enter the new Name.



Step 5) Click on 'Create.'

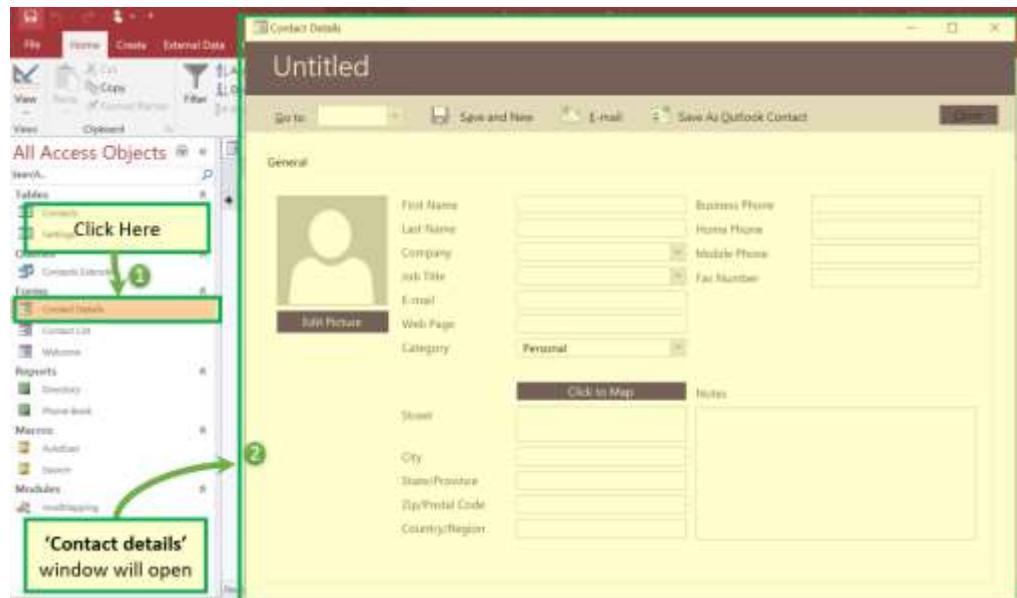


Result: Guru99_Contact Database created and below window will appear.



Step 6) optionally, you can click on any of the objects from left navigation pane and open that object for further references and work.

For, E.g., Clicking on 'Contact Detail' form will open 'Contact Detail' form as displayed below.

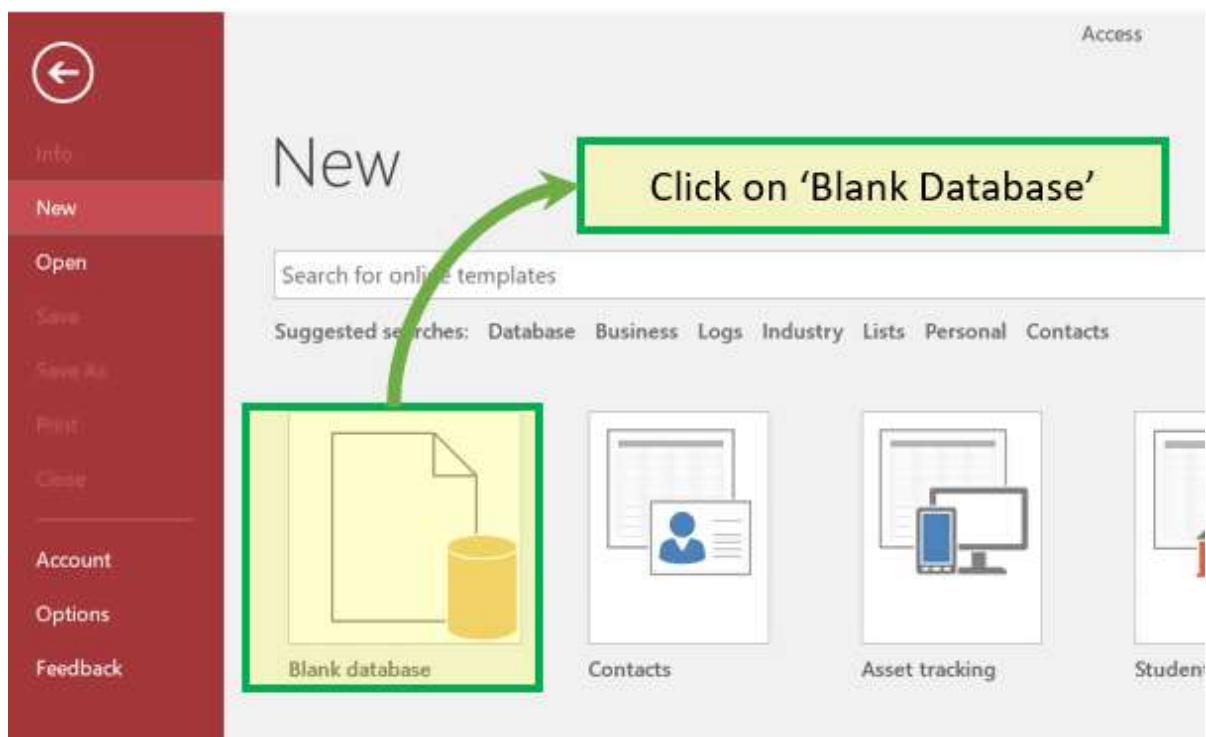


Create a Blank Database

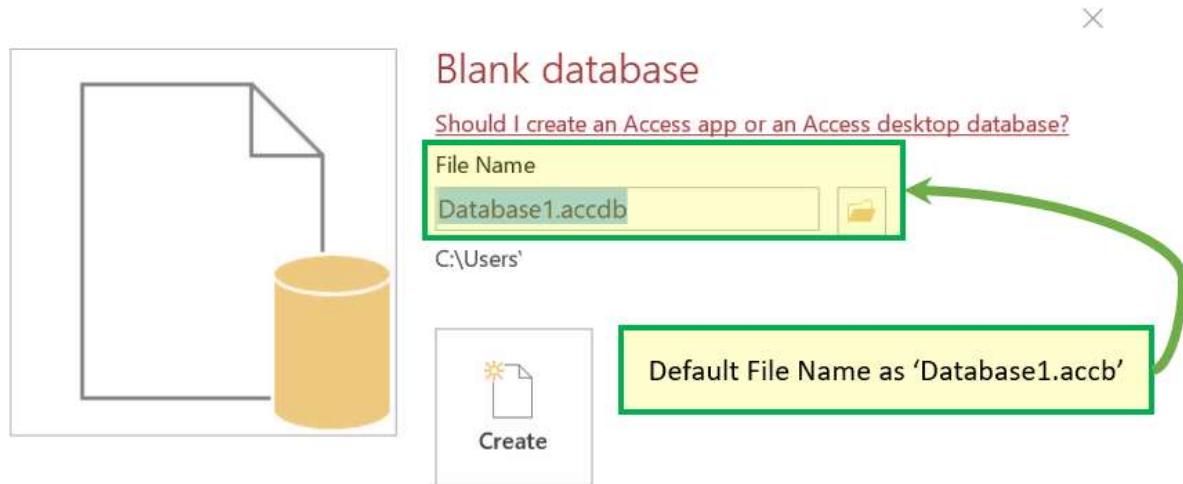
Step 1) With MS ACCESS application open, Click on File > New



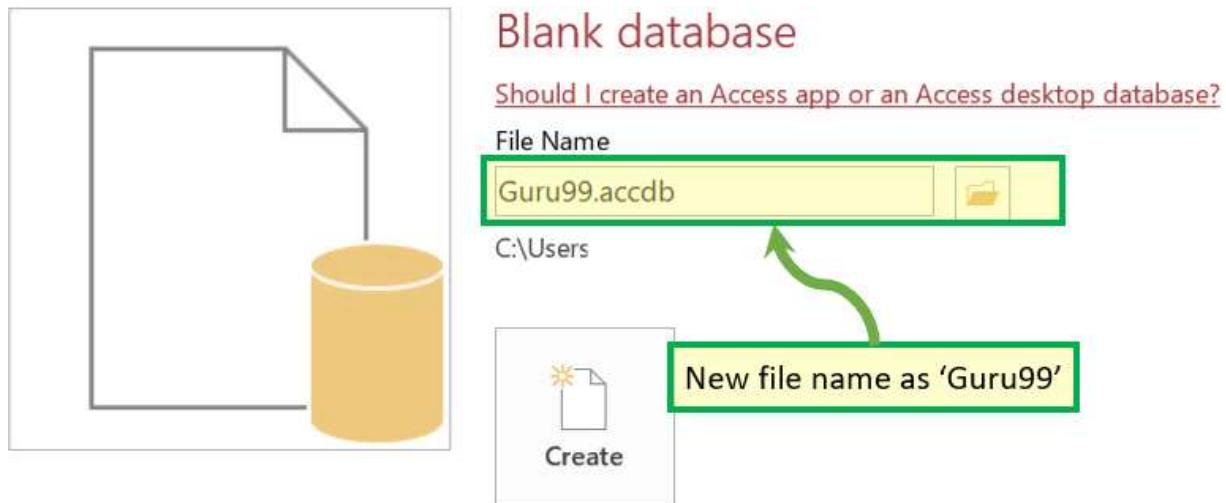
Step 2) Click on 'Blank Database.'



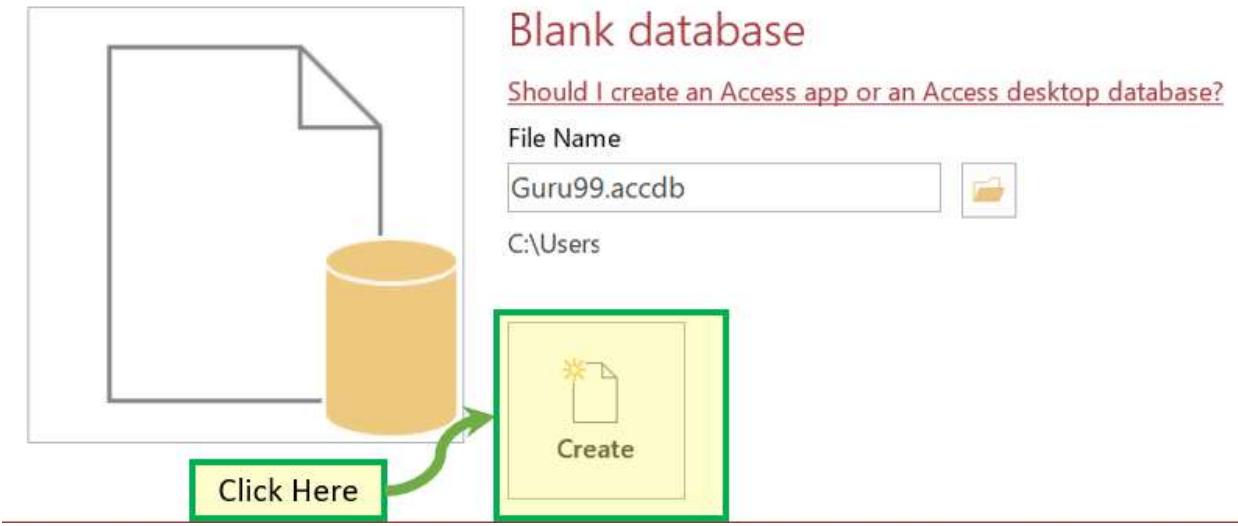
Step 3) File name box will appear with the default file name.



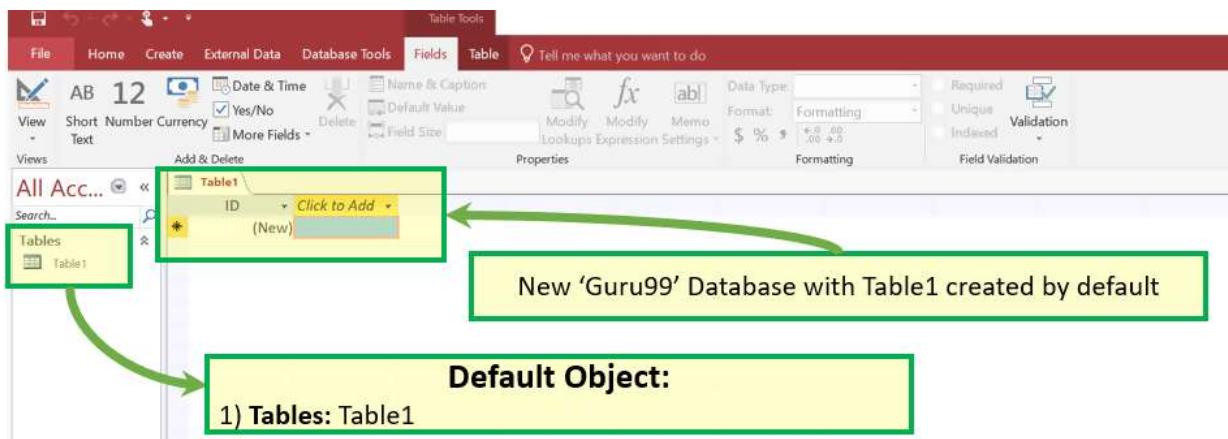
Step 4) Enter the new name.



Step 5) Click on 'Create.'

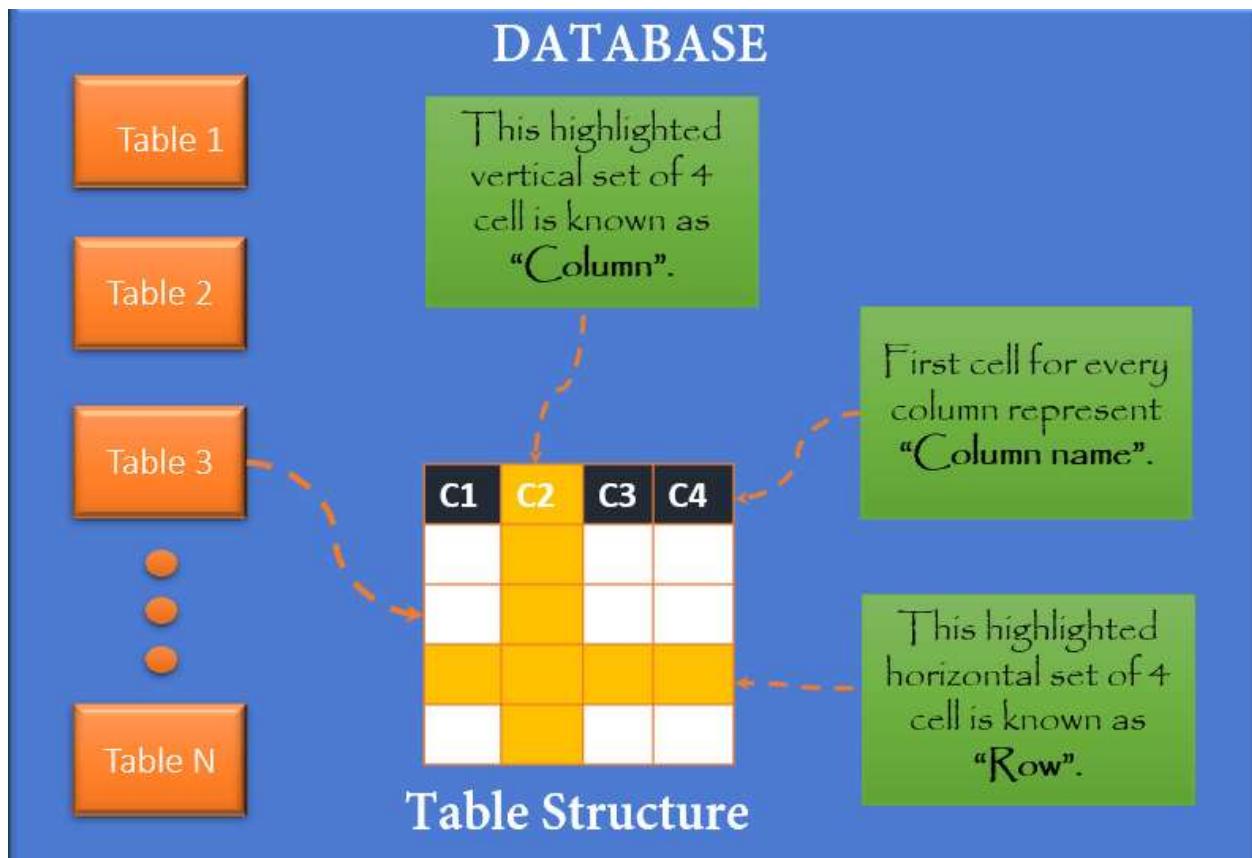


Result: Guru99 Database created and below window will appear.



How to Create Table

The first step to store data in the database is to create a Table where data will reside. Postcreation of the table, we can keep inserting the rows in the table.

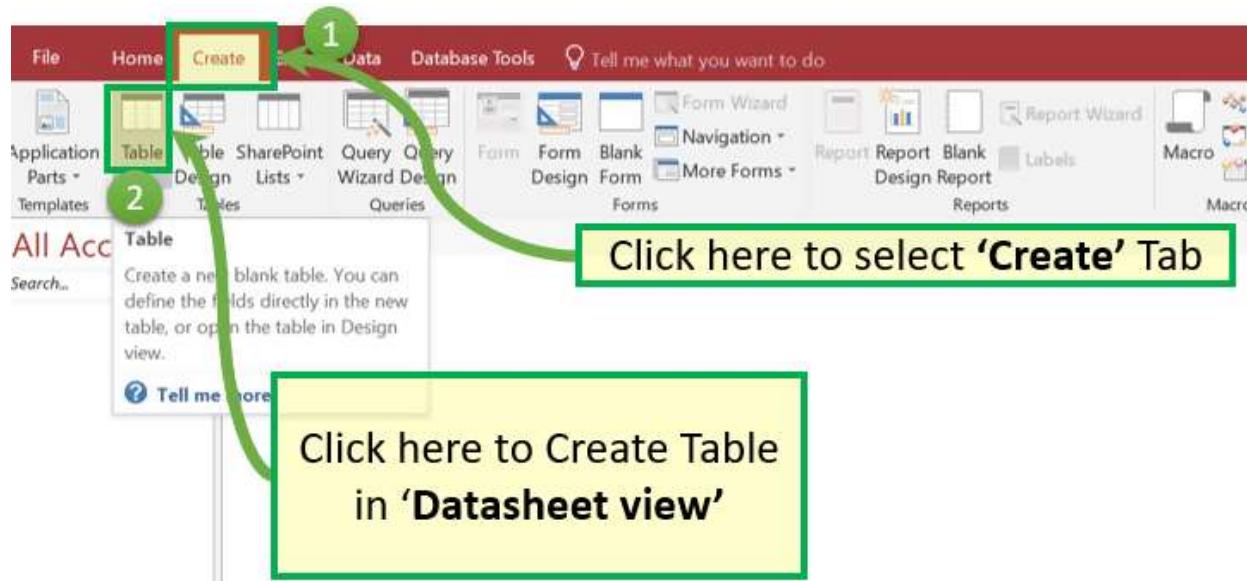


There are two ways to create Database in MS ACCESS

1. Create a Table from **Design View**
2. Create a Table from **Datasheet View**

Create Table – Datasheet View

Step 1) First Click **Create** tab. Then from **Tables** group, click **Table**.



Step 2) System will display the default table created with 'Table1' name.

The screenshot shows the Microsoft Access ribbon with the 'Fields' tab selected. In the main pane, a table named 'Table1' is displayed with one column 'ID'. The properties for 'ID' are shown in the ribbon: Data Type: AutoNumber, Format: \$ % , , .00 .00, Unique checked, Indexed checked. A green box highlights the table structure, and a callout box says 'By Default 'Table1' created'.

Step 3) To Rename Column, double click on Column Header and enter the new column Name.

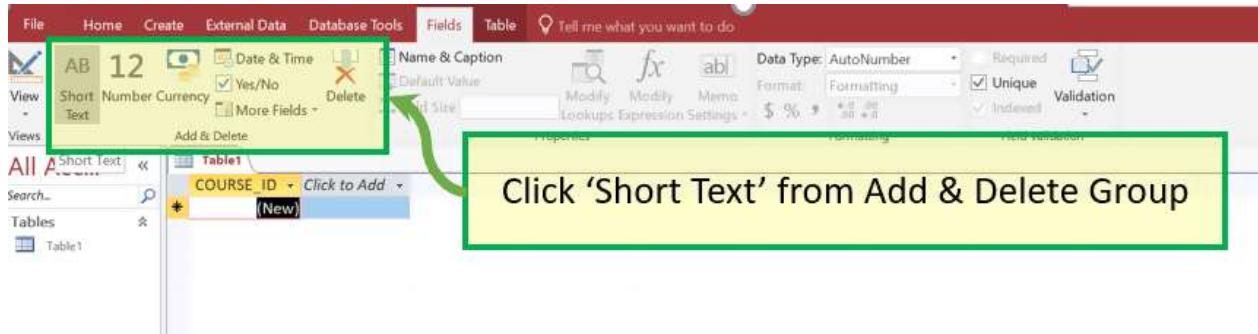
The screenshot shows the Microsoft Access ribbon with the 'Fields' tab selected. In the main pane, the column 'ID' is being renamed to 'COURSE_ID'. A green box highlights the column header 'ID', and a callout box says 'Double click and enter new column name as 'Course_ID''. The properties for 'COURSE_ID' are shown in the ribbon: Data Type: AutoNumber, Format: \$ % , , .00 .00, Unique checked, Indexed checked.

Note that the Data type of Course_ID is 'AutoNumber.' Hence this is also the Unique Key of the table.

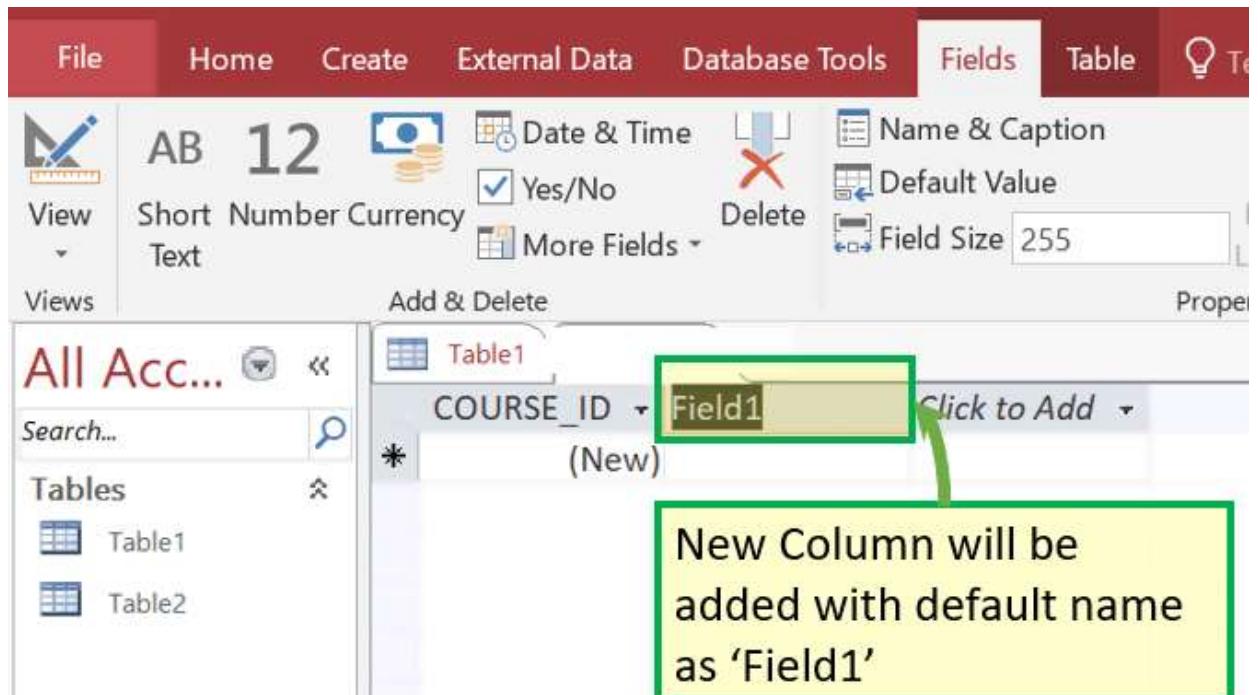
The screenshot shows the Microsoft Access ribbon with the 'Fields' tab selected. In the main pane, the column 'COURSE_ID' is highlighted. A green box highlights the column header 'COURSE_ID', and a callout box says 'Data type of Course_ID is Auto Number'. The properties for 'COURSE_ID' are shown in the ribbon: Data Type: AutoNumber, Format: \$ % , , .00 .00.

Step 4) You can **Add Column** by clicking on any category from the 'Add & Delete' group. Alternatively, you can also add a column by clicking on 'Click to Add'

For Example, click on 'Short Text' from the 'Add & Delete' group.



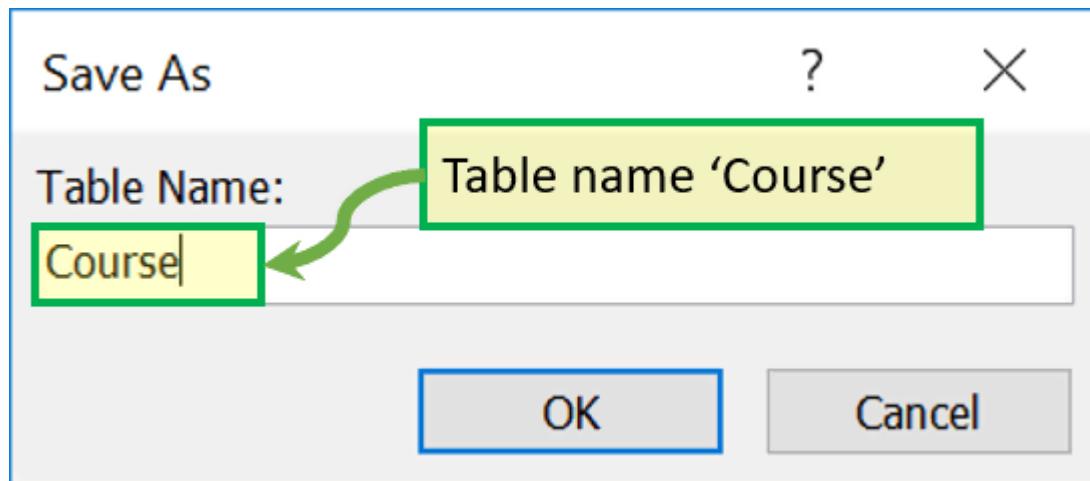
Step 5) Column will be added with the default name as 'Field1.'



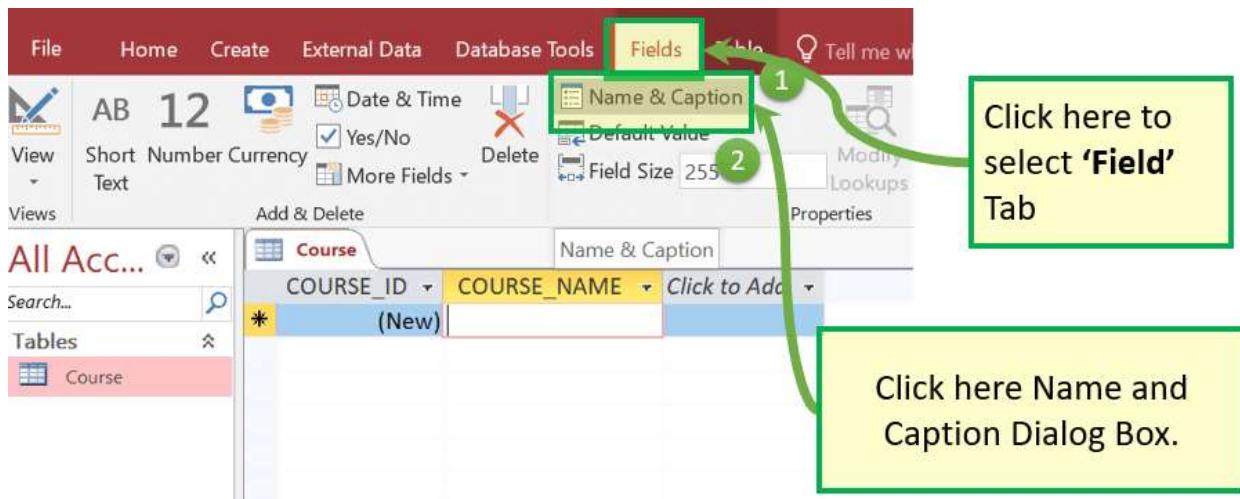
Step 6) Click on Header and rename as '**COURSE_NAME**.'

The screenshot shows the Microsoft Access ribbon with the 'Fields' tab selected. In the main area, there is a table named 'Table1' with two columns: 'COURSE_ID' and 'COURSE_NAME'. The 'COURSE_NAME' column is highlighted with a green border. A callout bubble with a green border contains the text 'Enter the new name as 'COURSE_NAME''. The 'Properties' ribbon tab is also visible.

Step 7) Press 'Ctrl + S' and Enter the new table name to save the table.

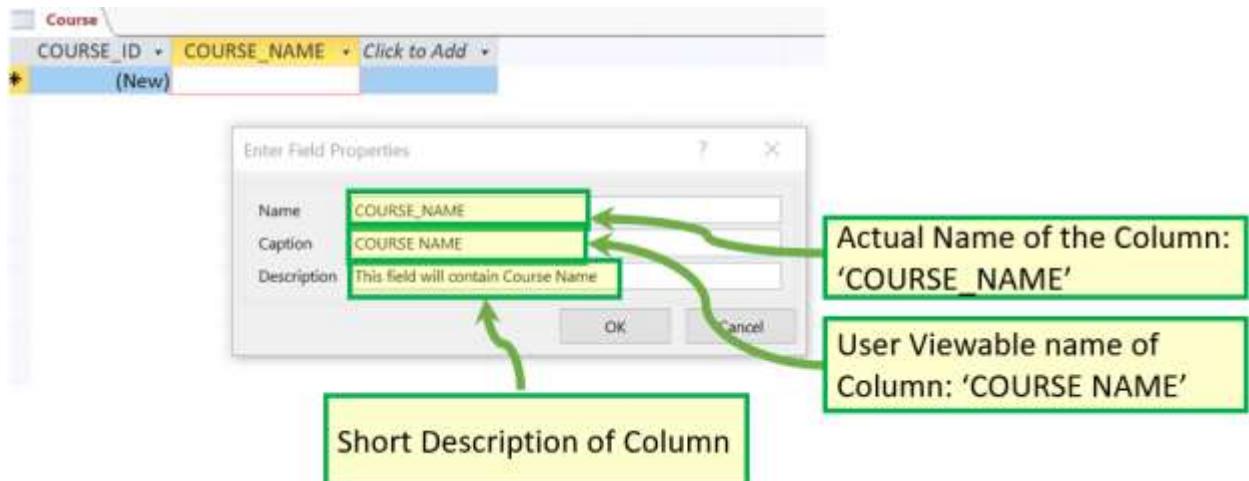


Step 8) You can also save new Name, Caption and Short description for any Column by clicking on 'Name and Caption.' Click on it

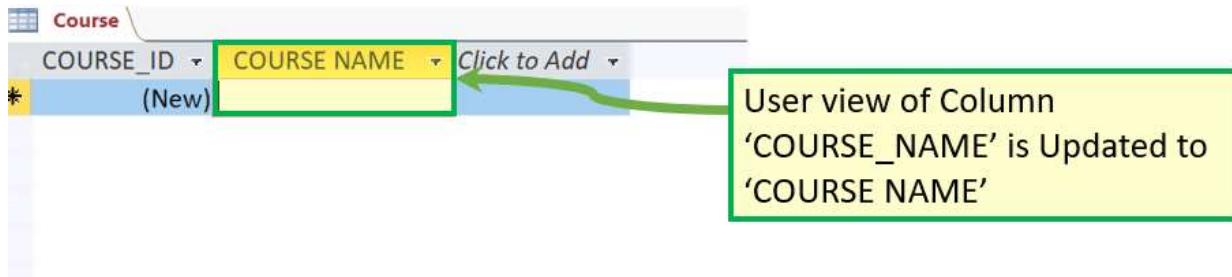


Step 9) Dialog Box will appear. Add the following and Click on 'OK'

- 'Name' - This is the actual name of the column.
- 'Caption' - This is the user view name of the column.
- 'Description' - This is the short description of the column name.

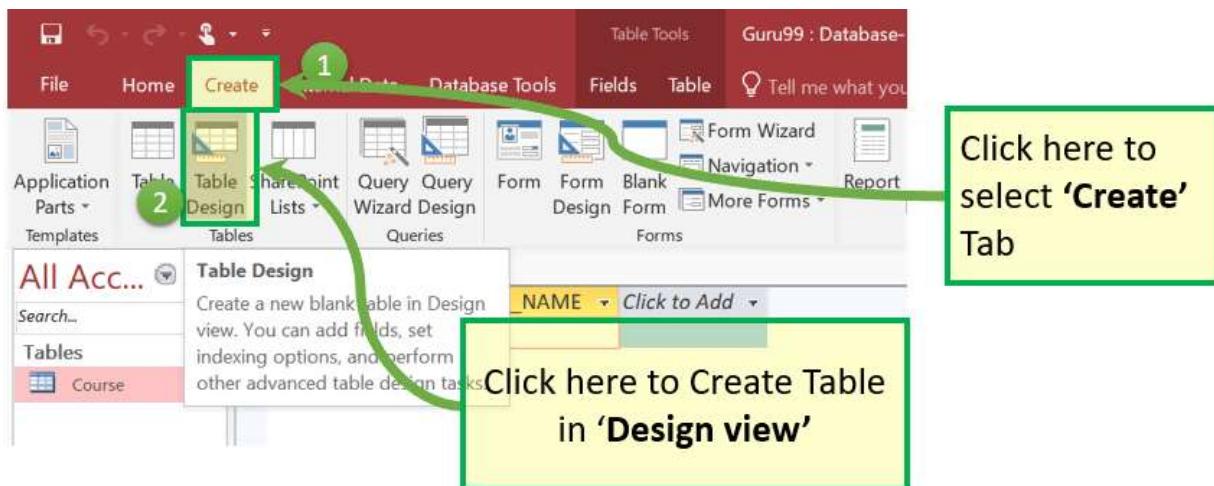


Result: Name, Caption, and Description now exist.

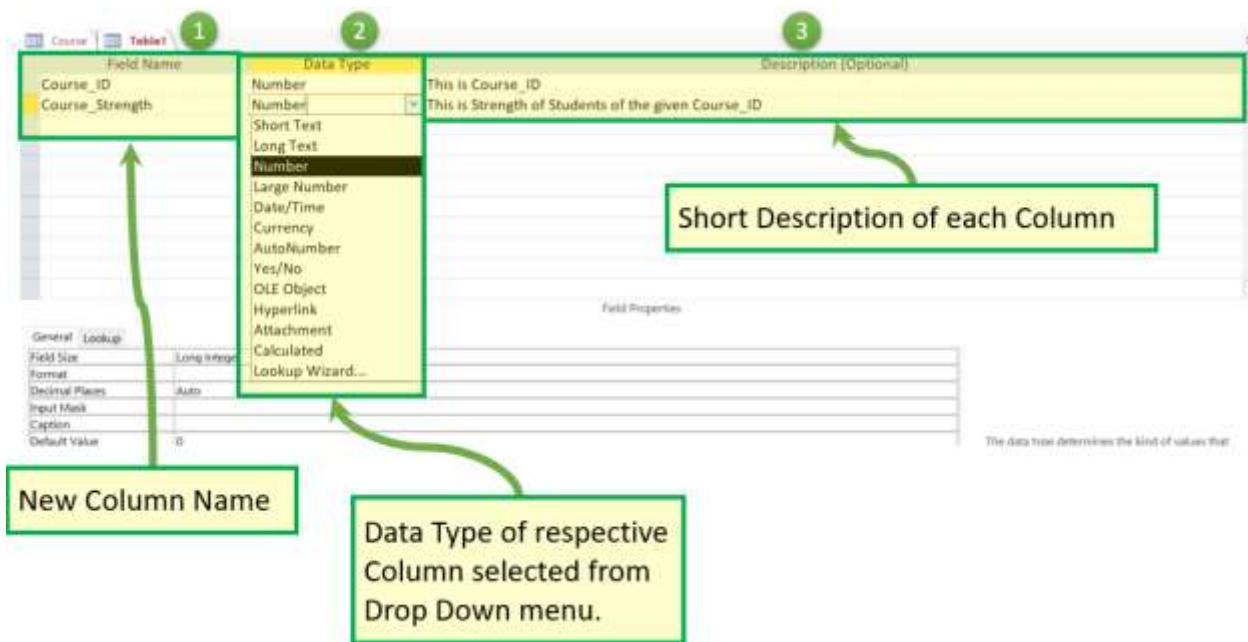


Create Table – Design View

Step 1) First Click Create tab. Then from Tables group, click Table.

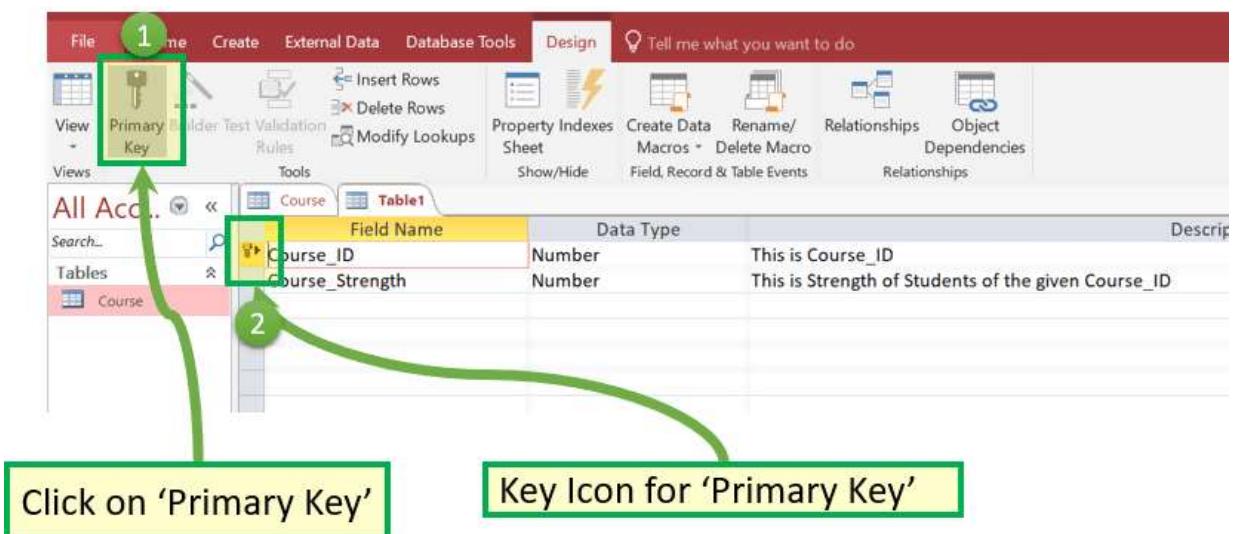


Step 2) Table Dialog box appears. For each Field enter **Filed Name**, **Data Type** and **Description**.

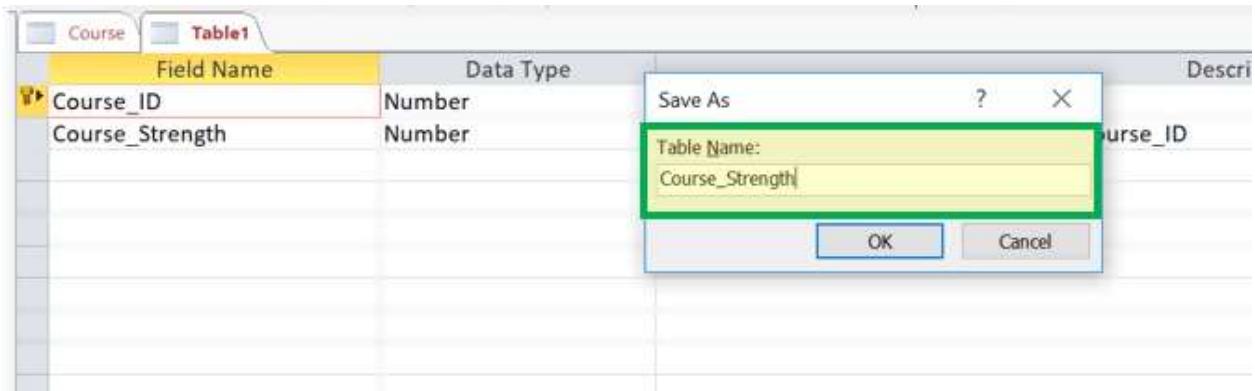


Steps 3) To Add Course_ID as Primary Key, select it and Click on 'Primary Key.'

Course_Id will be Preceded by KEY ICON as shown below:



Steps 4) Press 'Ctrl+S.' Enter the Table Name and Click OK



Result:

The screenshot shows the Microsoft Access database interface. On the left, there is a list of tables: 'All Acc...', 'Tables', 'Course', and 'Course_Strength'. The 'Course_Strength' table is highlighted with a green box. In the main area, the table 'Course_Strength' is displayed in design view. It has two fields: 'Course_ID' (Number type) and 'Course_Strength' (Number type). Descriptions for the fields are provided: 'This is Course_ID' for Course_ID and 'This is Strength of Students of the given Course_ID' for Course_Strength. A large green box at the bottom left contains the text 'New Table 'Course_Strength' Created in Guru99 Database'.

How to Switch views between Datasheet and Design

To switch views, between the datasheet (spreadsheet view) and the design view, click the 'View' button in the top-left hand corner of the Access Ribbon (shown in the Home/Help/Design Tabs). And Click on the View you need to display.

For Example: Let's Assume You want to switch to the newly created table 'Course_strength' from 'Design view' to 'Data Sheet' View.

Step 1) Click on Datasheet View

1

Field Name	Data Type	Description (O)
Course_ID	Number	This is Course_ID
Course_Strength	Number	This is Strength of Students of the given Course_ID

Click on 'Datasheet View' to switch from 'Design view' to 'Datasheet view'

Result:

All Acc...

Tables

- Course
- Course_Strength

Course_ID	Course_Strength
*	0

Course_Strength Table changed to Data sheet view with Same two column as 'Course_ID' and 'Course_Strength'

MS ACCESS- Adding Data

- You have created tables Course and Course_Strength.
- There are two ways to add data. One is Datasheet view and other from Form. We will learn to add data from Datasheet view in this section.
- There is no need to save the data manually. Once you click other rows, Access automatically saves the data.
- The only thing you need to take care while adding data is, you should enter the correct data type, i.e., if Column is defined as Number we can add only number and not text.

Step 1) Select the 'Course' table



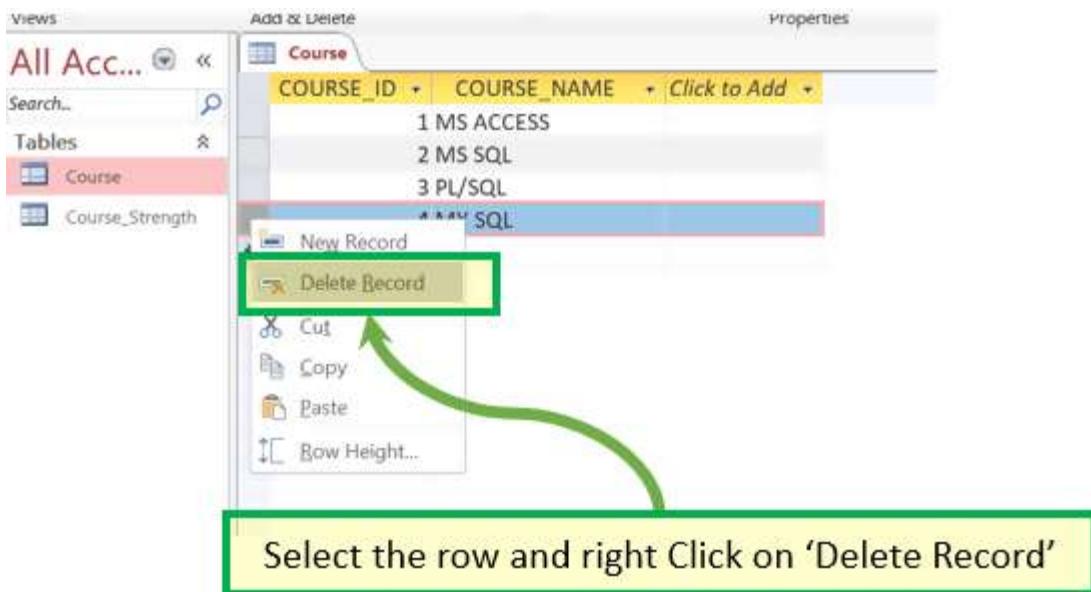
Steps 2) Select the **Datasheet view** option in the ribbon and **add** some data by entering the values in It. Updated Data will be AutoSaved.

COURSE_ID	COURSE NAME	Click to Add
1	MS ACCESS	
2	MS SQL	
3	PL/SQL	
4	MY SQL	
*	(New)	

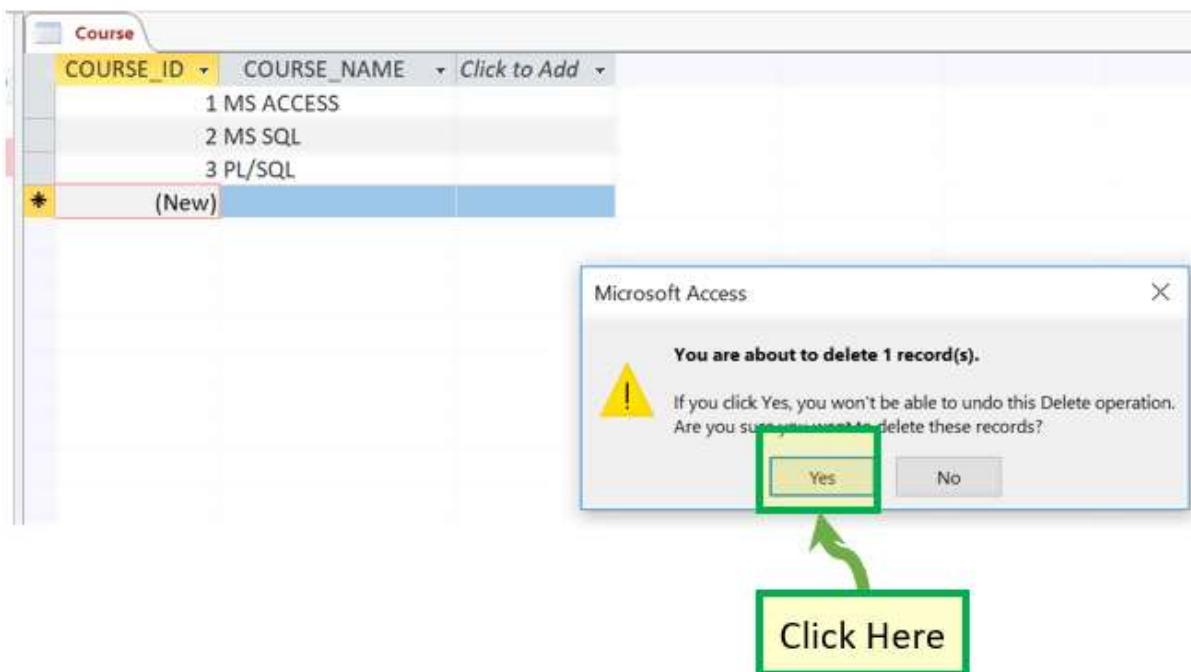
New **Course name** added by clicking on each row.
Since **Course_ID** is of '**AutoNumber**' **datatype**, it will automatically **increment its value by 1**

Now let's say You want to delete 4th row with 'My SQL' as Course name.

Step 3) Select the row by clicking on the leftmost column and Right Click on the row. The options menu will appear with the 'Delete Record' Option



Step 4) Popup Window will appear to confirm the deletion of the record. Click 'OK'



Result:



Summarizing views:

Datasheet View:

Displays in the view, which allows you to enter raw data into your database table.

Design view:

Displays the view, which allows you to enter fields, data types, and descriptions into your database table.

Forms in MS ACCESS

- A form is a database object that you can use to create a user interface for a database application.
- It is mainly used to ease the process of data entry or editing.
- Data in a form can be selected from one or more tables.
- Forms can also be used to control access to data, like which fields or rows of data are visible to which users.
- Forms have a Form View.
- Help you to display live data with easy creation of new data.

To understand form lets first create **two new Record** in Contact Table (from the prebuilt ContactDatabase discussed [here](#))

Step 1) Select the 'Contact' table from Left Navigation.

Step 2) Create two rows by entering some relevant data in two rows.

The screenshot shows the Microsoft Access ribbon at the top with various tabs like Application Parts, Table, SharePoint, Query, Form, Design, etc. Below the ribbon, a table named 'Contact' is displayed with two rows of data. A green callout box labeled 'Select 'Contact' Table' points to the table. Another green callout box contains the instruction: 'Enter data in two rows, by clicking on each individual cell and entering respective value'. A green circle labeled '1' points to the 'Tables' icon in the ribbon, and another green circle labeled '2' points to the table name 'Contact' in the list.

ID	Company	Last Name	First Name	E-mail Address	Job Title	Business Phn	Home Phn	Mobile Phn	Fax Number	Address
1	Guru99	Guru	Guru	xz@gmail.com	Consultant	989897878	564564564	346456464	123-1232323	Rosa Roya
2	Edu99	Edu	Guru	abc@yahoo.com	Business Analyst	457457575	567567557	375757575	575-34345335	Hamilton

Create Form, and then we will see how forms can be leverage for easy display, editing, and creation of new data.

How to create a form

There are four primary ways to create the form as mentioned below:

- Form Wizard
- Form
- Multiple Item
- Split Form

Let's have a look at each option to create the form, one by one:

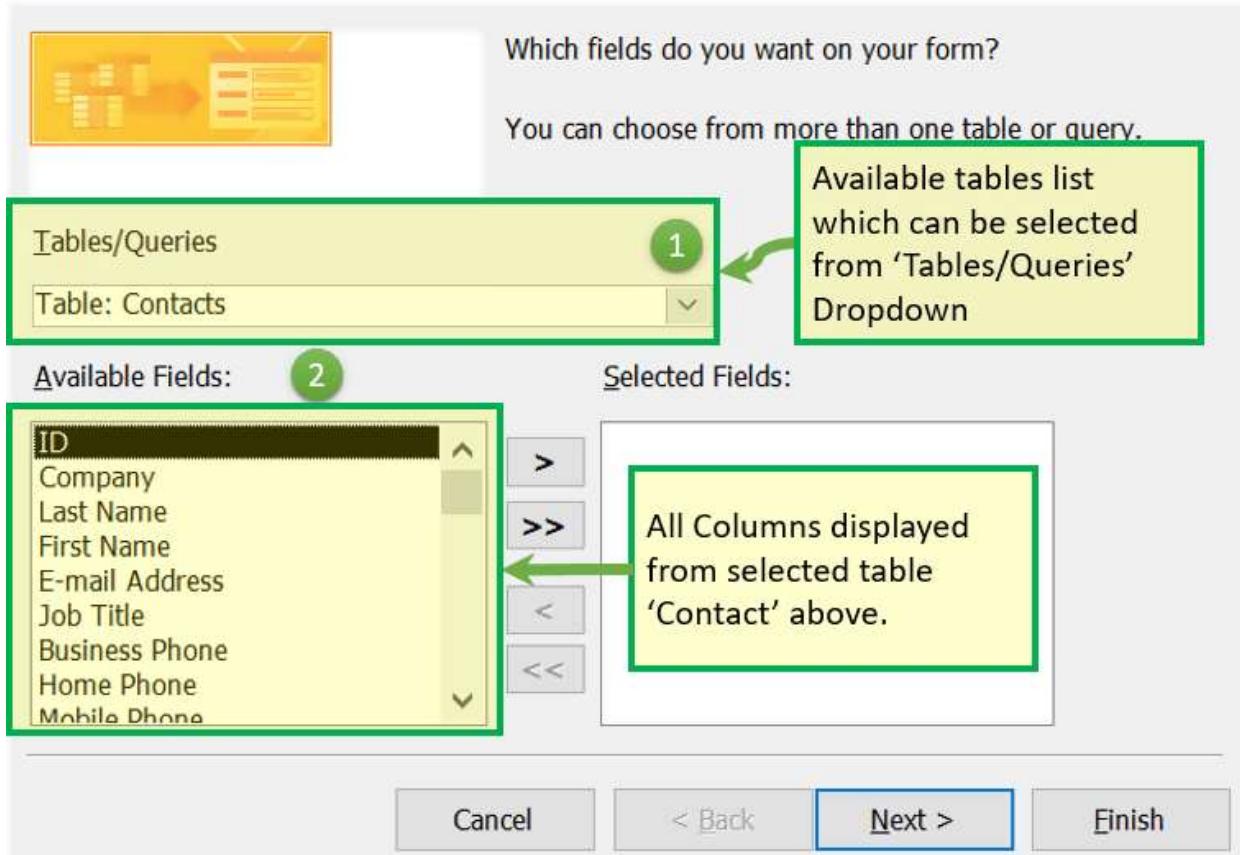
1. Create using Form Wizard

This option allows the user to create the form with the wizard and select the column from the available list of columns from the legacy Select window format.

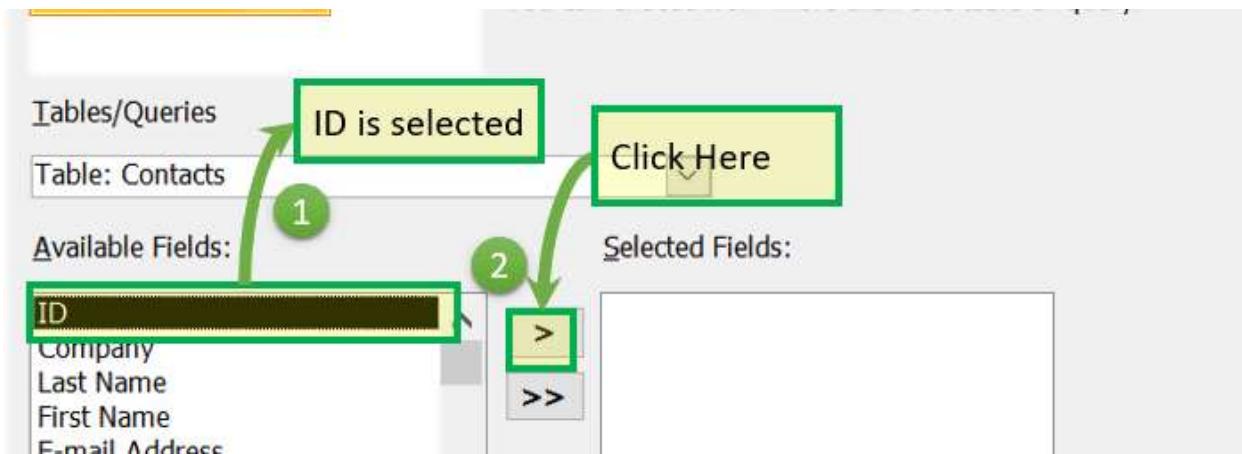
Step 1) Click on 'Form Wizard.'

Step 2) System will display below the screen.

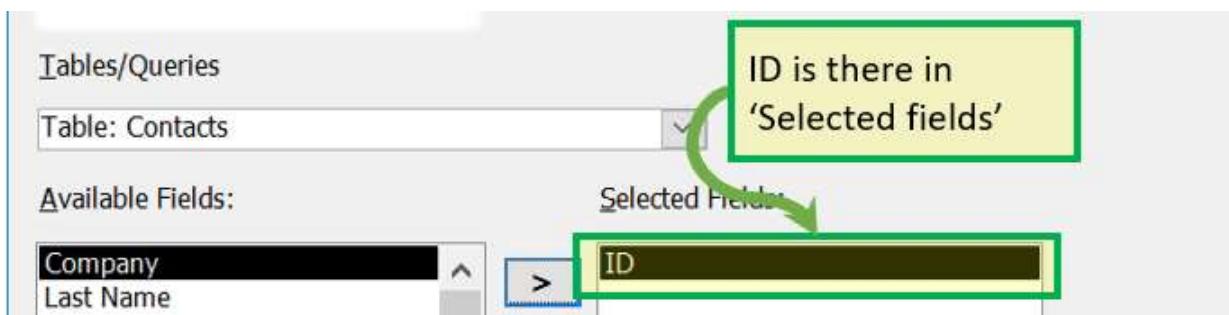
Form Wizard



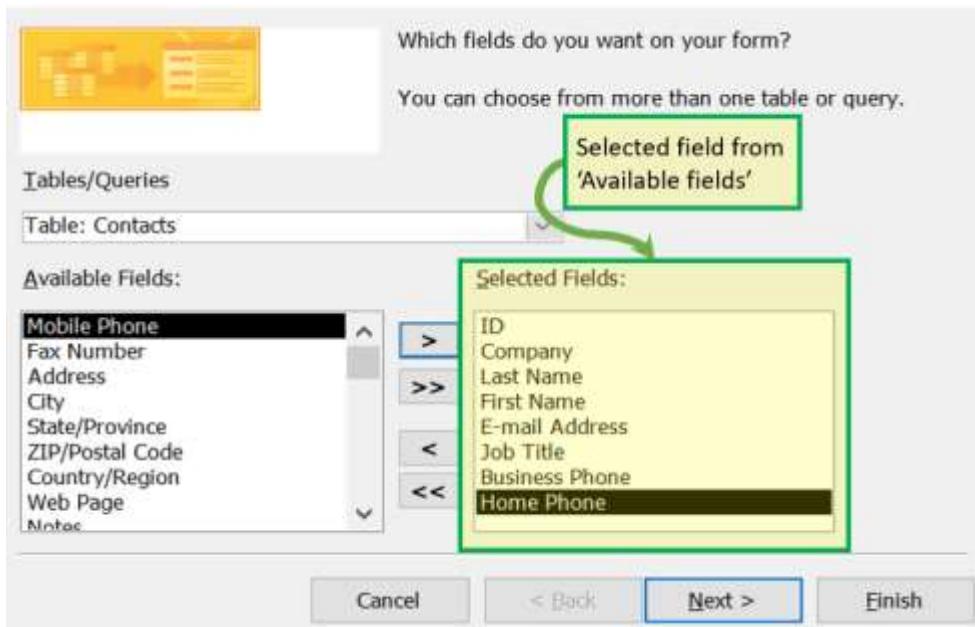
Step 3) Select the columns which you want to be there in final form.



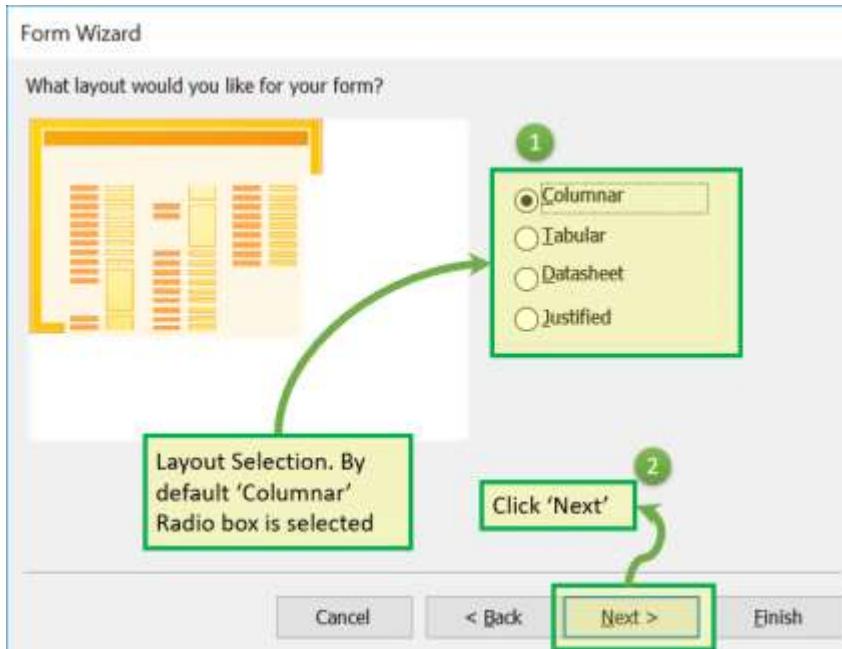
Result: ID is selected



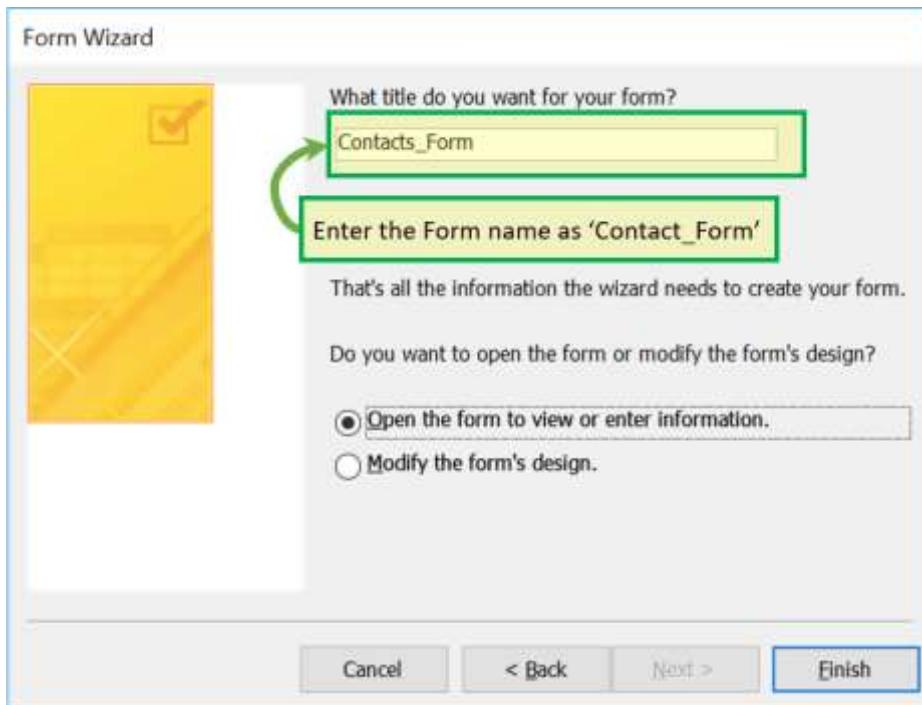
Step 4) Keep selecting all required column as explained in Step 3 above and then click 'Next.'



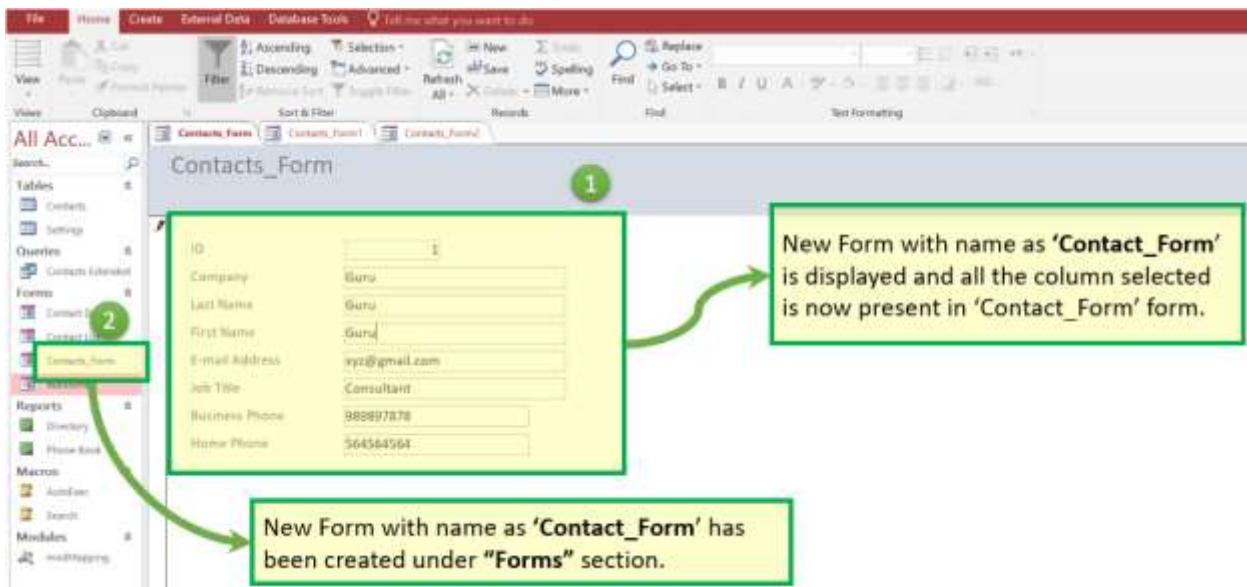
Step 5) Layout selection box will appear which allows the user to select the different type of form layout. Click 'NEXT'



Step 6) Enter the name of the form as "Contact_Form" and click 'Finish.'



Result: Contact_Form now exist with all column displayed which are there in step 4 in theSelected column list.

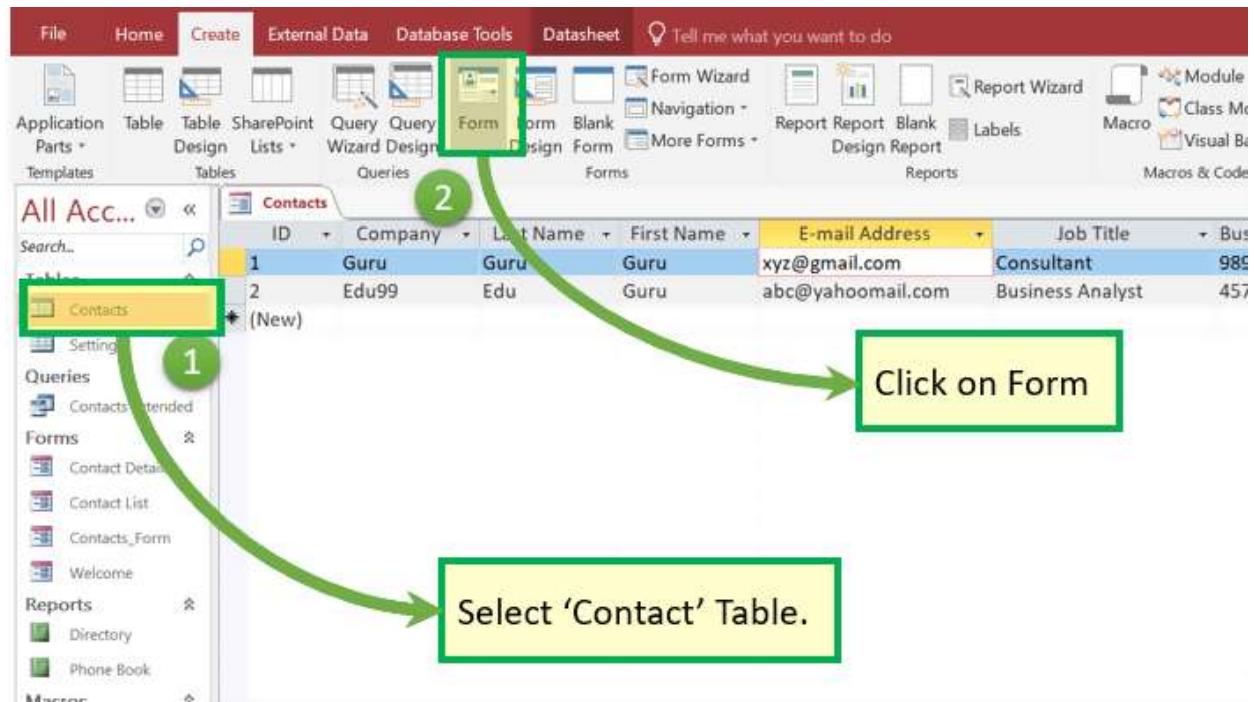


2. Create using Form

It is the simplest way to create the form which will:

- By default, populate all the column from the selected table in 'form view,'
- The user can delete non-required column manually

Step 1) Select the table for which we want to create the form and click on 'Form.'



Step 2) Below window will appear.

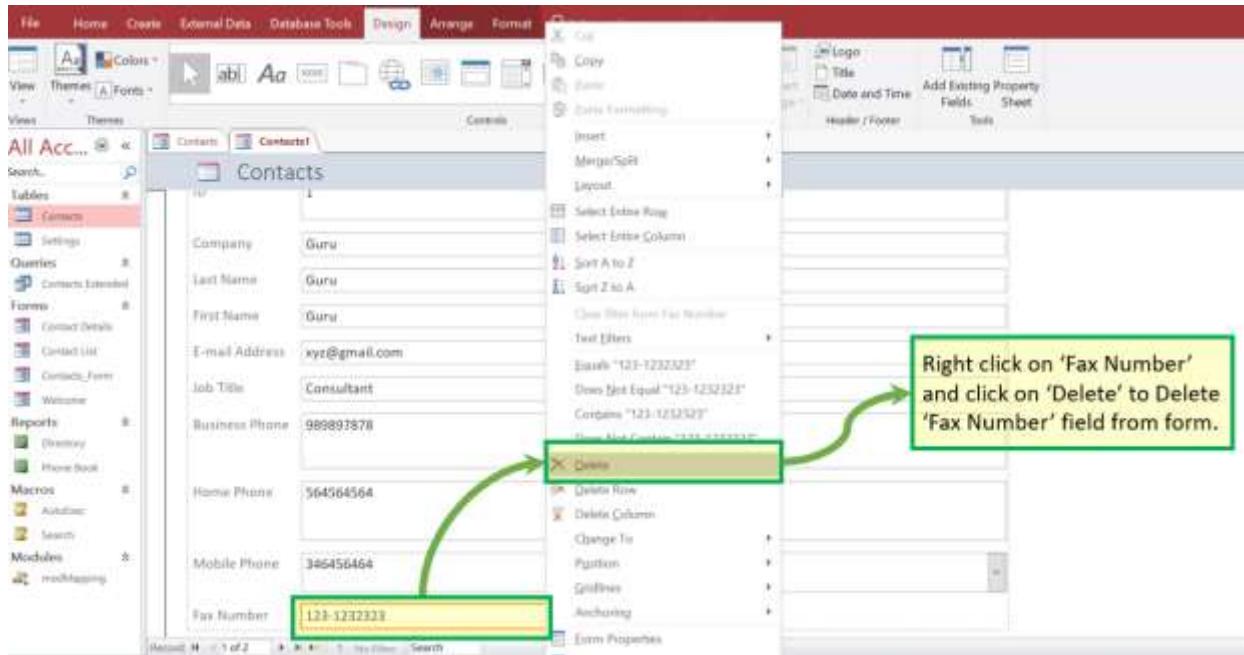
Contacts

Contacts1

ID	1	Address	Rosa Royal
Company	Guru	City	Helena
Last Name	Guru	State/Province	Montana
First Name	Guru	Zip/Postal Code	5434343
E-mail Address	xyz@gmail.com	Country/Region	US
Job Title	Consultant	Web Page	
Business Phone	989897878	Notes	
Home Phone	564564564	Attachments	
Mobile Phone	346456464	Category	Personal
Fax Number	123-1232323		

All Column of
Table 'Contacts'
appear by default
with values of
first row.

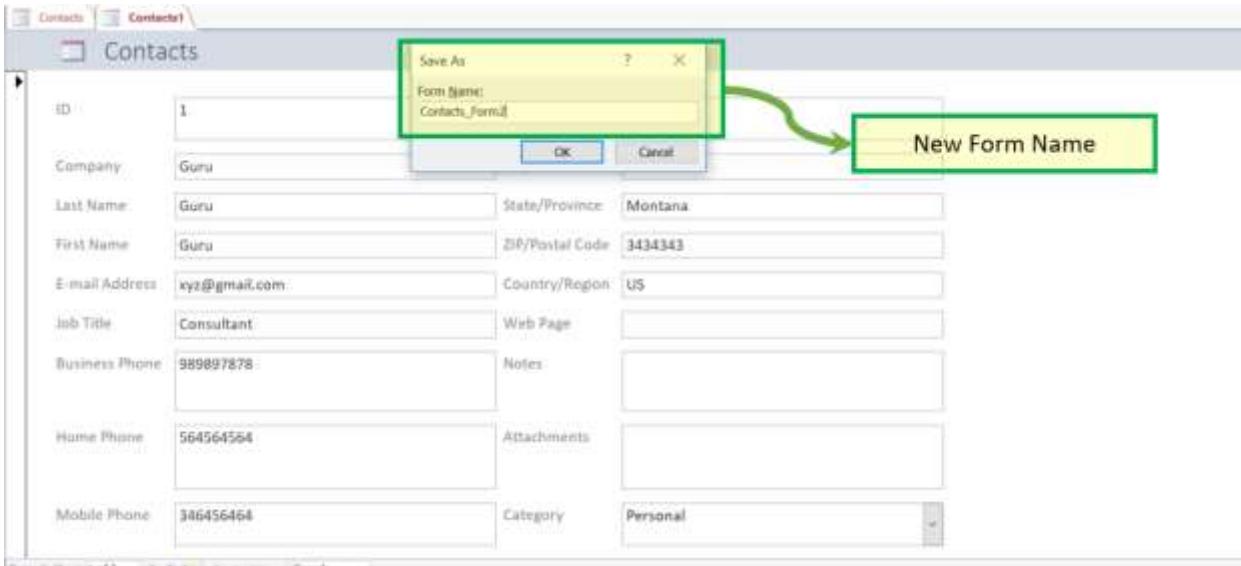
Step 3) Right-click on any cell which we don't want to be part of final forms and click on 'Delete.'



Result: 'Fax Number' field does not exist now.



Step 4) Press 'Ctrl+S' and enter new Form Name as 'Contact_Form2'. Click 'OK'.



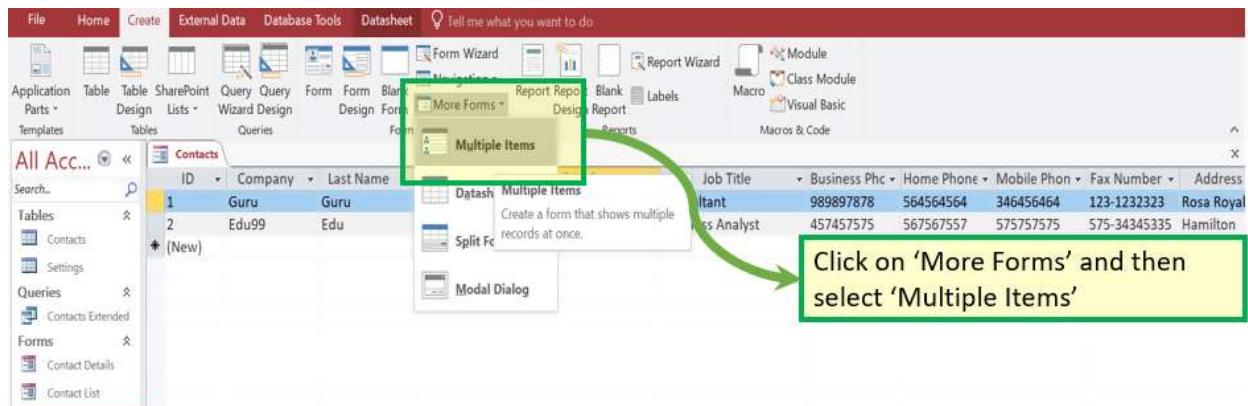
Result: New form with the name as 'Contact_Form2' exists under the "Forms" section.

The screenshot shows the Microsoft Access interface. On the left, the 'All Access Objects' navigation pane is open, showing various database objects like Tables, Queries, Forms, Reports, and Macros. A green box highlights the 'Contact_Form2' entry under the 'Forms' section. On the right, a 'Contacts' form is displayed, showing two records: one for 'Guru' and one for 'Edu99'. A green arrow points from the 'Contact_Form2' entry in the navigation pane to a yellow box containing the text 'New Form with name as 'Contact_Form2' has been created under "Forms" section.'

3. Create form by 'Multiple Item.'

It is another type wherein All the records already created will be displayed in Form with an option to Add new record.

Step 1) From the 'Create' tab. Click on 'More forms' and select 'Multiple Items.'



Result: Below Multiple lines, the window will appear

Contacts

ID	Company	Last Name	First Name	Email Address	Job Title	Business Phone	Home Phone
1	Guru	Guru	Guru	xyc@gmail.com	Consultant	989897878	5645645
2	Edu99	Edu	Guru	abc@yahoo.com	Business Analyst	457457575	5675675
(New)							

Multiple line view with line for each record exist in 'Contact' table.
3rd Row provide the option to Add new row in this form view

Step 2) Press 'Ctrl+S'. Enter the new form name and click 'OK.'

Save As

Form Name: Contact_Form_Multiple_Item

OK Cancel

Enter New Form name and click 'OK'

Result: New Form with the name as 'Contact_Form_Multiple_Item' exists under the "Forms" section.

The screenshot shows the Microsoft Access ribbon with the 'Create' tab selected. In the 'Forms' section, a new form named 'Contact_Form_Multiple_Item' is highlighted with a green border. A callout bubble points to this form with the text: 'New Form with name as 'Contact_Form_Multiple_Item' has been created under "Forms" section.' The 'Datasheet' view is also visible on the right side of the screen.

4. Create form by 'Split from'.

It is a mix of simple form and split form in a way that this form provides the view of **Form and datasheet** in a split window.

Whatever the user enters in Form is visible directly in Datasheet view immediately and viceversa.

Step 1) From the 'Create' tab, click on 'More forms' and select 'Split Form.'

The screenshot shows the Microsoft Access ribbon with the 'Create' tab selected. In the 'Forms' section, the 'More Forms' button is highlighted with a green border. A callout bubble points to this button with the text: 'Click on 'More Forms' and then select 'Multiple Items''. The 'Datasheet' view is visible on the right side of the screen.

Result: Below window will appear with the Form and data sheet together.

Form View

ID	1	Address	Rosa Royal
Company	Guru	City	Helena
Last Name	Guru	State/Province	Montana
First Name	Guru	ZIP/Postal Code	3434343
E-mail Address	xyz@gmail.com	Country/Region	US
Job Title	Consultant	Web Page	

Datasheet view

ID	Company	Last Name	First Name	E-mail Address	Job Title	Business Phn	Home Phone	Mobile Phon	Fax Number
1	Guru	Guru	Guru	xyz@gmail.com	Consultant	889897878	564564564	346456464	123-1232323
2	Edu99	Edu	Guru	abc@yahoomail.com	Business Analyst	457457575	567567557	575757575	575-34345335
(New)									

Step 2) Press 'Ctrl+S' and enter the new form name. Click 'OK.'

Save As

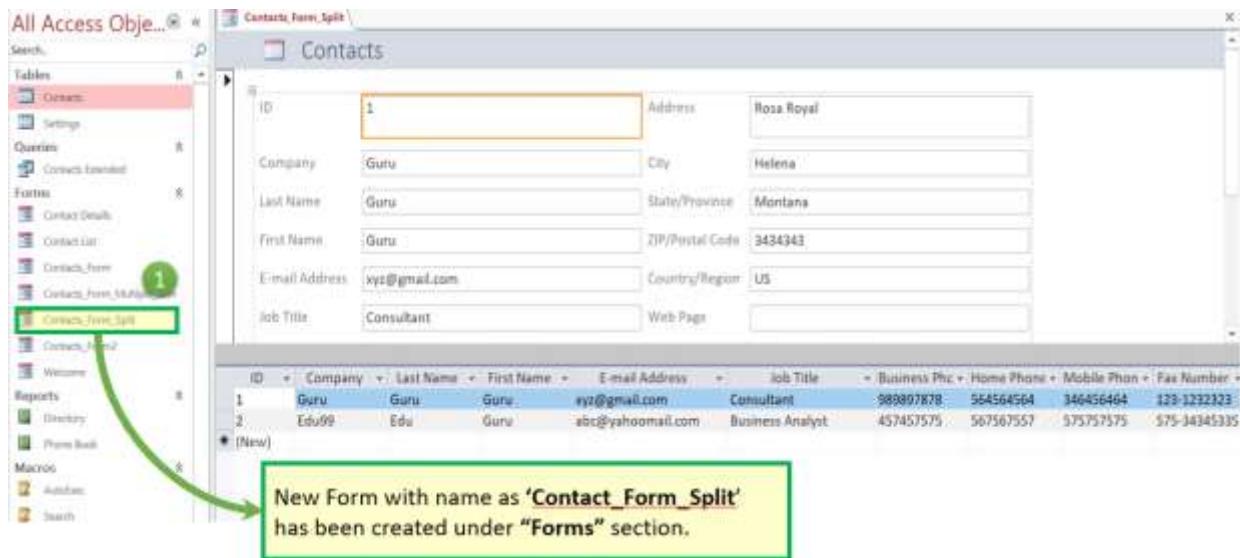
Form name:
Contact_Form_Split

OK Cancel

ID	1	Address	Rosa Royal
Company	Guru	City	Helena
Last Name	Guru	State/Province	Montana
First Name	Guru	ZIP/Postal Code	3434343
E-mail Address	xyz@gmail.com	Country/Region	US
Job Title	Consultant	Web Page	

ID	Company	Last Name	First Name	E-mail Address	Job Title	Business Phn	Home Phone	Mobile Phon	Fax Number
1	Guru	Guru	Guru	xyz@gmail.com	Consultant	889897878	564564564	346456464	123-1232323
2	Edu99	Edu	Guru	abc@yahoomail.com	Business Analyst	457457575	567567557	575757575	575-34345335
(New)									

Result: New Form with the name as 'Contact_Form_Split' exists under the "Forms" section.

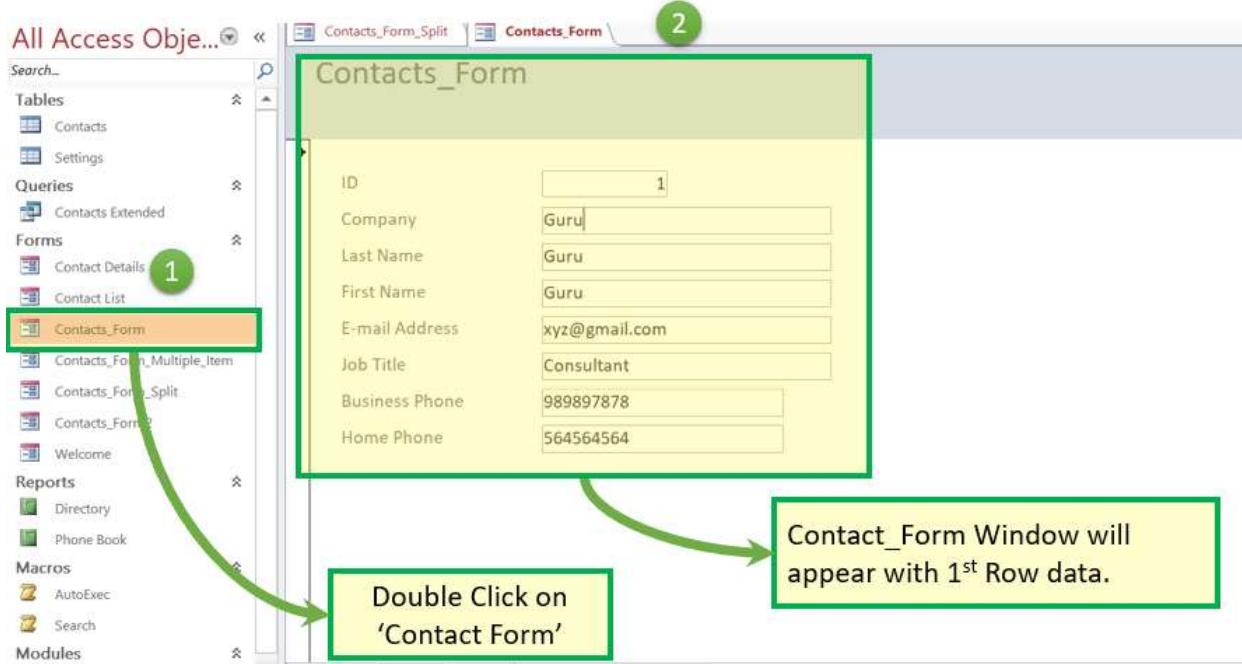


Edit the existing record via Form.

- One of the features of forms is that we can edit the values and data directly from the form.
- It is more user-friendly because as compared to row format in the table, forms have better visibility of selected fields and the user can do the direct updates.
- These values updated from forms will also be reflected in original tables immediately.

Let's have a look at how to edit value from the form:

Step 1) Click on '**Contact_Form**'



Double Click on
'Contact Form'

Contact_Form Window will
appear with 1st Row data.

Step 2) Update some values on 'Contact_Form' value

Contacts_Form

ID	1
Company	Guru99
Last Name	Edu
First Name	Guru
E-mail Address	xyz@gmail.com
Job Title	Consultant
Business Phone	989897878
Home Phone	564564564

Update Company name from Guru to 'Guru99' and Last name from 'Guru' to 'Edu'

Step 3) Double Click on 'Contact' table.

Templates | Tables

All Access Obj...

Search... 

Tables

-  Contacts
-  Settings

Queries

-  Contacts Extended

Forms

-  Contact Details
-  Contact List
-  Contacts_Form

In Table 'Contact' - Company name from updated to 'Guru99' from 'Guru99' and Last name updated from 'Guru' to 'Edu'

ID	Company	Last Name	First Name	E-mail Address	Job Title	Business Phc	Home Phone	Mobile Phon	Fax Number
1	Guru99	Edu	Guru	xyz@gmail.com	Consultant	989897878	564564564	346456464	123-1232323
2	Edu99	Edu	Guru	abc@yahoo mail.com	Business Analyst	457457575	567567557	575757575	575-34345335
* (New)									

Add a record to a Form.

- Forms also give the flexibility to Add records.
- Again, this is a user-friendly and appealing way of adding records as compared to adding records in a row form.
- Here, we will take the Microsoft Access databases example of Split from 'Contact_Form_Split' created above.

Step 1) Open 'Contact_Form_Split'

Click Here to open 'Contact_Form_Split'

ID	Company	Last Name	First Name	E-mail Address	Job Title
1	Guru	Guru	Guru	xyz@gmail.com	Consultant
2	Edu99	Edu	Guru	abc@yahoo mail.com	Business Analyst
* (New)					

Step 2) To Add record, click on 'New (blank) Record Icon.'

The screenshot shows the Microsoft Access interface with the 'Contacts' form open. At the top, there's a ribbon with tabs like File, Home, Create, External Data, Database Tools, and Tell me what you want to do. Below the ribbon is a toolbar with various icons for creating forms, reports, and queries. The main area displays a form with fields for ID, Company, Last Name, First Name, E-mail Address, Job Title, Address, City, State/Province, ZIP/Postal Code, Country/Region, and Web Page. Below the form is a datasheet view showing two records:

ID	Company	Last Name	First Name	E-mail Address	Job Title	Business Phn	Home Phone
1	Guru99	Edu	Guru	xyz@gmail.com	Consultant	989897878	564564564
2	Edu99	Edu	Guru	abc@yahoo.com	Business Analyst	457457575	567567557
* (New)							

A green callout box with the text 'Click Here to Add New Record' has an arrow pointing to the 'New' button in the toolbar. The status bar at the bottom left says 'Record: 1 of 2'.

Result: New record window appear in:

1. Form View and
2. Datasheet View.

This screenshot illustrates the 'New Record' form in two different views within Microsoft Access:

- View 1:** Shows the 'New Record' form in Form View. A green callout box with the text "'New Record' form appear to add data for new records." has an arrow pointing to the 'New' button in the toolbar. The status bar at the bottom left says 'Record: 1 of 1'.
- View 2:** Shows the 'New Record' form in Datasheet View. A green callout box with the text "'New Record' form in Data sheet view as well." has an arrow pointing to the 'New' button in the toolbar. The status bar at the bottom left says 'Record: 1 of 1'.

The left side of the screen shows the navigation pane with 'All Access Objects' and a list of tables, queries, forms, and reports. The 'Contacts' form is currently selected.

Step 3) Manually fill the data from Form. Note that in split form all data will be automatically reflected in below data sheet as well.

Step 4) Double Click on 'Contact' table.

Manually fill data for record 3 here.

All Data filled in Form is automatically reflected in Data sheet view

The screenshot shows a Microsoft Access application window. At the top, there are several tabs: 'Contacts_Form' (selected), 'Contacts', 'Contacts_Form_Multiple_Item', 'Contacts_Form2', and 'Contacts_Form_Split'. The main area is titled 'Contacts'. A green box highlights the third record in a data sheet at the bottom. A green arrow points from the text 'Manually fill data for record 3 here.' to the third record. Another green arrow points from the text 'All Data filled in Form is automatically reflected in Data sheet view' to the same record. The data sheet has columns: ID, Company, Last Name, First Name, E-mail Address, Job Title, Business Phc, Home Phone, Mobile Phon, and Fax Number. The third record's values are: ID=3, Company='Education', Last Name='Krish', First Name='Krish', E-mail Address='abc@gmail.com', Job Title='UI Developer', Business Phc='989897878', Home Phone='564564564', Mobile Phon='346456464', and Fax Number='123-1232323'. The form above the data sheet also displays these values for record 3.

Templates | Tables

All Access Obj...

Search...

Tables

- Contacts
- Settings

Queries

- Contacts Extended

Forms

- Contact Details
- Contact List
- Contacts_Form

Result: New Record updated to 'Contact' Table added from Form
'Contact_Form_Multiple_Item'

All Access Obj... <

Tables Contacts Contacts_Form_Multiple_Item Contacts_Form2

ID	Company	Last Name	First Name	E-mail Address	Job Title	Business Phc	Home Phone	Mobile Phon	Fax Number
1 Guru99	Edu	Guru	xyz@gmail.com	Consultant	989897878	564564564	346456464	123-1232323	
2 Edu99	Edu	Guru	abc@yahoo.com	Business Analyst	457457575	567567557	575757575	575-34245335	
(New)	3 Education	Krish	Krish	abc@gmail.com	UI Developer	457647567557	457646756	934945945	234-19383334



New Record updated to 'Contact'
Table added from Form
'Contact_Form_Multiple_Item'

Report

- A report is an object in MS Access that is designed for formatting, calculating and printing selected data in an organized way.
- It contains information from tables and also information that are there in the report design.
- Reports are helpful as they allow you to present all information of your database in an easy-to-read format.

Let's take an MS Access databases example of 'Contact' DB default report – 'Phone Book.'

Step 1) Click on 'Phone Book' under 'Report' section. The system will open the inbuilt 'PhoneBook' report.

It will display Contact Name, Home, Business and Mobile name

displayed for each record present.

The screenshot shows the Microsoft Access interface. On the left, the navigation pane lists various objects: Tables (Contacts, Settings), Queries (Contacts Extended), Forms (Contact Details, Contact List, Contacts_Form, Contacts_Form_Multiple_Item, Contacts_Form_Split, Contacts_Form2, Welcome), Reports (Directory, Phone Book), Macros (AutoExec, Search), and Modules. The 'Phone Book' report is highlighted with a yellow box and has a green circle with the number '1' next to it. In the center, the 'Phone Book' report is displayed. It has a title 'Phone Book' and a subtitle '(UNCATEGORIZED)'. Below this, there are three tables: one for 'UNCATEGORIZED' contacts (Krish Krish) and two for 'BUSINESS' contacts (Guru Edu). The 'PERSONAL' section is empty. The tables have columns for Contact Name, Home, Business, and Mobile. A green circle with the number '2' is placed above the first table. A green arrow points from the 'Phone Book' report in the navigation pane to the report itself. Another green arrow points from a callout box to the report, containing the text: 'In built 'Phone Book' report is displayed with Contact Name, Home, Business and Mobile name displayed for each records present'. A third callout box contains the text: 'Double Click on 'Phone Book' Report'.

Contact Name	Home	Business	Mobile
Krish Krish	457646756	457647567557	934945945

Contact Name	Home	Business	Mobile
Guru Edu	567567557	457457575	575757575

Contact Name	Home	Business	Mobile
Guru Edu	564564564	989897878	346456464

Step 2) Now suppose that we want to edit the report Heading from 'Home' to 'Home Number.' Right click and click on 'Design View.'

Phone Book

(UNCATEGORIZED)

Contact Name	Home	Business	Mobile
Krish Krish	457646756	457647567557	934945945
BUSINESS			
Contact Name	Business	Mobile	
Guru Edu	457457575	575757575	
PERSONAL			
Contact Name	Business	Mobile	
Guru Edu	989897878	346456464	

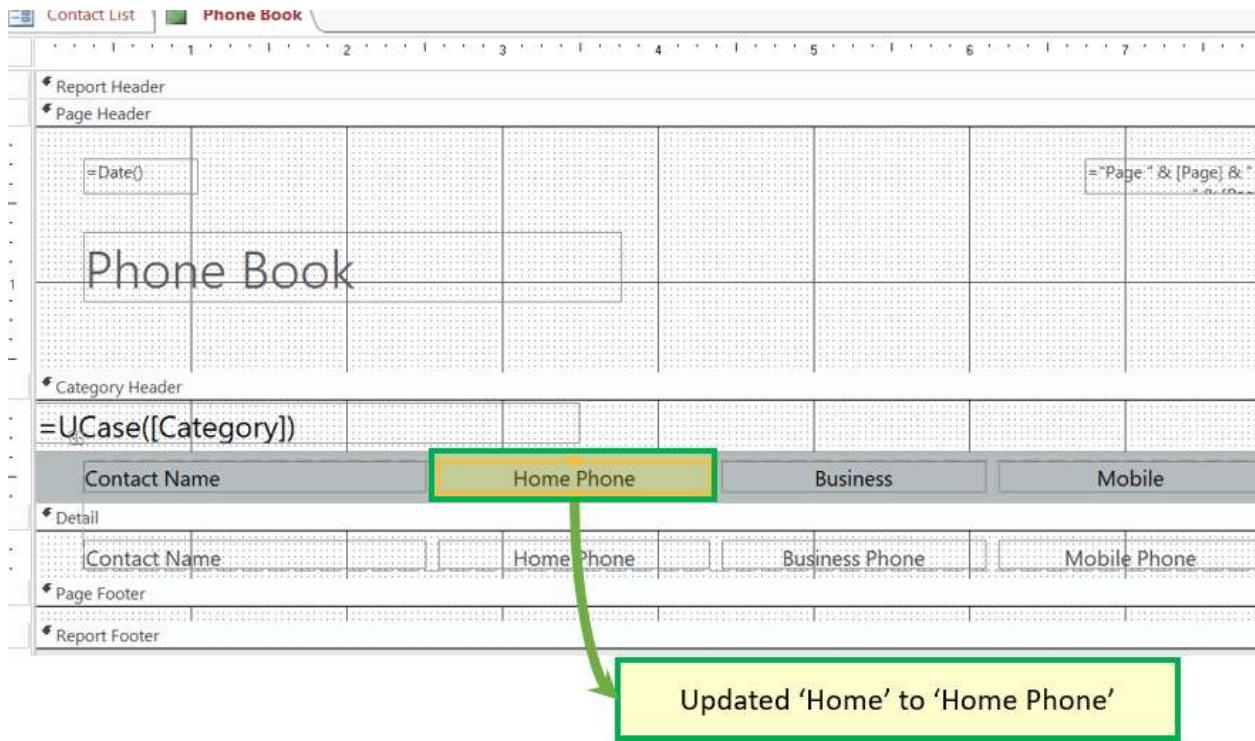
A context menu is open over the first row of the table, showing options: Report View, Layout View, Design View, Print Preview, Cut, Copy, Paste, Report Properties, and Properties. The 'Design View' option is highlighted with a green box.

A green arrow points from the 'Design View' option in the context menu to a yellow box containing the text 'Click on \'Design View\''.

The system will open the Report in Design view.

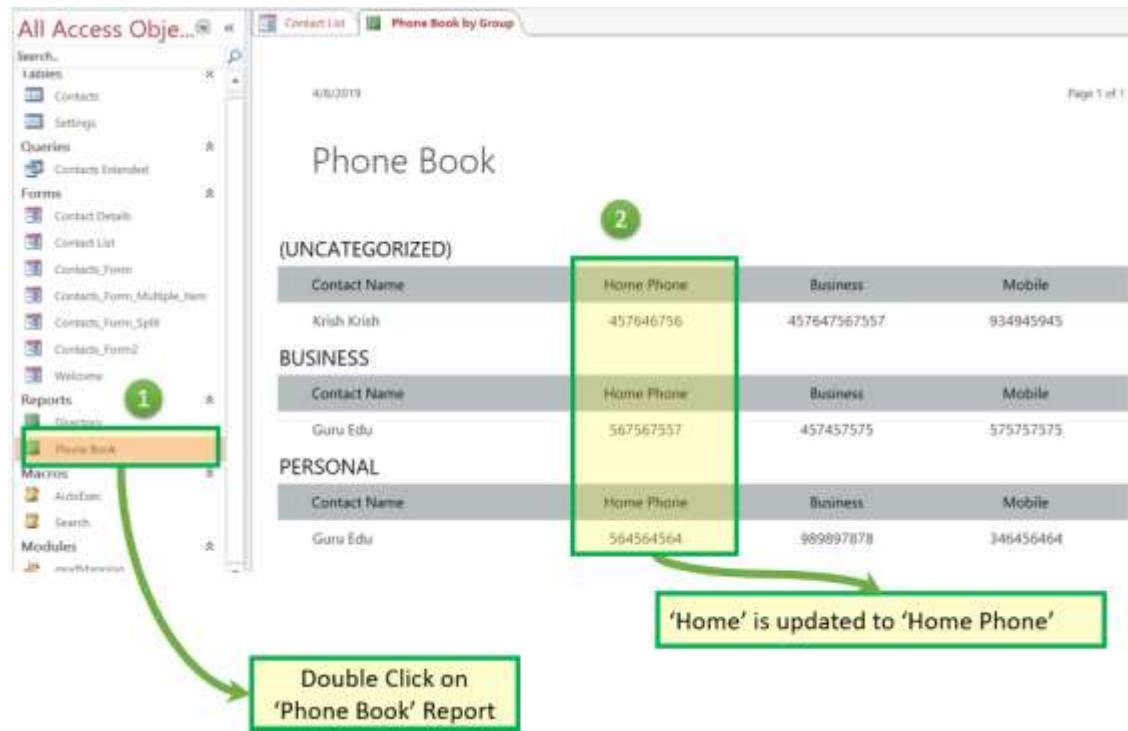
The screenshot displays the Phone Book report in Design View. It includes sections for Report Header, Page Header, Category Header, Detail, Page Footer, and Report Footer. In the Detail section, the 'Contact Name' column header is highlighted with a green box. A green arrow points from this header to a yellow box containing the text 'Column Name in Design name. Here we can change the headings.'

Step 3) Edit the name you want to update and Press 'Ctrl+S'.



Step 4) Double click 'Phone book' under reports

Result: Label is updated from 'Home' to 'Home Phone.'



Summary

- Microsoft Access is a Database Management System offered by Microsoft.
- Allows you to create tables, queries, forms, and reports, and connect with the help of Macros
- MS-Access will enable you to link to data in its existing location and use it for viewing, updating, querying, and reporting.
- Access consists of **four main database objects**: Tables, Queries, Forms, and Reports.
- There are **two ways to create a Database in SQL ACCESS**:
- Create Database from **Template**
- Create a **Blank Database**
- There are **two ways to create a Database in MS ACCESS**
- Create a Table from **Design View**
- Create a Table from **Datasheet View**
- You can switch between the datasheet and the design view by clicking the 'View'button in the top-left-hand corner of the Access program.
- A form can be created using Form Wizard, Form, Multiple Item, Split Form
- A report is an object in MS Access designed for formatting, calculating, and printing selected data in an organized way.