

# MS ACCESS 2016 BEGINNER COURSE

24<sup>th</sup> to 25<sup>th</sup> October 2018

## 1. WHY ACCESS



Focus:

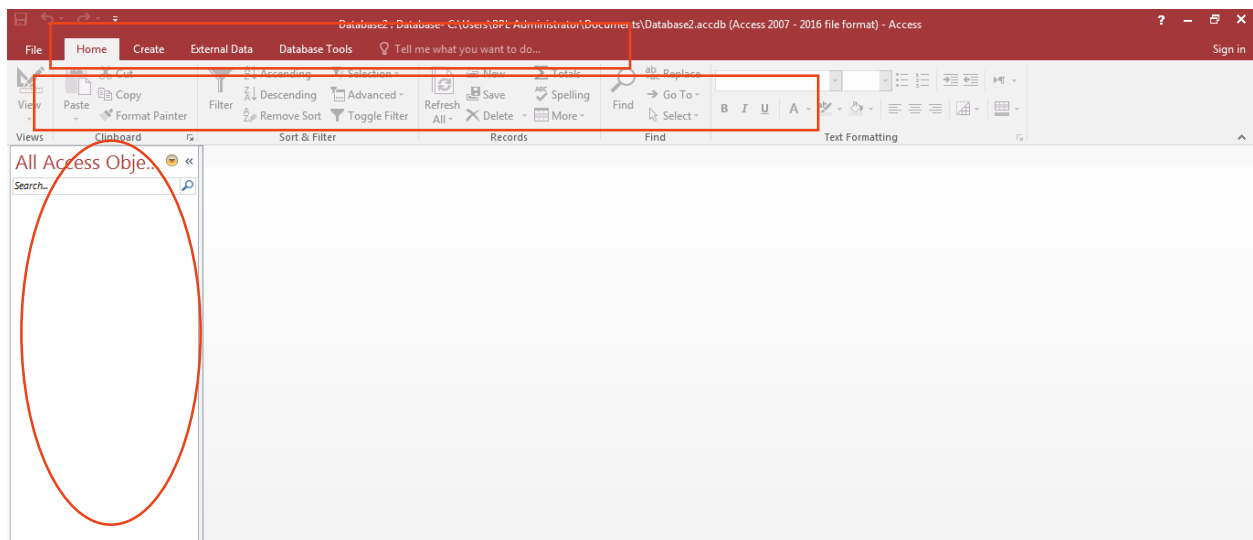
1. Access beginner course
2. Get familiar with Access Objects

### 1.1. MAJOR DATA PROBLEMS THAT ACCESS SOLVES

- Size and Speed
- Data Sharing
- One to Many

## 2. PARTS OF ACCESS SCREEN

- Navigation Pane
- Menu
- Ribbons
- Objects



## 3. OBJECTS

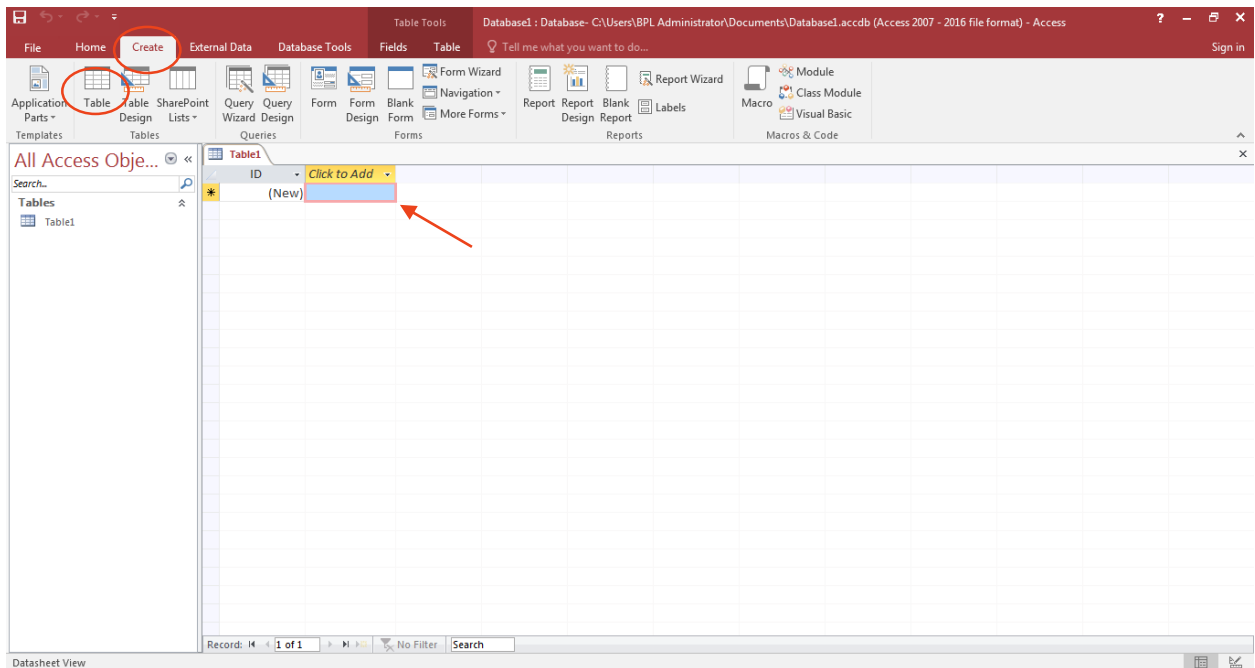
### 3.1. TABLES

**i** A table is where data is stored and a table lives within a database. Without a database there can be no table! Tables are at the heart of any database.

All tables are composed of horizontal **rows** and vertical **columns**, with small rectangles called **cells** in the places where rows and columns intersect. In Access, rows and columns are referred to as **records** and **fields**.

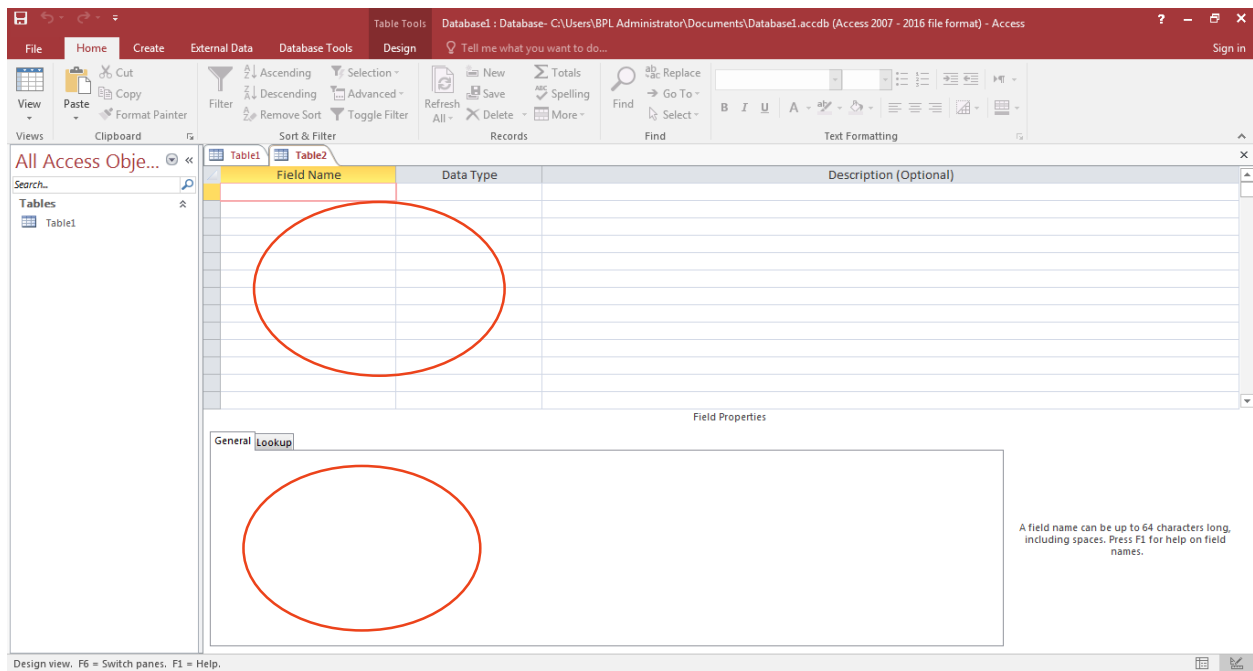
#### Create new table

1. Open MS Access
2. Save database
3. Click [Menu] Create and click [Button] Table

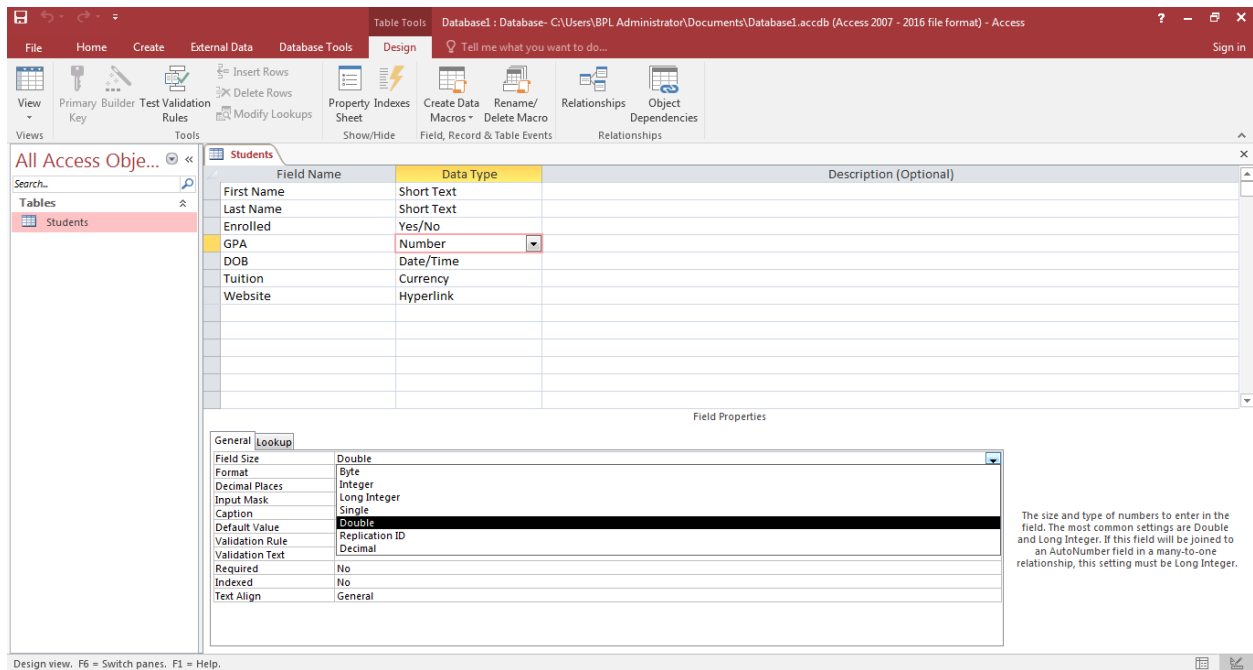


**i** A **field** is a way of organizing information by type. Think of the **field name** as a question and every cell within that field as a response to that question.

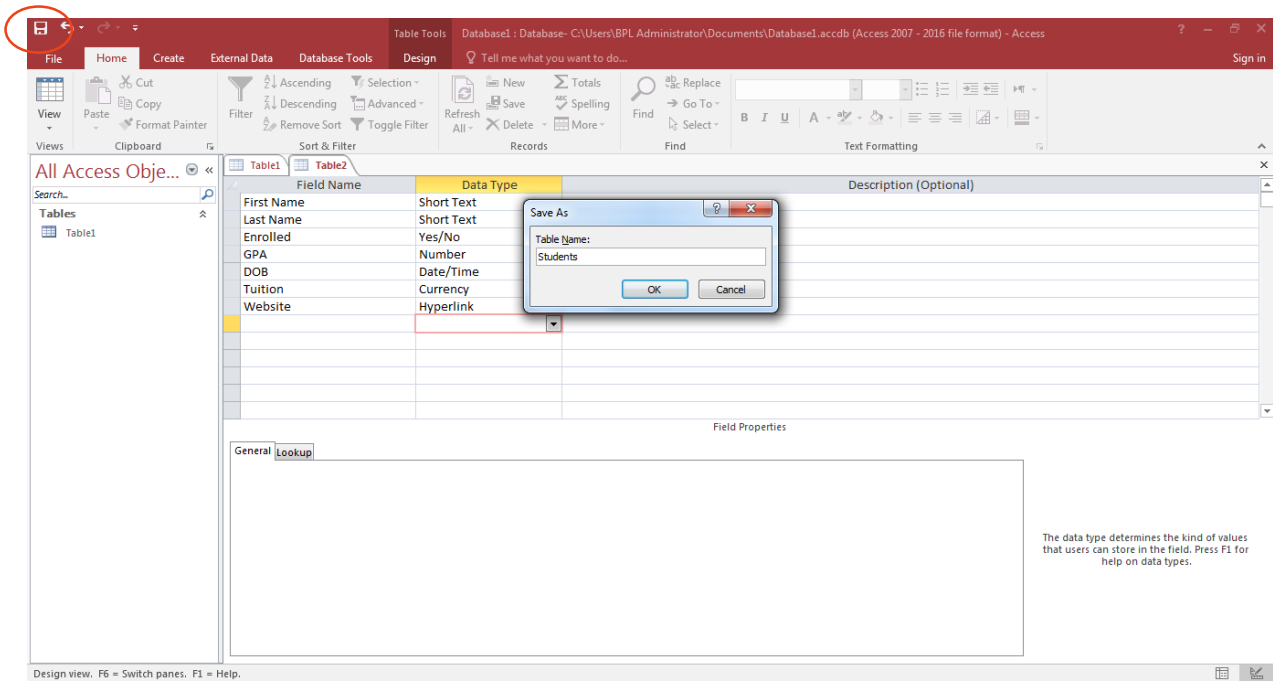
4. Click [Menu] Create
5. Click [Button] Table Design



6. Fill in Field Name and Data Type
7. Chose Double for Data Type Number

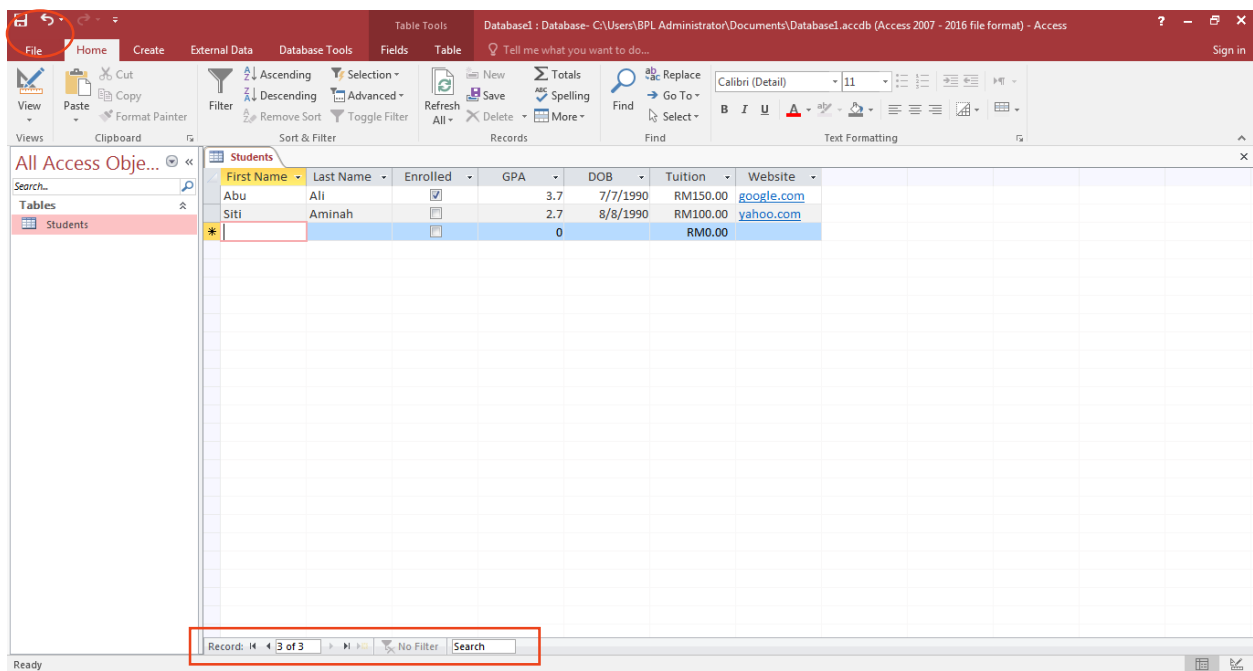


## 8. Save table as **Students**



## 9. Add second record

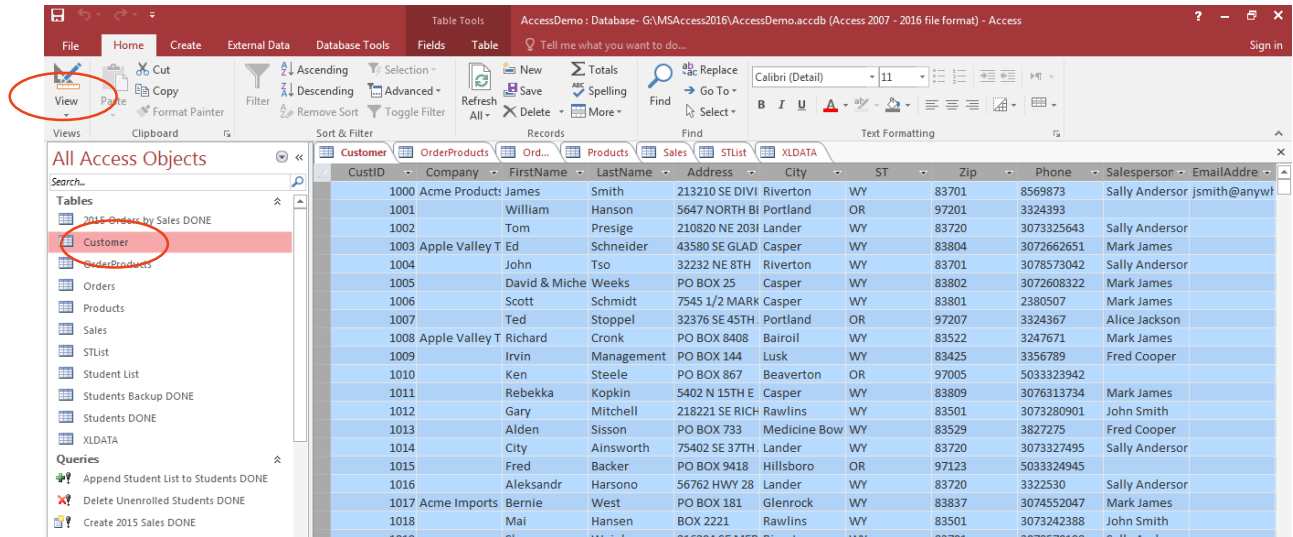
**i** A **record** is one unit of information. Every cell on a given row is part of that row's record. Each record has its own **ID number**. Within a table, each ID number is unique to its record and refers to all of the information within that record. The ID number for a record cannot be changed.



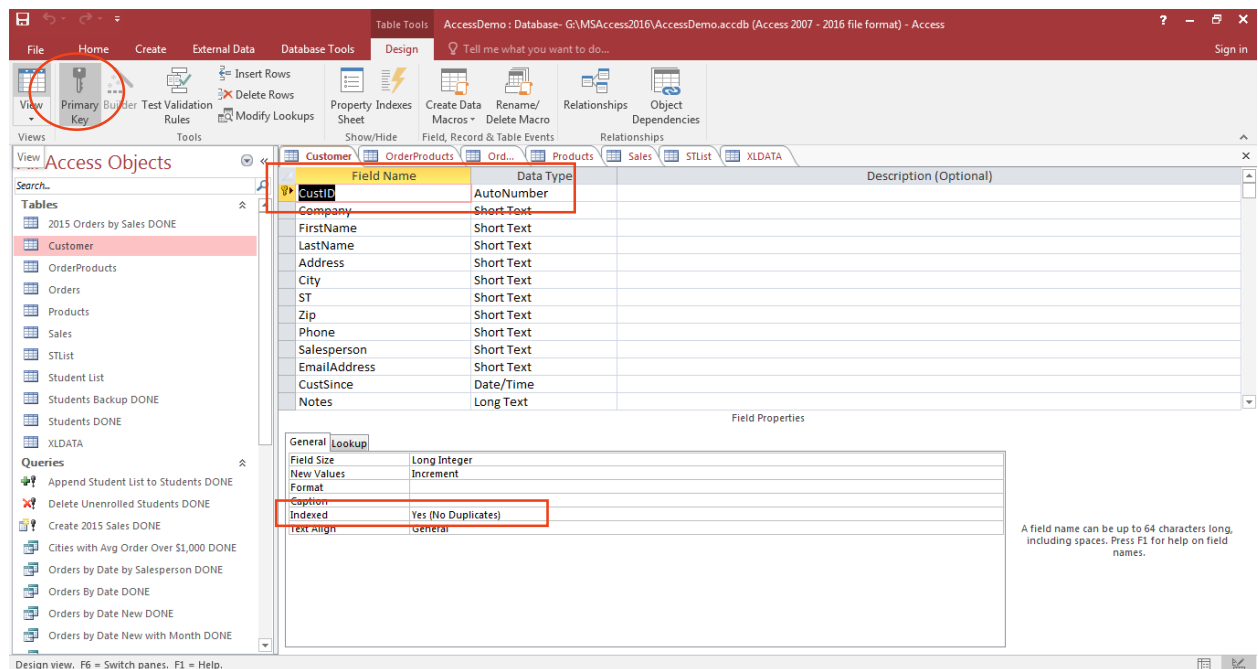
## Primary Key

**i** A **primary key** is a field or set of fields with values that are unique throughout a table. Values of the key can be used to refer to entire records, because each record has a different value for the key.

1. Open sample database
2. Double click [Table] Customer



3. Enter [Mode] Design View



4. Double click [Table] Customer
5. Double click [Table] Orders

AccessDemo: Database- G:\MSAccess2016\AccessDemo.accdb (Access 2007 - 2016 file format) - Access

Table Tools: Fields, Table

Filter, Sort & Filter, Records, Find, Text Formatting

All Access Objects

Search...

Tables

- 2015 Orders by Sales DONE
- Customer
- OrderProducts
- Orders
- Products
- Sales
- STList
- Student List
- Students Backup DONE
- Students DONE
- XLDATA

Queries

- Append Student List to Students DONE
- Delete Unenrolled Students DONE
- Create 2015 Sales DONE
- Cities with Avg Order Over \$1,000 DONE
- Orders by Date by Salesperson DONE
- Orders by Date DONE
- Orders by Date New DONE
- Orders by Date New with Month DONE

Datasheet View

OrderNo	CustID	FirstName	LastName	Address	City	ST	Zip	Phone	OrderDate
12	2631	Franklin	Smith	PO BOX 1762	Dubois	LA	83713	4552361	15-Oct-15
17	2913	Debra	Berg	PO BOX 187	Lander	WY	83720	3329746	29-Oct-15
18	2913	Debra	Berg	PO BOX 187	Lander	WY	83720	3329746	25-Nov-15
21	1869	Shirlee	Trembley	8783 BEVER DR NE	Lander	WY	83720	3073323127	19-Nov-15
28	3235	Jennifer	Nguyen	5619 NE 81ST AVE	Lander	WY	83720	3359244	02-Jan-16
31	3074	Jann	Kakiuchi	8718 W CEDAR	Crowheart	WY	83712	3074552354	29-Nov-15
33	2652	Jack	Linn	PO BOX 3261	Evanston	WY	84130	8004402359	09-Nov-15
37	1726	Nathan	Patel	PO BOX #372	Fort Washakie	WY	83714	3323250	08-Nov-15
39	1726	Nathan	Patel	PO BOX #372	Fort Washakie	WY	83714	3323250	10-Nov-15
40	1936	Long	Sage	79456 SE EMERALD LOOP	Lander	WY	83720	3322095	29-Nov-15
41	1563	Mary	Sweet	8756 SE 27TH ST	Lander	WY	83720	3073320338	27-Nov-15
42	2882	Alfred	Baumann	7919 S 7TH	Powell	WY	83635	3077654484	25-Jan-16
46	2882	Alfred	Baumann	7919 S 7TH	Powell	WY	83635	3077654484	20-Oct-15
47	2882	Alfred	Baumann	7919 S 7TH	Powell	WY	83635	3077654484	27-Nov-15
48	2882	Alfred	Baumann	7919 S 7TH	Powell	WY	83635	3077654484	13-Jan-16
51	2882	Alfred	Baumann	7919 S 7TH	Powell	WY	83635	3077654484	17-Jan-16
53	2882	Alfred	Baumann	7919 S 7TH	Powell	WY	83635	3077654484	02-Jan-16
54	2882	Alfred	Baumann	7919 S 7TH	Powell	WY	83635	3077654484	19-Jan-16
64	1702	Action	Friesen	216300 SE HWY 224 SP#36	Lander	WY	83720	3325003	27-Jan-16
63	1702	Action	Friesen	216300 SE HWY 224 SP#36	Lander	WY	83720	3325003	23-Oct-15
65	1459	Nelda	Craft	PO BOX 162	Lander	WY	83720	3326052	10-Oct-15
73	3308	Mary	Schreiber	5624 GARFIELD	Rawlins	WY	83501	8754619	16-Jan-16
77	1435	Allan	Vogel	214614 SE CREEKSIDE DR	Riverton	WY	83701	3078572733	14-Jan-16
93	2189	Anthony	Lester	21340 JAMAICA DR	Casper	WY	83804	3072356765	07-Dec-15
94	2189	Anthony	Lester	21340 JAMAICA DR	Casper	WY	83804	3072356765	14-Jan-16

## Sorting and Filtering

1. Option 1: Click [Field] and click [Ribbon] for filtering and sorting
2. Option 2: Right click on field/ click on the dropdown button

AccessDemo: Database- G:\MSAccess2016\AccessDemo.accdb (Access 2007 - 2016 file format) - Access

Table Tools: Fields, Table

Filter, Sort & Filter, Records, Find, Text Formatting

All Access Objects

Search...

Tables

- 2015 Orders by Sales DONE
- Customer
- OrderProducts
- Orders
- Products
- Sales
- STList
- Student List
- Students Backup DONE
- Students DONE
- XLDATA

Queries

- Append Student List to Students DONE
- Delete Unenrolled Students DONE
- Create 2015 Sales DONE
- Cities with Avg Order Over \$1,000 DONE
- Orders by Date by Salesperson DONE
- Orders by Date DONE
- Orders by Date New DONE
- Orders by Date New with Month DONE

Datasheet View

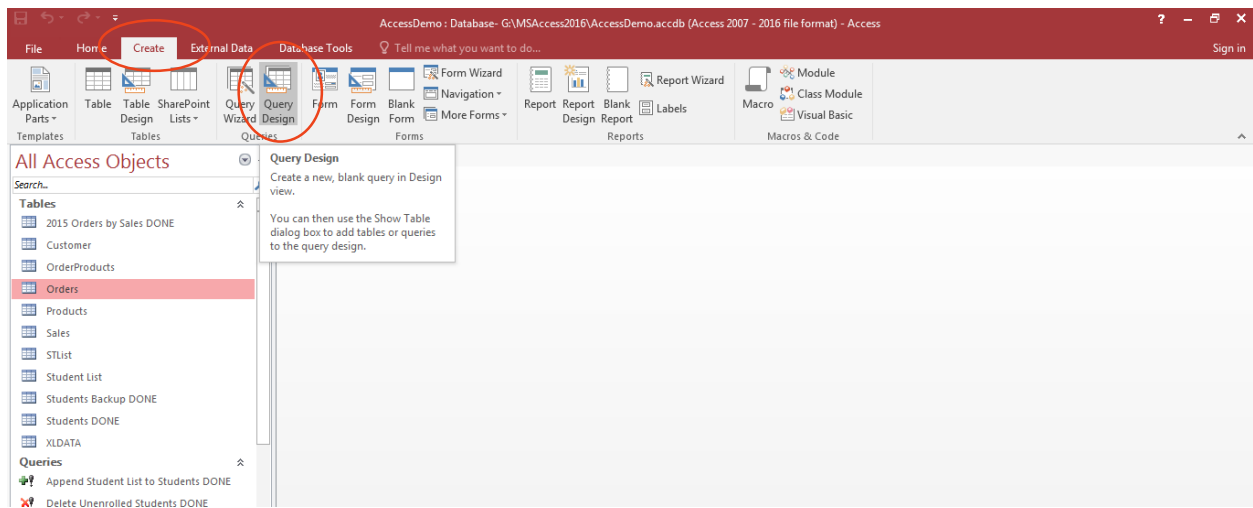
CustID	Company	FirstName	LastName	Address	City	ST	Zip	Phone	Salesperson	EmailAddress
10		Smith		213210 SE DIVI	Riverton	WY	83701	8569873	Sally Andersor	jsmith@anyw
10		Hanson		5647 NORTH Bl	Portland	OR	97201	3324393		
10		Presige		210820 NE 2031	Lander	WY	83720	307325643	Sally Andersor	
10		Schneider		43580 SE GLAD	Casper	WY	83804	3072662651	Mark James	
10		So		32232 NE 8TH	Riverton	WY	83701	3078573042	Sally Andersor	
10		che Weeks		PO BOX 25	Casper	WY	83802	3072608322	Mark James	
10		Schmidt		7545 1/2 MARK	Casper	WY	83801	2380507	Mark James	
1007		Stoppel		32376 SE 45TH	Portland	OR	97207	3324367	Alice Jackson	
1008	Apple Valley T	Richard	Cronk	PO BOX 8408	Bairail	WY	83522	3247671	Mark James	
1009	Irvin	Management		PO BOX 144	Lusk	WY	83425	3356789	Fred Cooper	
1010	Ken	Steele		PO BOX 867	Beaverton	OR	97005	5033323942		
1011	Rebekka	Kopkin		5402 N 15TH E	Casper	WY	83809	3076313734	Mark James	
1012	Gary	Mitchell		218221 SE RICH	Rawlins	WY	83501	3073280901	John Smith	
1013	Alden	Sisson		PO BOX 733	Medicine Bow	WY	83529	3827275	Fred Cooper	
1014	City	Ainsworth		75402 SE 37TH	Lander	WY	83720	3073327495	Sally Andersor	
1015	Fred	Backer		PO BOX 9418	Hillsboro	OR	97123	5033324945		
1016	Aleksandr	Harsono		56762 HWY 28	Lander	WY	83720	3322530	Sally Andersor	
1017	Acme Imports	Bernie	West	PO BOX 181	Glenrock	WY	83837	3074552047	Mark James	
1018	Mai	Hansen		BOX 2221	Rawlins	WY	83501	3073242388	John Smith	
1019	Sharon	Weinberger		216204 SE MER	Riverton	WY	83701	3078570198	Sally Andersor	
1020	Early	Mcadams		210714 NE 315	Gresham	OR	97233	5033329037		
1021	Gabriel	Lee		5617 E MONRC	Riverton	WY	83701	3078562562	Sally Andersor	
1022	Becky	Kennison		5470 JEFFERSO	Casper	WY	83804	3072345952	Mark James	
1023	Beatriz	Norquist		21821 MCTAVI	Casper	WY	83801	2358720	Mark James	
1024	Robert	Hartwell		PO BOX 3605	Kinnear	WY	83716	3078566394	John Smith	

## 3.2. QUERIES

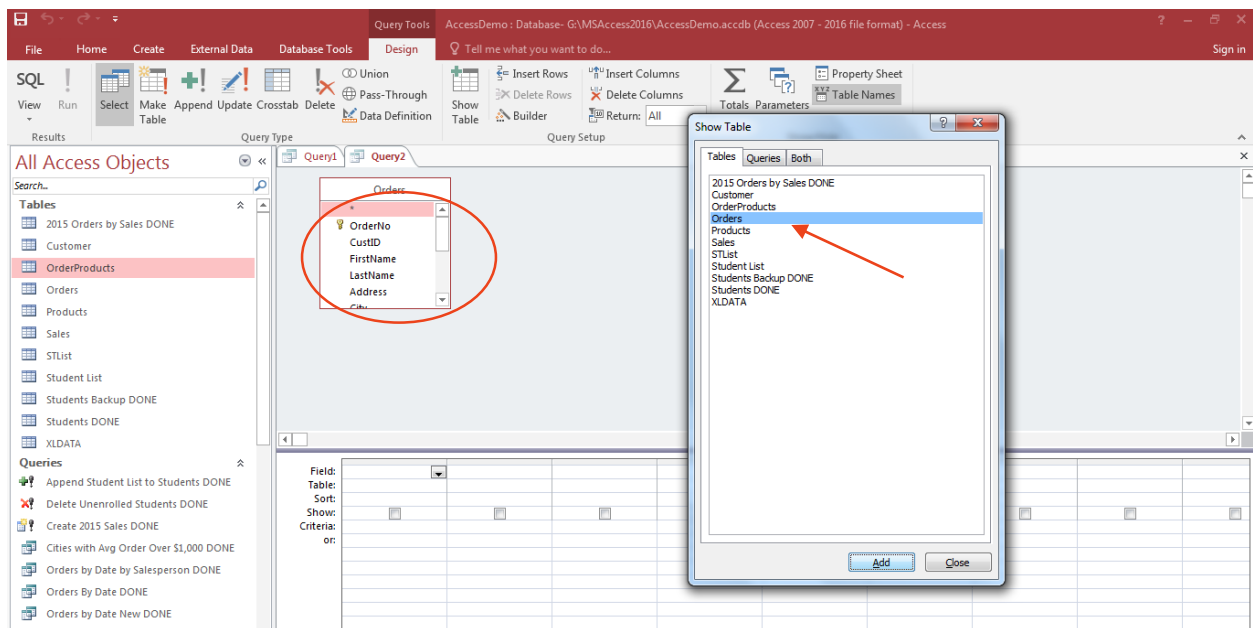
**i** **Queries** allow you to **pull information** from one or more tables based on a set of search conditions you define.

### Basic query

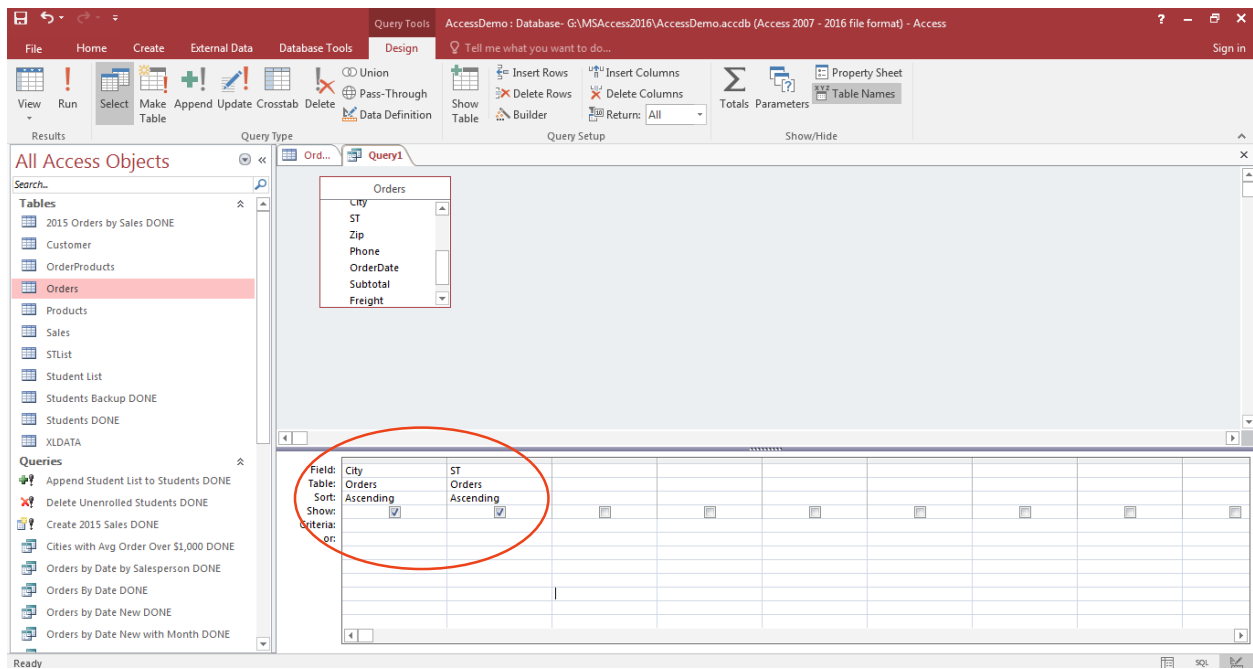
1. Open sample database
2. Click [Menu] Create
3. Click [Button] Query Design



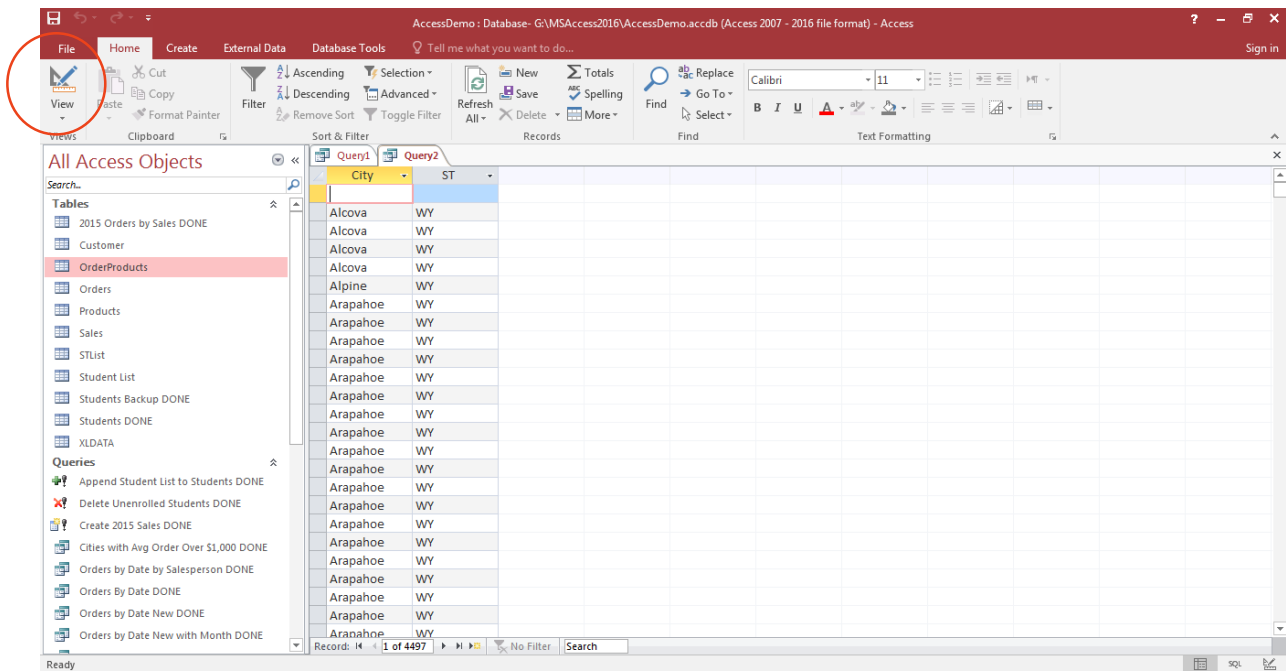
4. Add [Table] Orders to query



5. Add Field by drag and drop or select from field dropdown button



6. Switch to [Mode] Datasheet View

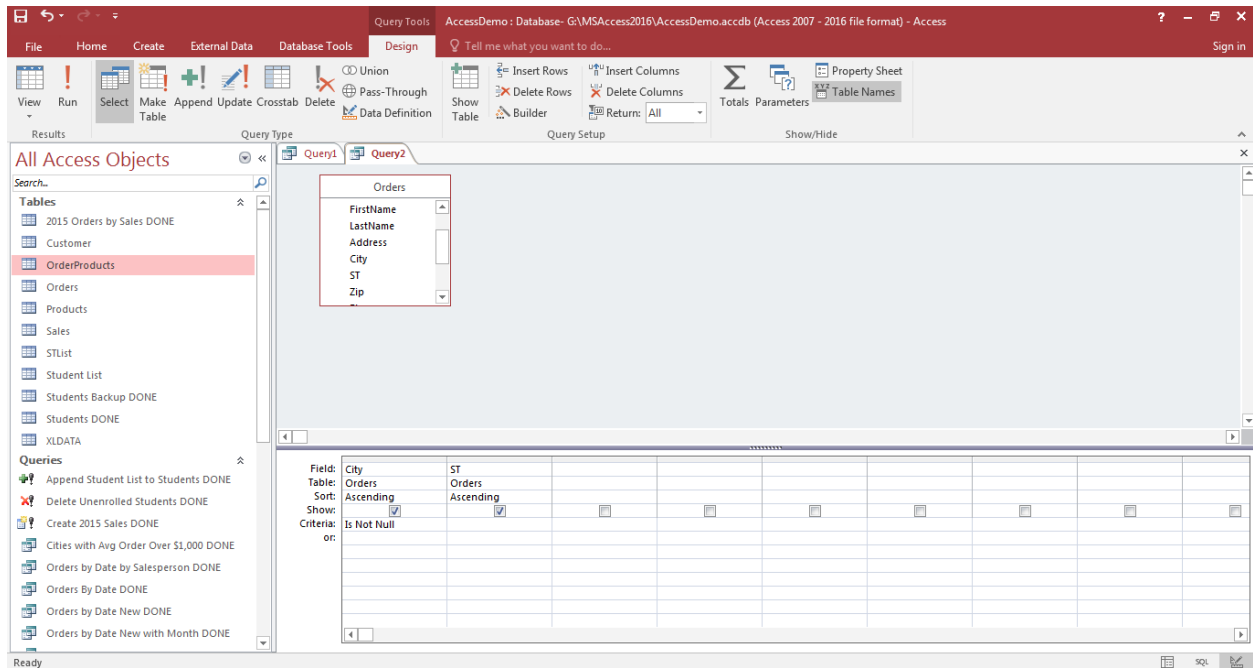




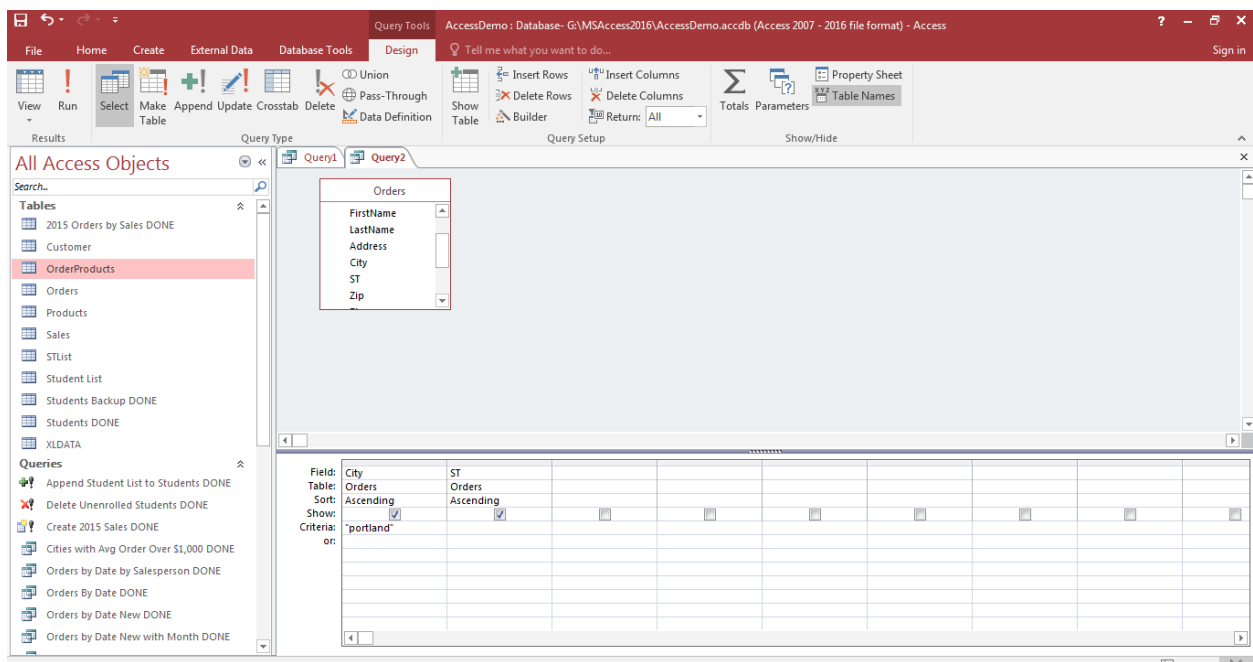
## Criteria

**i Criteria:** row of each field you want to filter. Typing criteria into more than one field in the Criteria: row will set your query to include only results that meet all criteria.

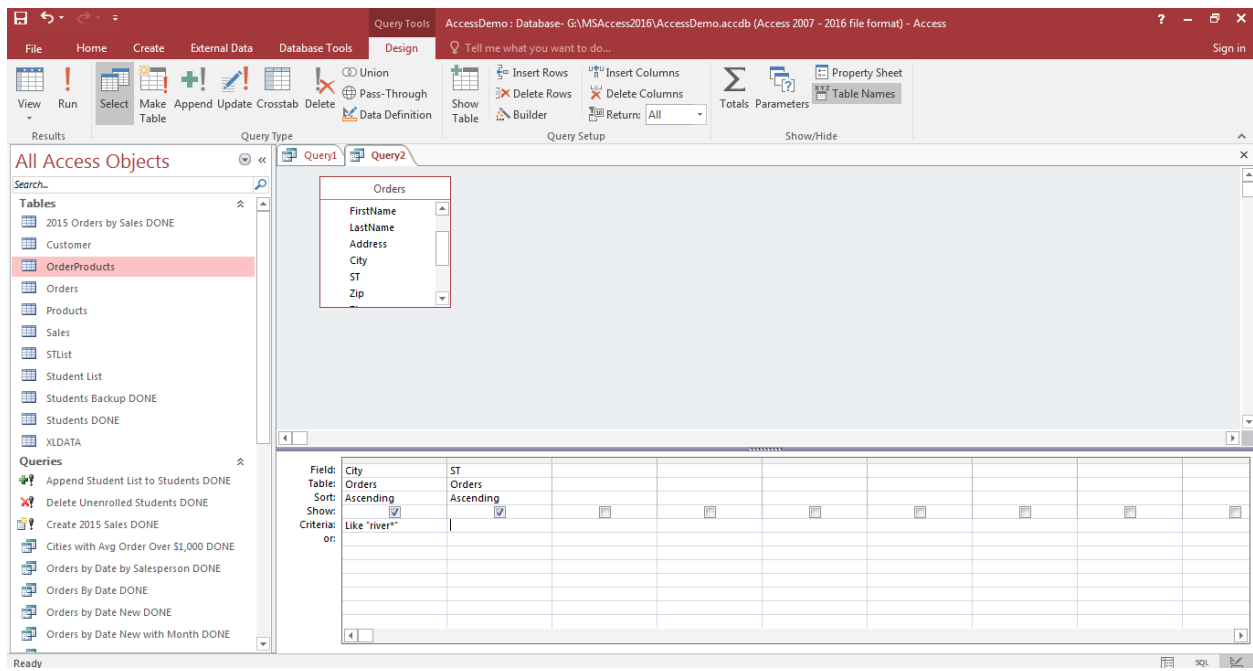
### 1. Filter blank field



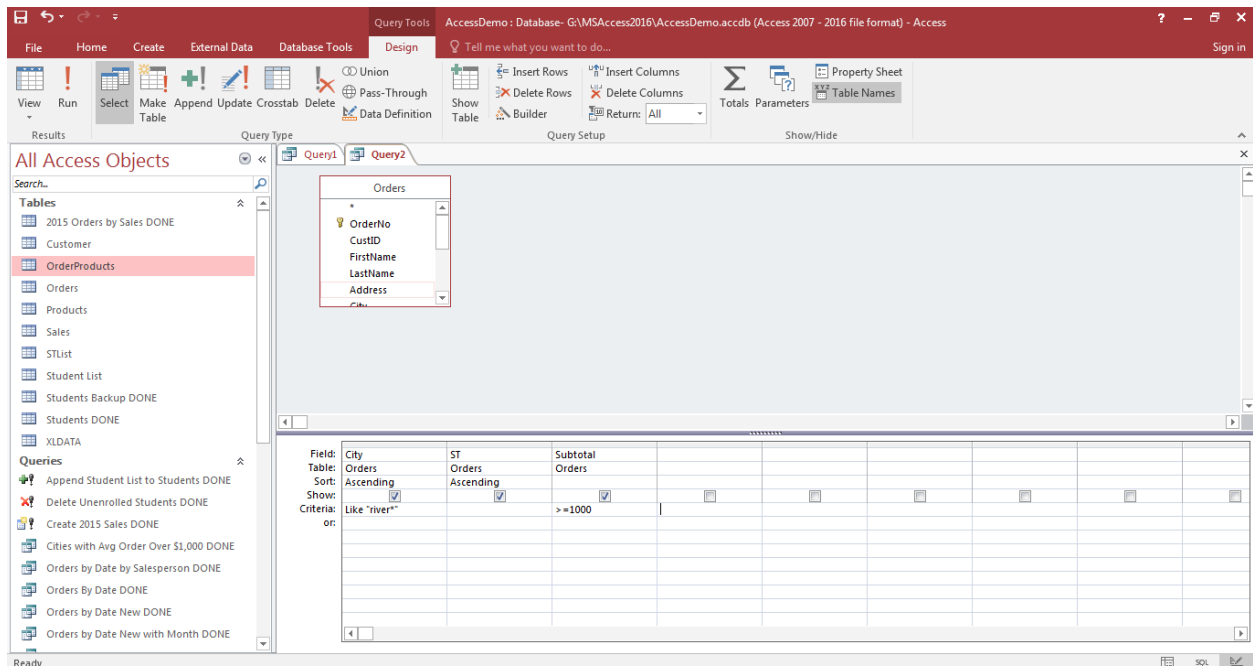
### 2. Filter exact match



### 3. Filter not an exact match



### 4. Filter number



## 5. Filter date

The screenshot shows the Microsoft Access interface with the 'Query2' design grid. The 'All Access Objects' pane on the left lists various tables and queries. The 'Design' tab is active, showing the 'Query Setup' section. The design grid is as follows:

Field:	City	ST	Subtotal	OrderDate					
Table:	Orders	Orders	Orders	Orders					
Sort:	Ascending	Ascending							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:	Like "river"		>=1000	>=#1/1/2016#					
or:									

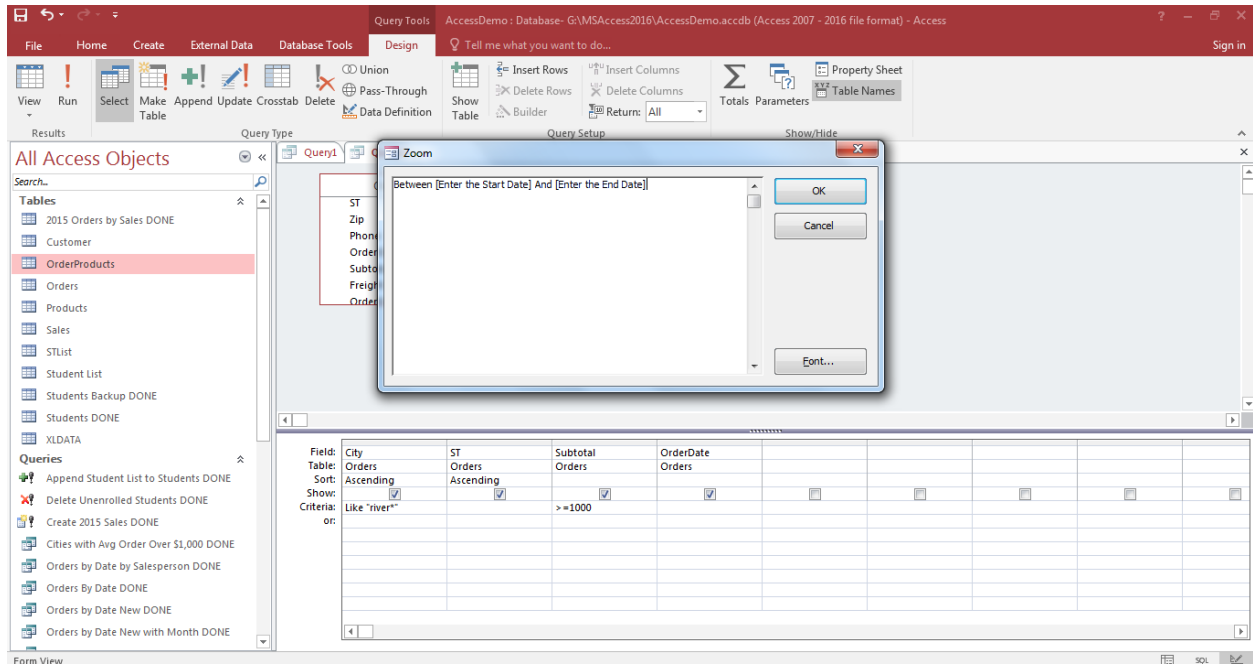
## 6. Filter OR

The screenshot shows the Microsoft Access interface with the 'Query2' design grid. The 'All Access Objects' pane on the left lists various tables and queries. The 'Design' tab is active, showing the 'Query Setup' section. The design grid is as follows:

Field:	City	ST	Subtotal	OrderDate					
Table:	Orders	Orders	Orders	Orders					
Sort:	Ascending	Ascending							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:	Like "river"		>=1000	>=#1/1/2016#					
or:	Like "lander"		>=1000	>=#1/1/2016#					

## 7. Filter with PROMPT

To use zoom box, hold SHIFT + F2



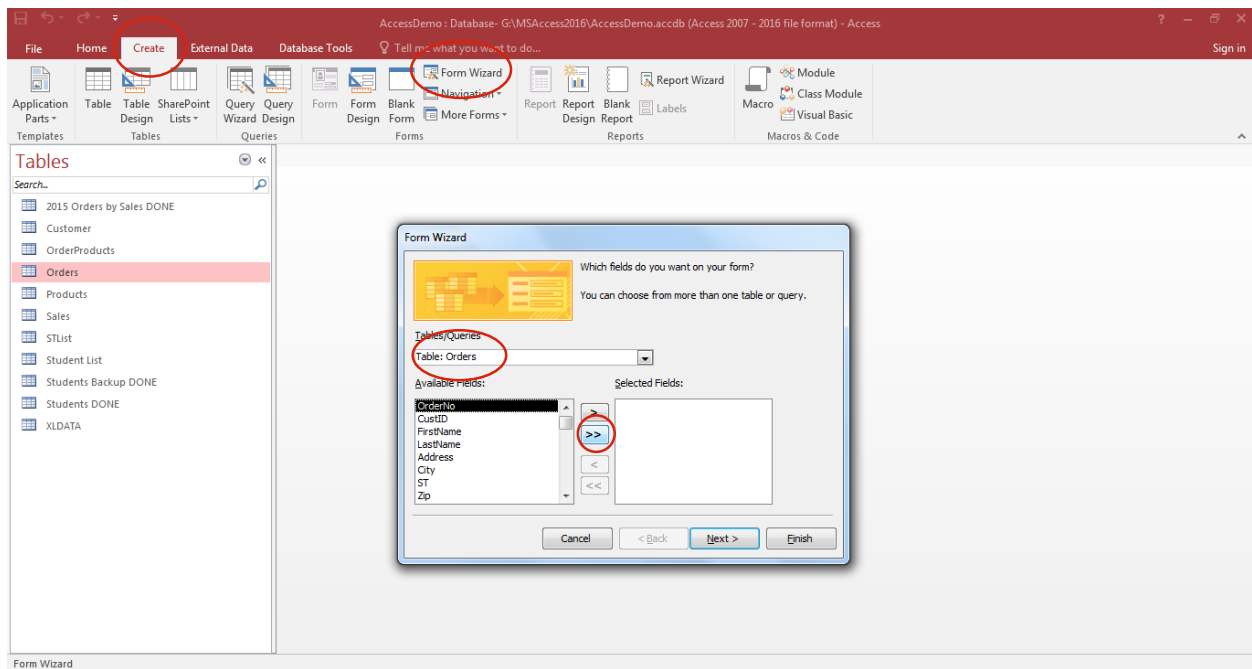
## 8. Save query

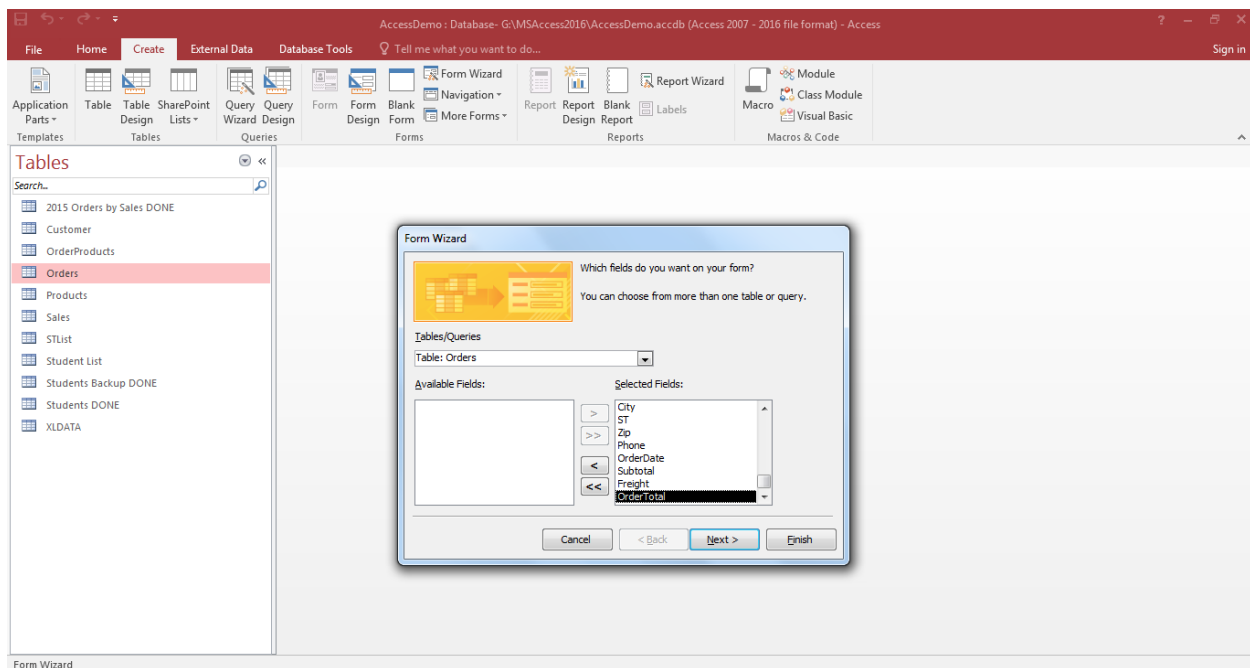
### 3.3. FORMS

**i** When you enter information into a form in Access, the data goes exactly where it's supposed to go: into one or more related tables.

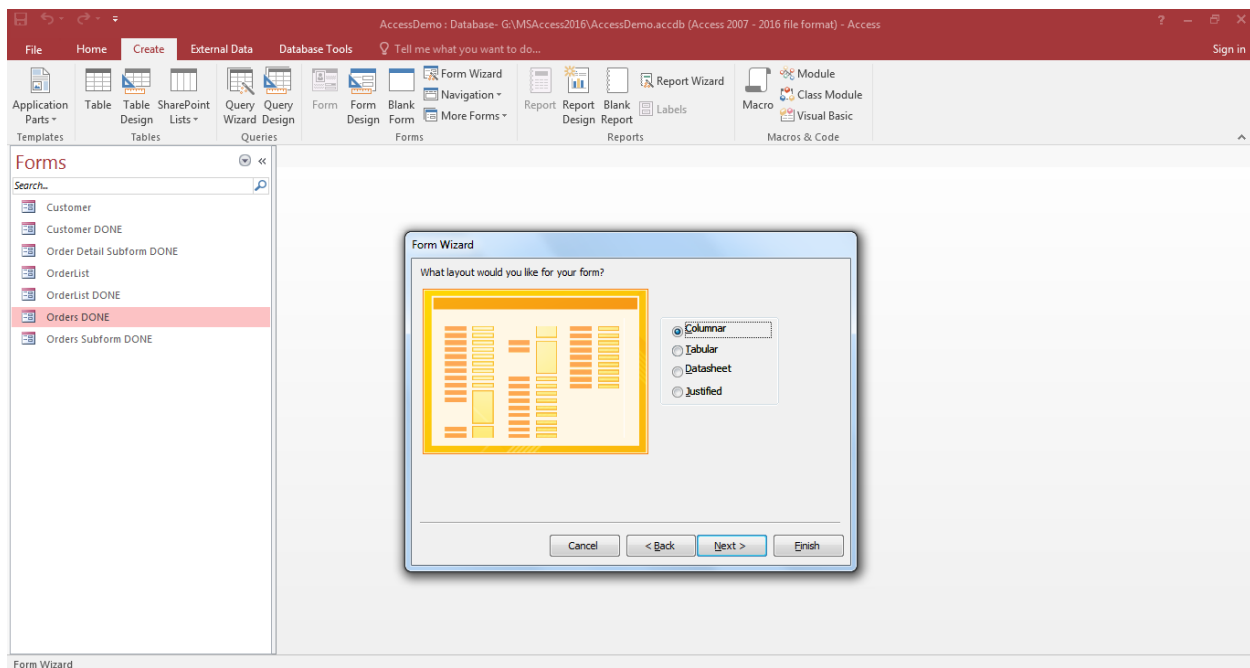
#### Basic form

1. Open sample database
2. Click [Menu] Create
3. Click [Button] Form Wizard
4. Select Table: Orders
5. Select ALL Available Fields

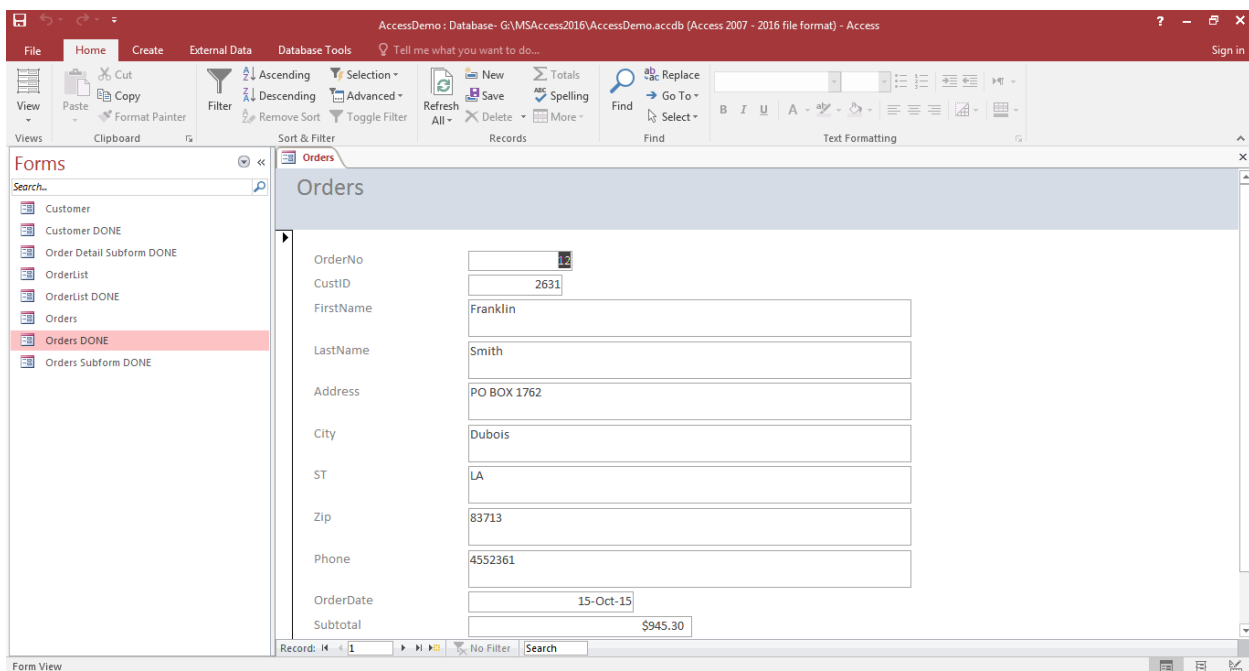
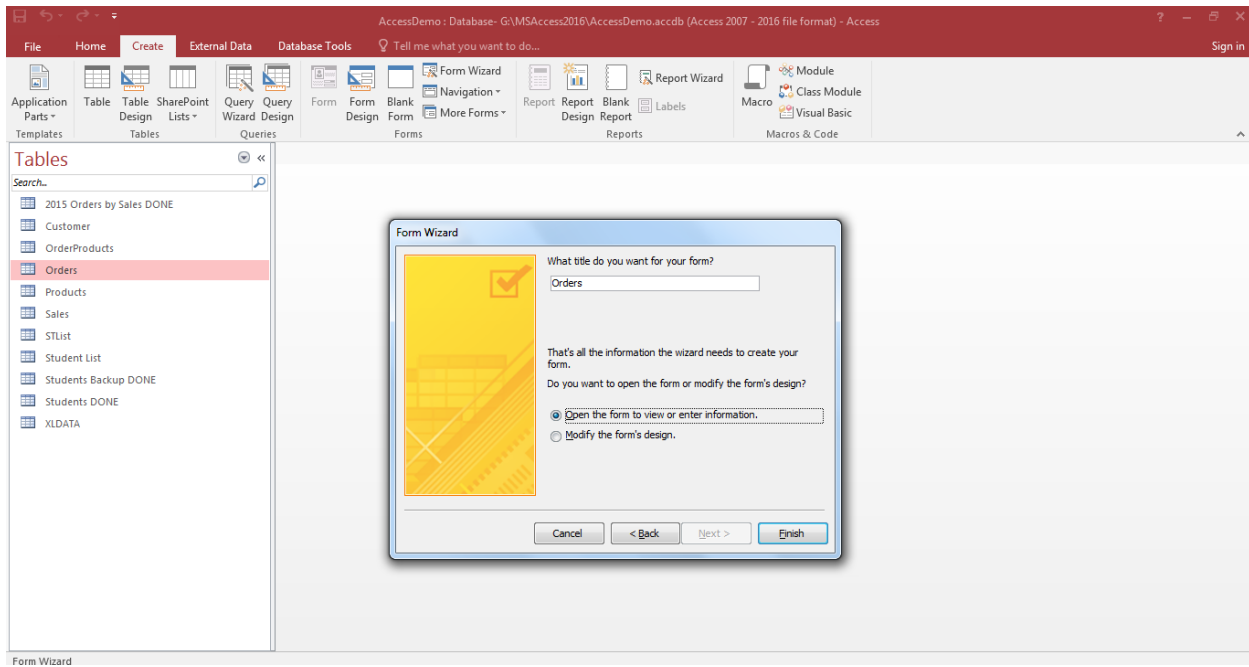




6. Select Columnar
7. Click Next



8. Save form
9. Click Finish



## Basic form control

1. Switch to [Button] Design View
2. Click Finish

AccessDemo: Database- G:\MSAccess2016\AccessDemo.accdb (Access 2007 - 2016 file format) - Access

File Home Create External Data Database Tools Tell me what you want to do... Sign in

Form View

Orders

OrderNo  
CustID 2631  
FirstName Franklin  
LastName Smith  
Address PO BOX 1762  
City Dubois  
ST LA  
Zip 83713  
Phone 4552361  
OrderDate 15-Oct-15  
Subtotal \$945.30

Records: 1 of 4497 No Filter Search

AccessDemo: Database- G:\MSAccess2016\AccessDemo.accdb (Access 2007 - 2016 file format) - Access

File Home Create External Data Database Tools Design Arrange Format Tell me what you want to do... Sign in

Form Design Tools

Form Header

Orders

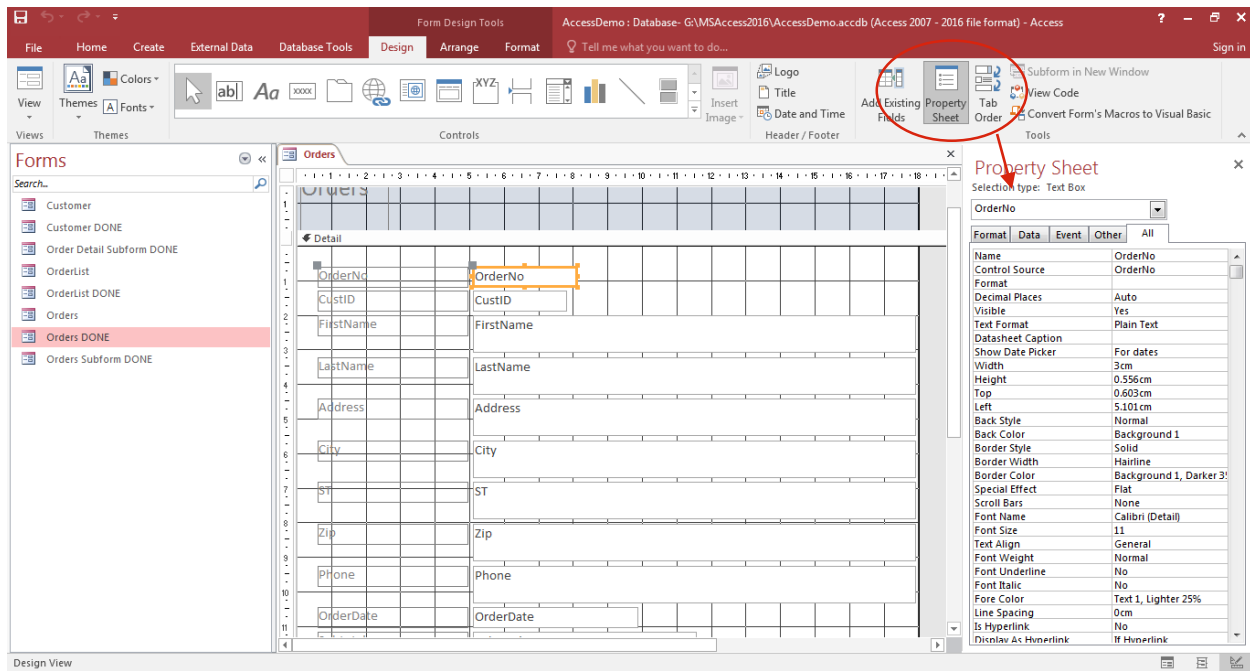
Detail

OrderNo  
CustID  
FirstName  
LastName  
Address  
City  
ST  
Zip  
Phone

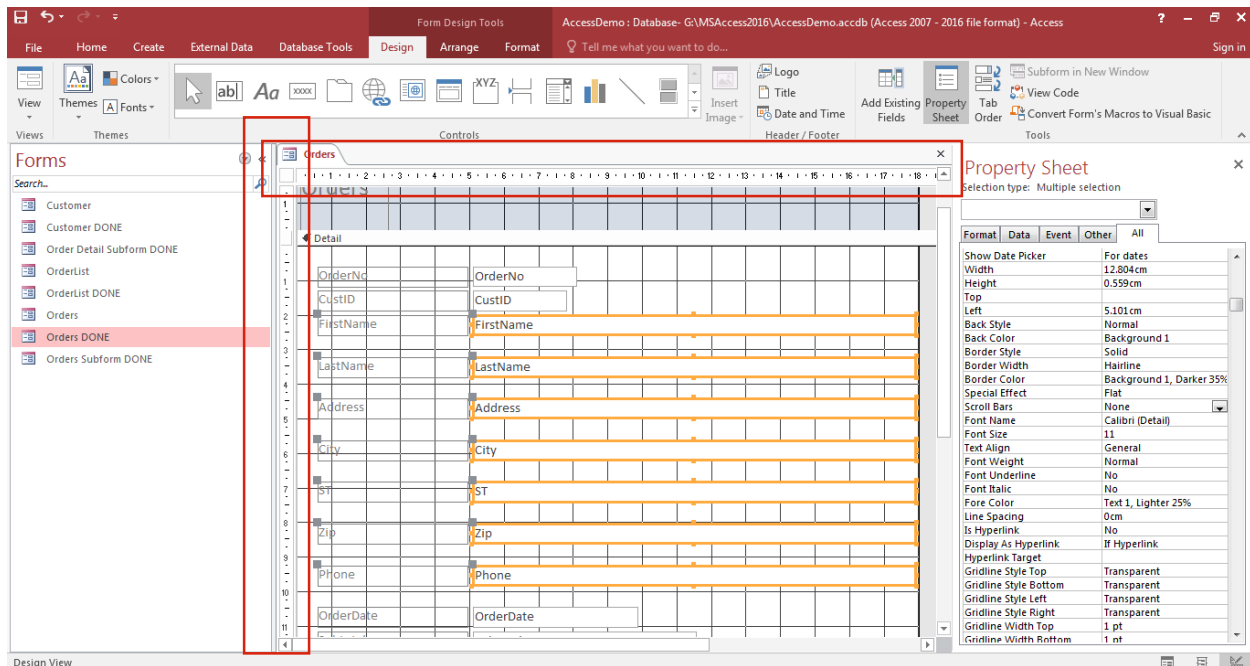
Records: 1 of 4497 No Filter Search



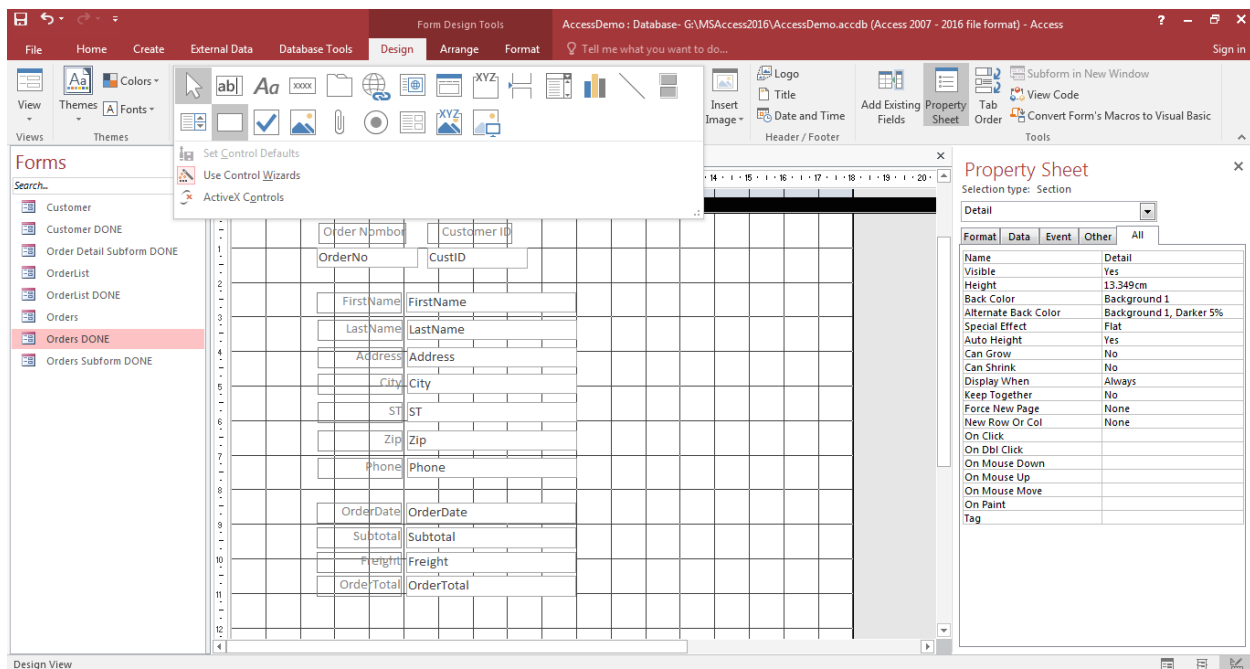
### 3. Rearrange the form by using ruler and Property Sheet



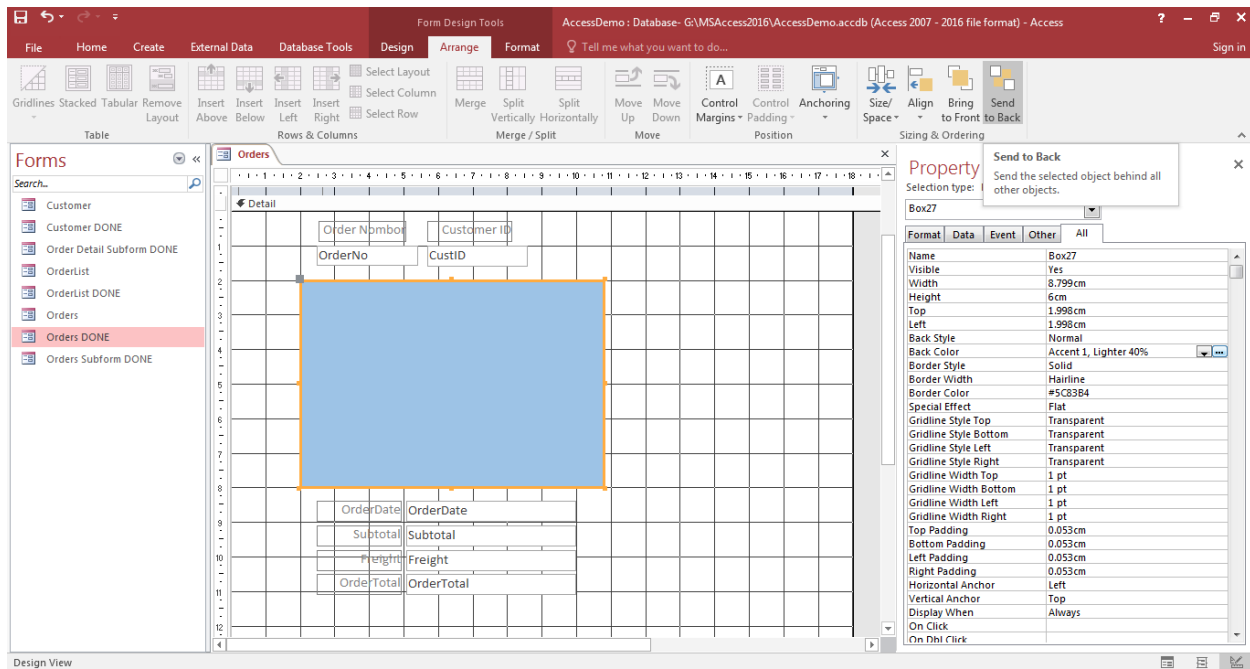
### 4. Use ruler on the top or on the left to select boxes. Use shift and click on boxes to select multiple boxes.

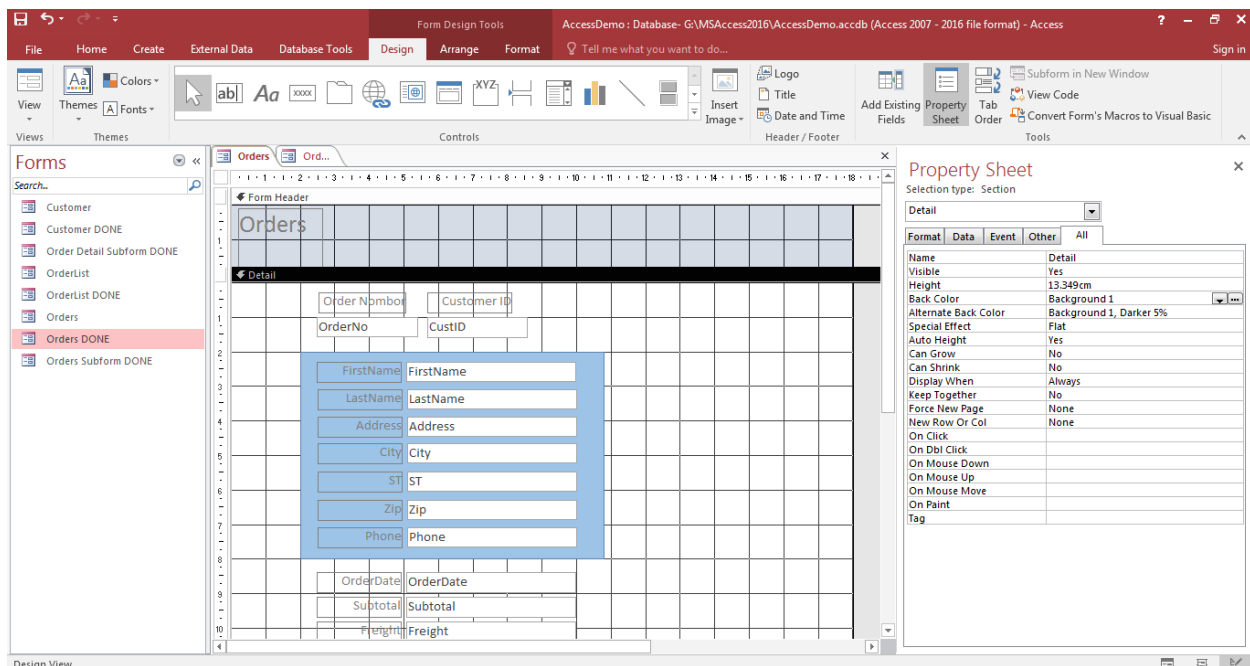


## 5. Use [Ribbon] Controller to add in new controls

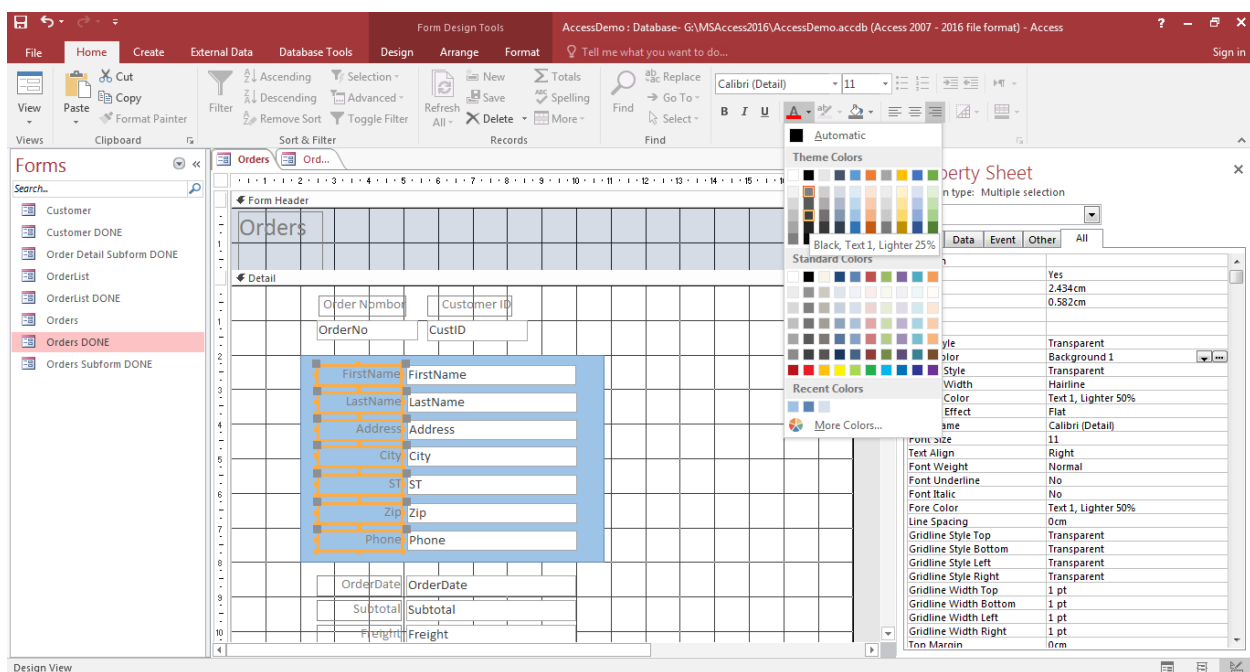


## 6. Use Property Sheet to modify Controller





7. Go to [Menu] Home and [Ribbon] Format to modify labels



AccessDemo : Database- G:\MSAccess2016\AccessDemo.accdb (Access 2007 - 2016 file format) - Access

File Home Create External Data Database Tools Tell me what you want to do... Sign in

Views Clipboard Sort & Filter Records Find Text Formatting

**Forms**

Search...

- Customer
- Customer DONE
- Order Detail Subform DONE
- OrderList
- OrderList DONE
- Orders
- Orders DONE**
- Orders Subform DONE

**Customer Orders**

Order Nombor Customer ID

FirstName Franklin  
 LastName Smith  
 Address PO BOX 1762  
 City Dubois  
 ST LA  
 Zip 83713  
 Phone 4552361

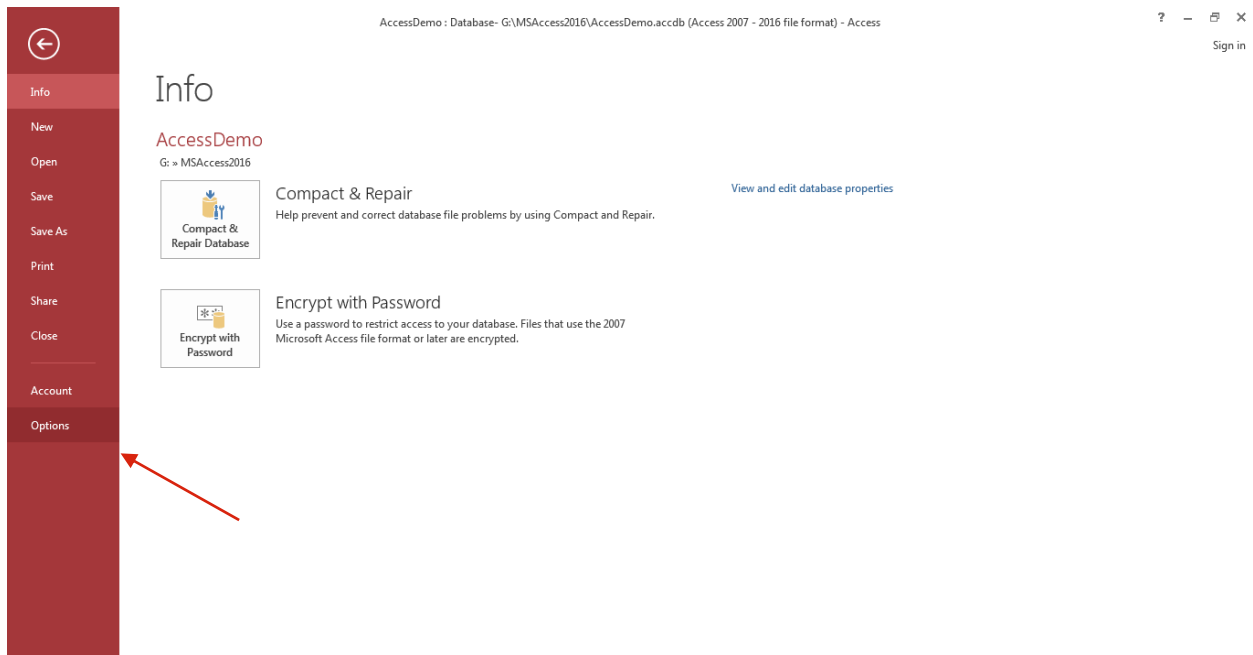
OrderDate 15-Oct-15  
 Subtotal \$945.30  
 Freight \$44.00  
 OrderTotal \$989.30

Record: 1 of 4497 No Filter Search

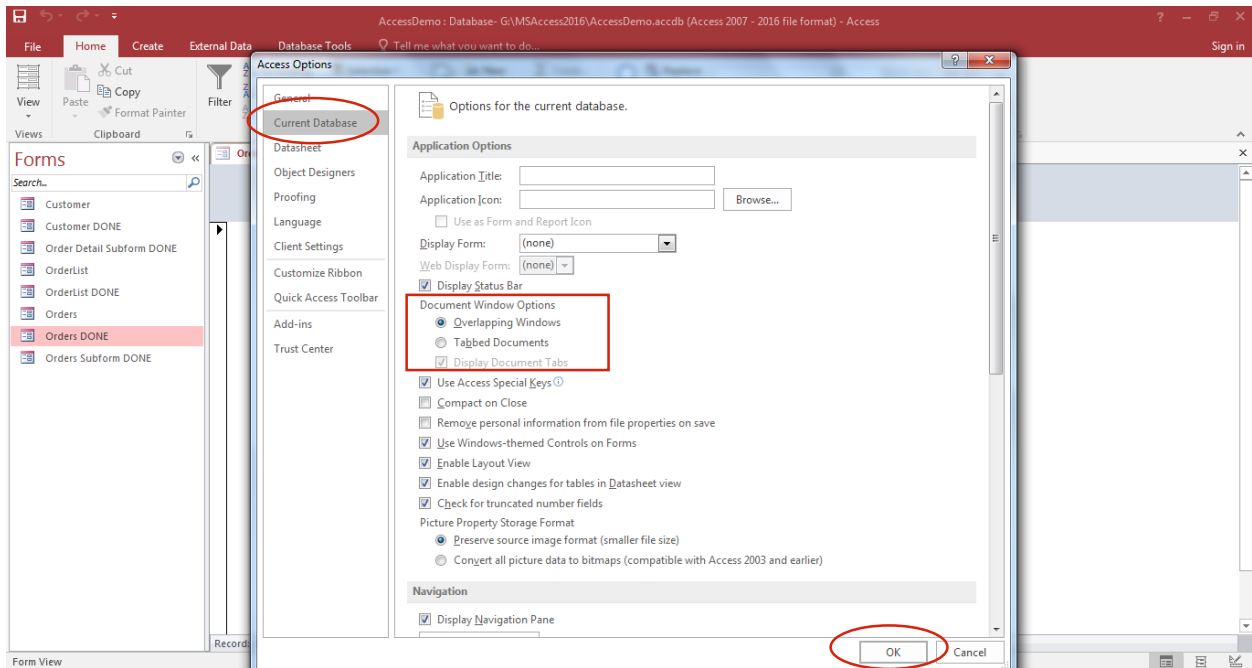
Form View

## Multiple Forms

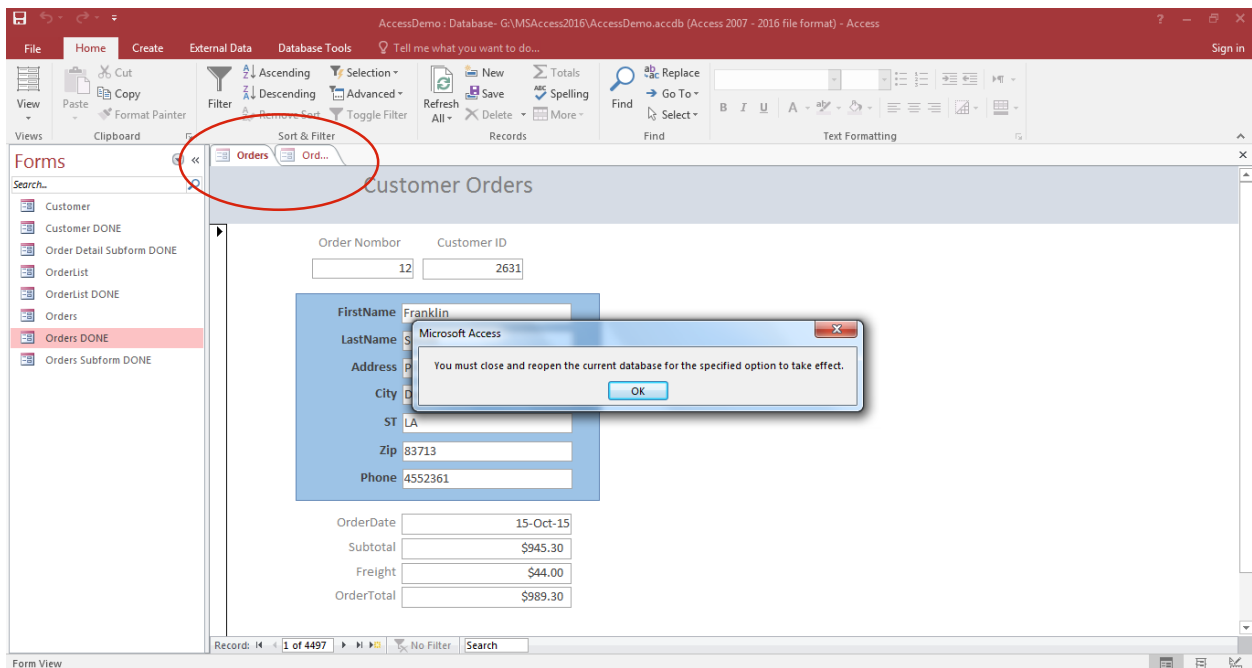
1. Go to [Menu] File
2. Click Option



3. Click Current Database
4. Select Overlapping Windows
5. Click OK



6. Reopen database



Access

File Home Create External Data Database Tools Tell me what you want to do... Sign in

View Paste Copy Cut Format Painter Filter Ascending Descending Selection Advanced Refresh Save Spelling Find Replace Go To Select Size to Fit Form Windows Text Formatting

Forms

Search...

- Customer
- Customer DONE
- Order Detail Subform DONE
- OrderList
- OrderList DONE
- Orders**
- Orders DONE
- Orders Subform DONE

Orders

Customer Orders

Order Nombor Customer ID

FirstName Franklin  
 LastName Smith  
 Address PO BOX 1762  
 City Dubois  
 ST LA  
 Zip 83713  
 Phone 4552361

OrderDate 15-Oct-15

Subtotal \$945.30

Freight \$44.00

OrderTotal \$989.30

Record: 1 of 4497 No Filter Search

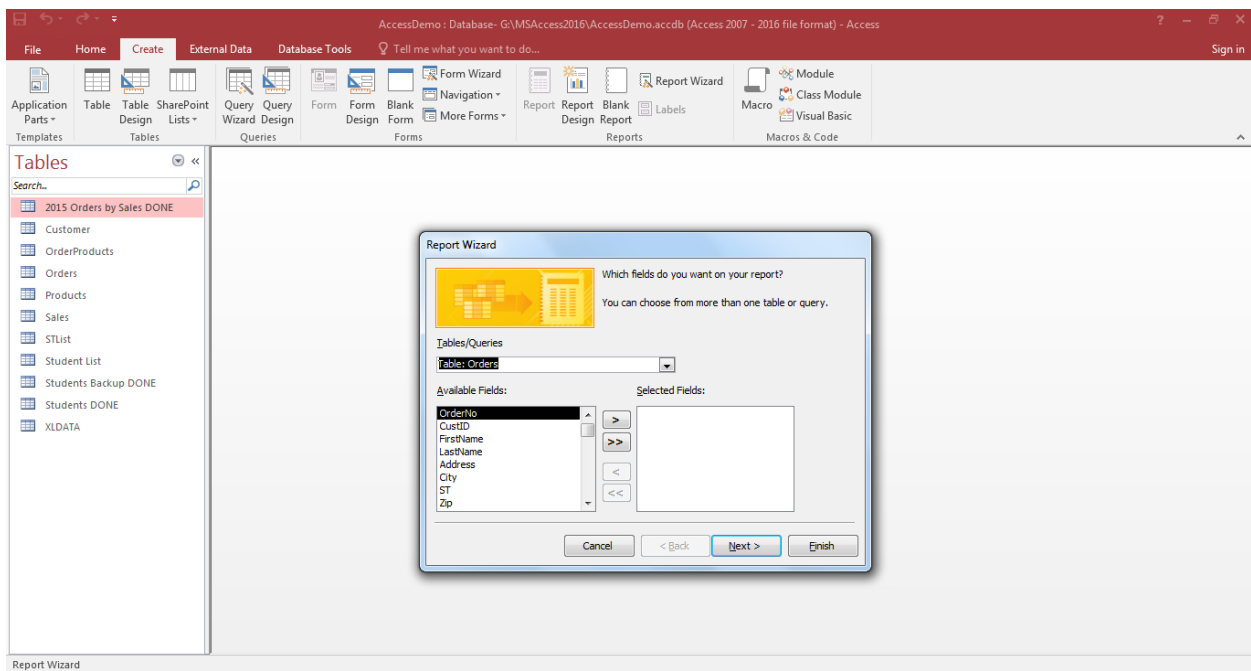
Form View

## 3.4. REPORTS

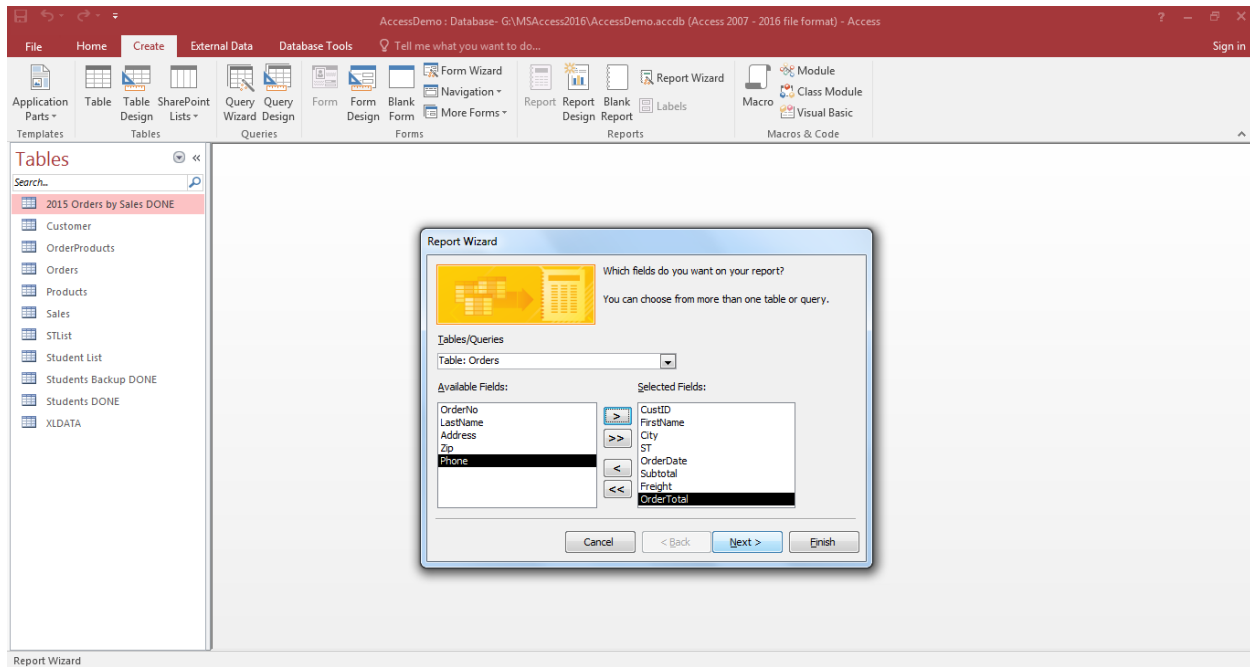
**i** **Reports** give you the ability to present components of your database in an easy-to-read, printable format. Access lets you create reports from both **tables** and **queries**.

### Basic report

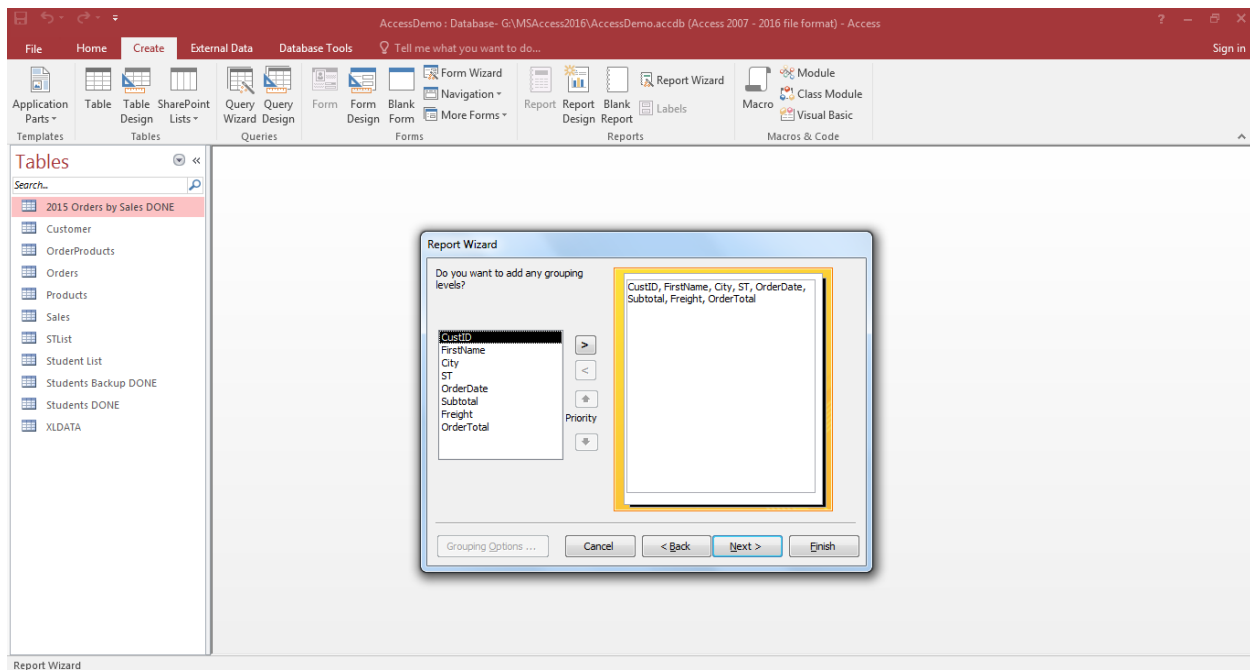
1. Open sample database
2. Click [Menu] Create
3. Click [Button] Report Wizard
4. Select Table: Orders



5. Select Available Fields
6. Click Next

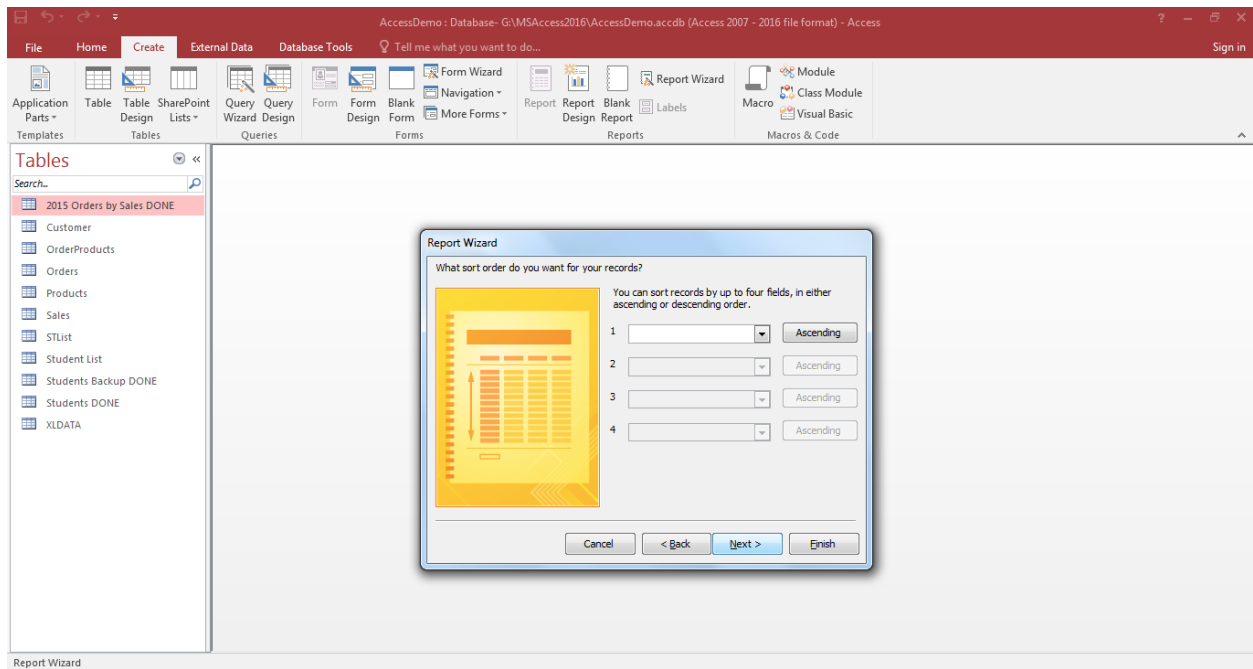


7. Click Next

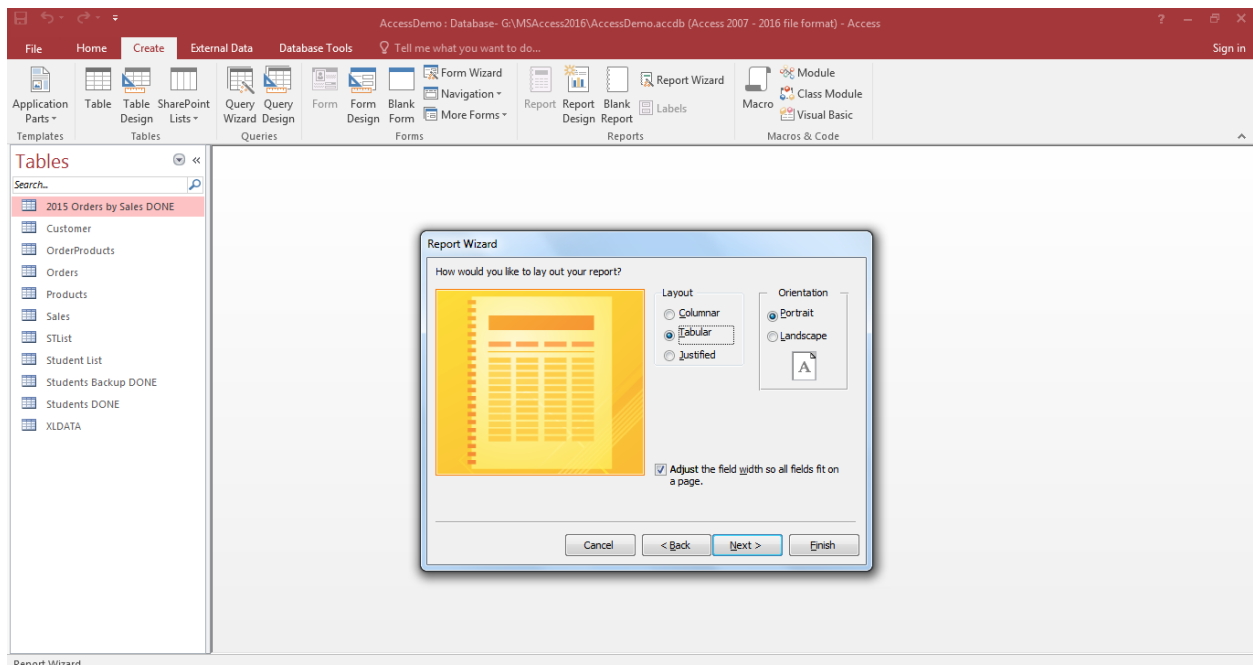




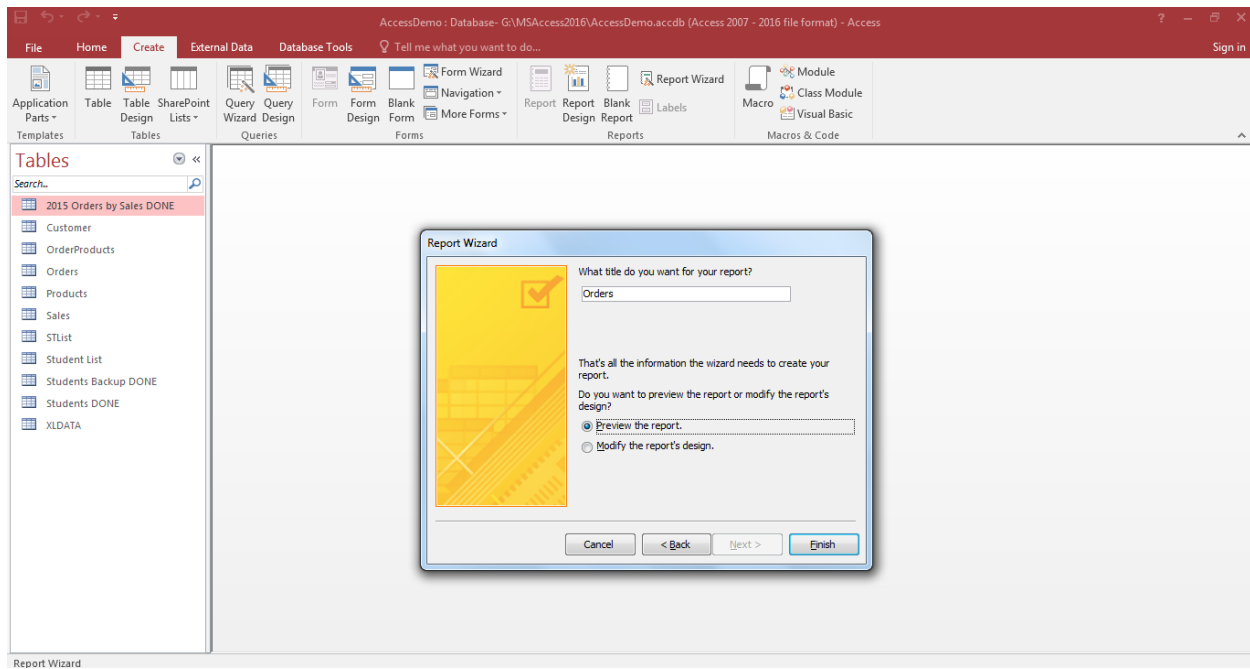
## 8. Click Next



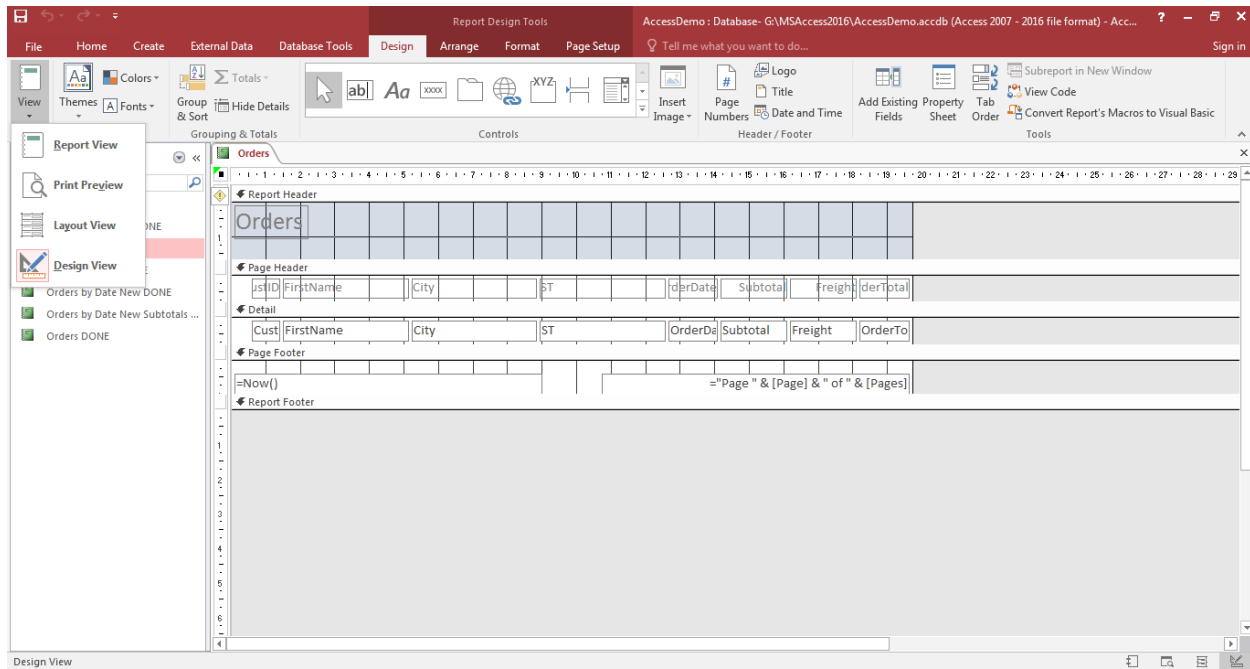
## 9. Click Next

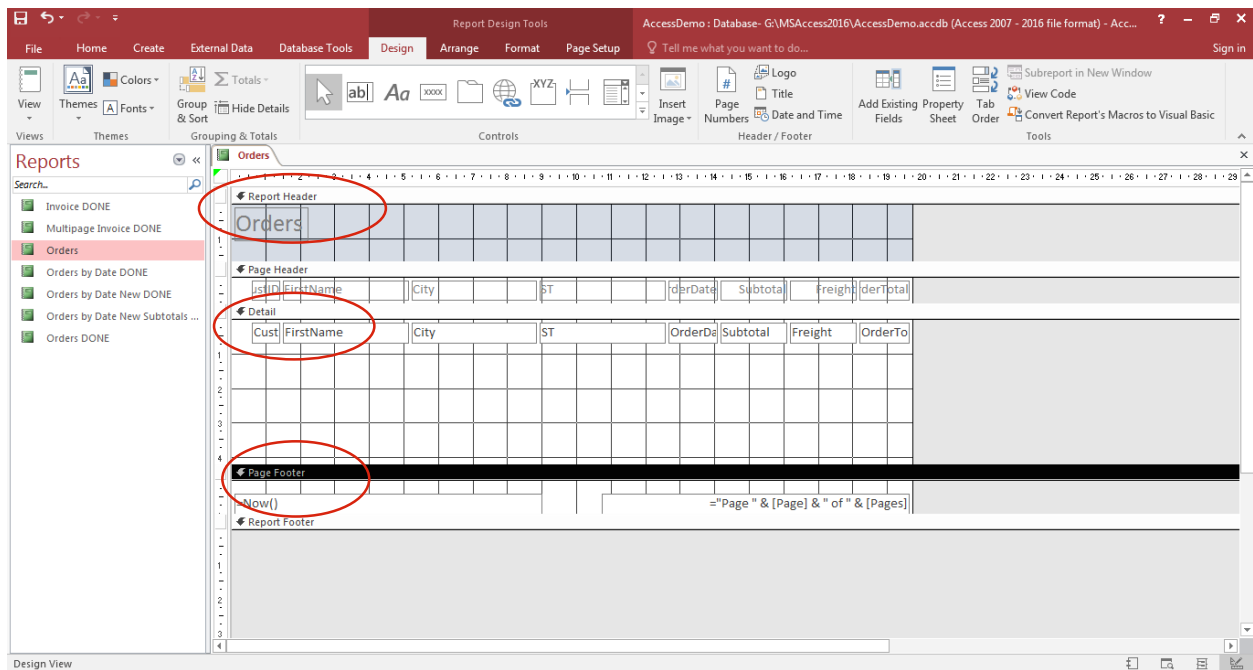


## 10. Click Finish



## 11. Switch to [Button] Design View





**i** **Report Header** appears once at the beginning of the report.

**i** **Detail** is an area that shows what one record looks like.

**i** **Report Footer** appears once at the end of the report.

