



COMPUTER PRACTICALS

—

LAB RECORD

BY

Name of the Student: _____

HALL-TICKET NO:

1	4	0	1	2	3	6	7	2			
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AL-QURMOSHI

Institute Of Business Management

(Affiliated to OSMANIA UNIVERSITY, HYDERABAD - 500007)



Al-Qurmoshi Institute of Business Management

(Approved by AICTE, Affiliated to Osmania University)

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CERTIFICATE

This is to certify that

Mr./Ms. _____

bearing HALL-TICKET NO: 1401-23-672-__ studying
MBA I-Semester for the academic year 2023-24 has
done *Computer Practicals-Lab work* as a part of MBA
curriculum.

Signature of the Internal Examiner

Signature of the External examiner

Principal

MASTER OF BUSINESS ADMINISTRATION (MBA) SYLLABUS

SEMESTER-I

PAPER CODE – MB 106

Course: ITAM COMPUTER PRATICAL

Unit – I: MICROSOFT EXCEL:

Microsoft Excel: Introduction to Excel, Introduction to data, Cell address, Cell reference; Excel Data Types; Introduction to formatting, number, text and date formatting; Concept of worksheet and workbook; Understanding formulas, Operators in Excel; Understanding Common Excel Functions such as sum, average, min, max, date, transpose, In, And, Or, Square Root, Power, Upper, Lower; Introduction to charts and different types of charts; Concept of print area, margins, header, footer and other page setup options.

Advance Excel: Creating Pivot tables, Macros - Relative & Absolute Macros.

Unit – II: MICROSOFT ACCESS:

Creating a database and tables by different methods - Data types - Inserting and Modification of Data - Sorting, Filtering and Displaying data; Creating and querying forms; Creating & Printing Reports and labels.

Unit – III: DBMS:

Macros – Functions of a DBMS, Transfer of data between Excel & Access; SQL Queries in Access.

Suggested Books

1. David Whigham, "Business Data Analysis Using Excel", Oxford University Press, Indian Edition.
2. Paul Cornell, "Accessing & Analyzing DATA with MS-EXCEL".
3. R & D, "IT Tools and Applications", Macmillan India Ltd.
4. Sanjay Saxena, "A First Course in Computers - Based on Windows Office XP", Second Edition - Vikas Publishing House.
5. P.Sudharsan & J.Jeyaalan, "Computers Systems & Applications", Jaico Student Edition - Jaico Publishing House.
6. D.P.Apte, "Statistical Tools for Managers- Using MS Excel", Excel Books

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Microsoft **Excel**

1. Create the following worksheet in Excel.


RNO	NAME	COMPUTER	MATHS	SCIENCE	TOTAL
531	Mike	57	67	86	
532	Jones	43	78	89	
533	Chris	23	68	57	
534	Shin	56	89	78	
535	York	54	78	67	

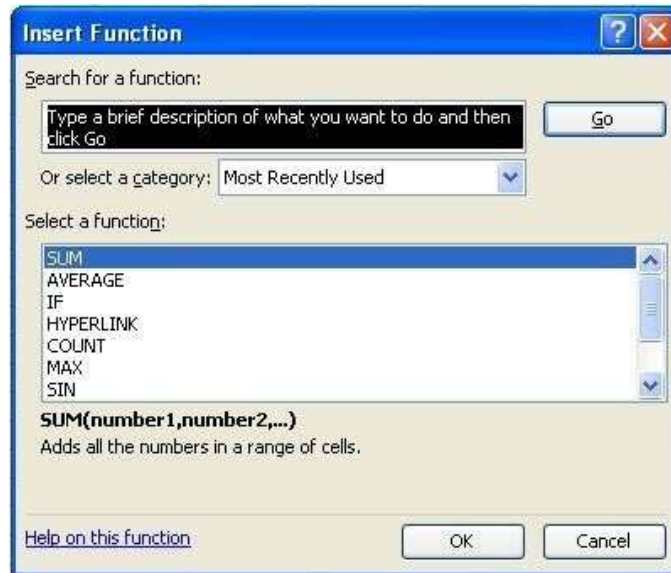
- Fill the TOTAL column.
- Filter the candidate whose ROLLNO > 532
- Filter the candidate whose MATHS > 70.

-
- Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
 - Select cell B3, type the column headings through G3. Highlight and make them in **Bold** with center alignment.
 - Fill the table with given data for name, computer, maths and science marks.

	A	B	C	D	E	F	G
1							
2							
3		RNO	NAME	COMPUTER	MATHS	SCIENCE	TOTAL
4		531	Mike	57	67	86	
5		532	Jones	43	78	89	
6		533	Chris	23	68	57	
7		534	Shin	56	89	78	
8		535	York	54	78	67	

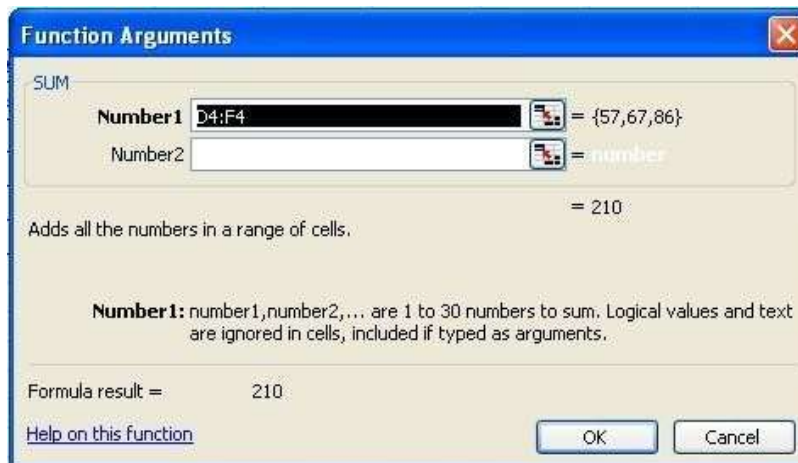
To Fill the TOTAL column:

- Select cell G3, click on function button . Insert function dialog box appears.



Sum function is already selected, click on OK button.

5. Function Arguments dialog box appears:



6. Select the range D4:F4 in Number1 textbox and click on OK button. Now formula bar will contain a new formula in the G4 cell =SUM (D4:F4)

7. Now click on  button to get the sum.

	A	B	C	D	E	F	G
1							
2							
3		RNO	NAME	COMPUTER	MATHS	SCIENCE	TOTAL
4		531	Mike	57	67	86	210
5		532	Jones	43	78	89	
6		533	Chris	23	68	57	
7		534	Shin	56	89	78	
8		535	York	54	78	67	

- Select the G4 cell. Take the cursor to the bottom-right corner to get a plus symbol. Hold it and drag down to autofill the rest of the cells in the column.

	A	B	C	D	E	F	G
1							
2							
3		RNO	NAME	COMPUTER	MATHS	SCIENCE	TOTAL
4		531	Mike	57	67	86	210
5		532	Jones	43	78	89	210
6		533	Chris	23	68	57	148
7		534	Shin	56	89	78	223
8		535	York	54	78	67	199

To filter the candidates whose ROLLNO > 532

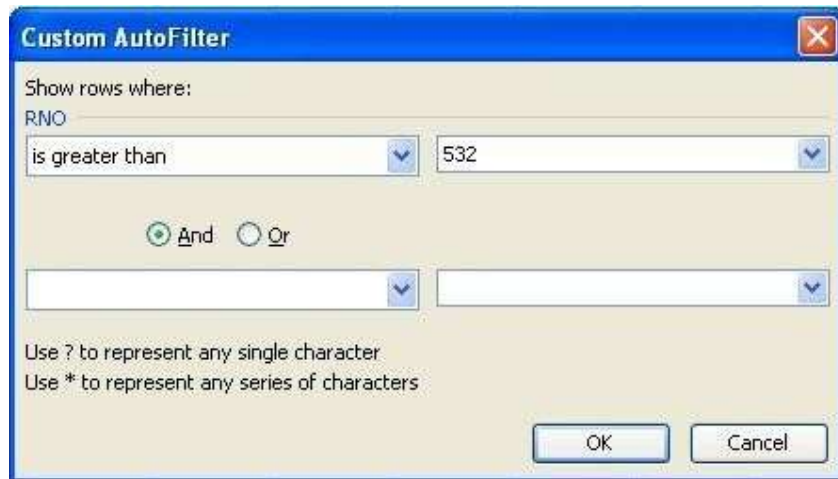
- Select the complete table. Go to Data menu-> Filter-> AutoFilter. After applying AutoFilter to the table, it looks like this:

	A	B	C	D	E	F	G
1							
2							
3		RNO ▼	NAME ▼	COMPUTER ▼	MATHS ▼	SCIENCE ▼	TOTAL ▼
4		531	Mike	57	67	86	210
5		532	Jones	43	78	89	210
6		533	Chris	23	68	57	148
7		534	Shin	56	89	78	223
8		535	York	54	78	67	199
9							

- Select the drop-down menu from RNO column and click **(Custom...)**

	A	B	C	D	E	F	G
1							
2							
3		RNO ▼	NAME ▼	COMPUTER ▼	MATHS ▼	SCIENCE ▼	TOTAL ▼
4	Sort Ascending		Mike	57	67	86	210
5	Sort Descending		Jones	43	78	89	210
6	(All)		Chris	23	68	57	148
7	(Top 10...)		Shin	56	89	78	223
8	(Custom...)		York	54	78	67	199
9	531						
10	532						
11	533						
12	534						
13	535						

Custom AutoFilter dialog box appears.



11. In RNO select **is greater than** from left box and **532** from right box. Click on OK button.
12. The following output is generated that show rows where RNO is greater than 532.

	A	B	C	D	E	F	G
1							
2							
3		RNO ▼	NAME ▼	COMPUTER ▼	MATHS ▼	SCIENCE ▼	TOTAL ▼
6		533	Chris	23	68	57	148
7		534	Shin	56	89	78	223
8		535	York	54	78	67	199
9							

To filter the candidate whose MATHS > 70

13. Now remove filters by deselecting Data->Filter->AutoFilter.
14. Again select the complete table. Go to Data->Filter->AutoFilter.
15. In the similar manner Filter the rows where Maths is greater than 70

	A	B	C	D	E	F	G
1							
2							
3		RNO ▼	NAME ▼	COMPUTER ▼	MATHS ▼	SCIENCE ▼	TOTAL ▼
5		532	Jones	43	78	89	210
7		534	Shin	56	89	78	223
8		535	York	54	78	67	199
9							

2. The following are the marks obtained by the students of MBA in three Subjects:

Roll No	Name	ME	IT	HRM
1014	Joe	86	95	88
1015	Clark	45	37	68
1012	Nice	75	87	57
1011	Green	65	74	85
1013	Nick	78	67	46

- Sort the data by roll no
- Using Conditional Formatting list out students who scored More than 65 in IT
- Using Conditional Formatting list out students who scored Between 60 and 80 in HRM.

-
- Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
 - Select cell B3, type the column headings through F3. Highlight and make them in **Bold** with center alignment.
 - Fill the table with given data for name, ME, IT and HRM.

To Sort data by Roll No

- Select the entire table. Go to Data->Sort... A new Sort dialog box appears. Roll No in Ascending order is already selected.

	A	B	C	D	E	F
1						
2						
3		Roll No	Name	ME	IT	HRM
4		1014	Joe	86	95	88
5		1015	Clark	45	37	68
6		1012	Nice	75	87	57
7		1011	Green	65	74	85
8		1013	Nick	78	67	46



- Click OK to get the data sorted in Ascending order of Roll No.

	A	B	C	D	E	F
1						
2						
3		Roll No	Name	ME	IT	HRM
4		1011	Green	65	74	85
5		1012	Nice	75	87	57
6		1013	Nick	78	67	46
7		1014	Joe	86	95	88
8		1015	Clark	45	37	68

To use Conditional Formatting to list out students who scored More than 65 in IT:

- Select the range E4 to E8 for IT subject.
- Go to Format-> Conditional Formatting; Conditional Formatting Dialog box appears.
- In Condition1, Select **Cell Value Is** in the First combo box, **Greater than** in Second combo box and type 65 in third combo box.
- Now Click Format... button down, Format Cells dialog box appears; select formatting of your choice.

The screenshot shows two dialog boxes overlaid on an Excel spreadsheet. The 'Conditional Formatting' dialog box is open, showing 'Condition 1' with the criteria 'Cell Value Is greater than 65'. The 'Format...' button is visible. The 'Format Cells' dialog box is also open, showing the 'Font' tab with 'Bold' selected in the 'Font style' list and a yellow color selected in the 'Color' dropdown. The background spreadsheet has columns labeled 'Roll No', 'Name', 'ME', 'IT', and 'HRM' with data for students 1011 through 1015.

Roll No	Name	ME	IT	HRM
1011	Green	65	74	85
1012	Nice	75	87	57
1013	Nick	78	67	46
1014	Joe	86	95	88
1015	Clark	45	37	68

10. Click OK to apply formatting. Click OK to apply condition.

	A	B	C	D	E	F
1						
2						
3		Roll No	Name	ME	IT	HRM
4		1011	Green	65	74	85
5		1012	Nice	75	87	57
6		1013	Nick	78	67	46
7		1014	Joe	86	95	88
8		1015	Clark	45	37	68

To Use Conditional Formatting to list out students who scored Between 60 and 80 in HRM.

11. Select the range F4 to F8 for HRM subject.
12. Go to Format-> Conditional Formatting; Conditional Formatting Dialog box appears.
13. In Condition1, Select **Call Value Is** in the First combo box, select **Between** in Second combo box, type 60 in third combo box and type 80 in the Fourth combo box.

14. Now Click Format... button down, Format Cells dialog box appears; select formatting of your choice.

The image shows two overlapping dialog boxes in an Excel spreadsheet. The background spreadsheet has columns A-F and rows 1-23. Rows 4-8 contain data for 'Roll No', 'Name', 'ME', 'IT', and 'HRM'. The 'IT' column values are 74, 87, 67, 95, and 37. The 'Conditional Formatting' dialog box is open, showing 'Condition 1' with 'Cell Value Is between 60 and 80'. The 'Format Cells' dialog box is also open, showing the 'Font' tab with 'Bold' font style and 'Red' color selected. The 'Preview' section shows 'AaBbCcYyZz' in bold red font.

15. Click OK to apply formatting. Click OK to apply condition.

	A	B	C	D	E	F
1						
2						
3		Roll No	Name	ME	IT	HRM
4		1011	Green	65	74	85
5		1012	Nice	75	87	57
6		1013	Nick	78	67	46
7		1014	Joe	86	95	88
8		1015	Clark	45	37	68

3. Calculate HRA, DA, IT, PF, Gross Salary, Net Salary from given data in a worksheet:

ENO	ENAME	Basic Pay	HRA	DA	Gross Pay	IT	PF	Net Pay
E101	Harry	10000						
E102	Bright	18000						
E103	Sunny	20000						
E104	John	10000						
E105	Mink	19000						

Where

House Rental Allowance HRA is 15% of Basic
 Depreciation Allowance DA is 13% of Basic
 Income Tax IT is 5% of Basic
 Provident Fund PF is 9% of Basic

Gross Pay = Basic Pay + HRA + DA
 Net Pay = Gross Pay - IT – PF

1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Select cell B3, type the column headings through J3. Highlight and make them in **Bold** with center alignment.
3. Fill the table with given data for ENO, ENAME, and Basic Pay.

	A	B	C	D	E	F	G	H	I	J
1										
2										
3		ENO	ENAME	Basic Pay	HRA	DA	Gross Pay	IT	PF	Net Pay
4		E101	Harry	10000						
5		E102	Bright	18000						
6		E103	Sunny	20000						
7		E104	John	10000						
8		E105	Mink	19000						
9										

4. Select cell E4; type =15*D4/100 and hit enter button. 15% of Basic is calculated as HRA in the E4 cell.
5. Again select E4 cell; take cursor to the bottom right corner of the cell till it becomes + hold and drag down to copy the formula to the rest of the rows.
6. Select cell F4; type =13*D4/100 and hit enter button. 13% of Basic is calculated as DA in the F4 cell.
7. Again select F4 cell; take cursor to the bottom right corner of the cell till it becomes + hold and drag down to copy the formula to the rest of the rows.
8. Select cell G4; type =D4+E4+F4 and hit enter button. Sum of Basic, HRA and DA is calculated as Gross Pay in the G4 cell.

9. Again select G4 cell; take cursor to the bottom right corner of the cell till it becomes + hold and drag down to copy the formula to the rest of the rows.
10. Select cell H4; type =5*D4/100 and hit enter button. 5% of Basic is calculated as IT in the H4 cell.
11. Again select H4 cell; take cursor to the bottom right corner of the cell till it becomes + hold and drag down to copy the formula to the rest of the rows.
12. Select cell I4; type =9*D4/100 and hit enter button. 9% of Basic is calculated as PF in the I4 cell.
13. Again select I4 cell; take cursor to the bottom right corner of the cell till it becomes + hold and drag down to copy the formula to the rest of the rows.
14. Now the final report after calculation is like this:

	A	B	C	D	E	F	G	H	I	J
1										
2										
3		ENO	ENAME	Basic Pay	HRA	DA	Gross Pay	IT	PF	Net Pay
4		E101	Harry	10000	1500	1300	12800	500	900	11400
5		E102	Bright	18000	2700	2340	23040	900	1620	20520
6		E103	Sunny	20000	3000	2600	25600	1000	1800	22800
7		E104	John	10000	1500	1300	12800	500	900	11400
8		E105	Mink	19000	2850	2470	24320	950	1710	21660

4. Prepare Pivot Table.

Employee Name	Department	Salary Rs.
A	Sales	4000
B	Accounts	5000
C	Marketing	6000
D	Sales	4000
E	Accounts	8000
F	Marketing	4000

1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Select cell B3, type the column headings through D3. Highlight and make them in **Bold** with center alignment.
3. Fill the table with given data for Employee Name, Department, and Salary Rs.

	A	B	C	D
1				
2				
3		Employee Name	Department	Salary Rs.
4		A	Sales	3000
5		B	Accounts	4000
6		C	Marketing	5000
7		D	Sales	6000
8		E	Accounts	4000
9		F	Marketing	8000

4. Select the complete table go to Data menu, select "PivotTable and PivotChart Report".



5. A PivotTable wizard should appear.



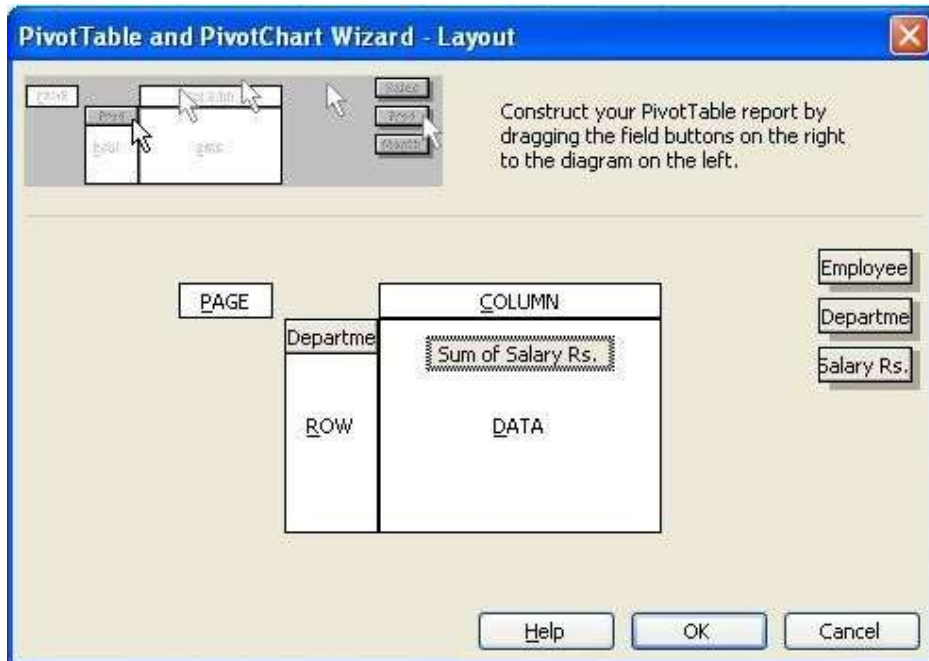
6. Make sure that the "Microsoft Excel list or database" and "PivotTable" options are chosen. Click on the Next button.



7. Select the range of data for the pivot table and click on the Next button.



8. Select the position to create the new pivot table. It will automatically default to the cell that was highlighted when you started this process. Click on the Layout button.
9. Now drag the fields that you want to appear in the Page, Row, Column, and Data sections of the pivot table. In this example, we've dragged the Department field to the Row section and the Salary Rs. to the Data section.
10. Click on the OK button to continue.



11. Now click on the Finish button.



12. Your pivot table should now appear on new sheet. What this pivot table displays is the total Salary for each Department.

	A	B
1		
2		
3	Sum of Salary Rs.	
4	Department	Total
5	Accounts	8000
6	Marketing	13000
7	Sales	9000
8	Grand Total	30000
9		

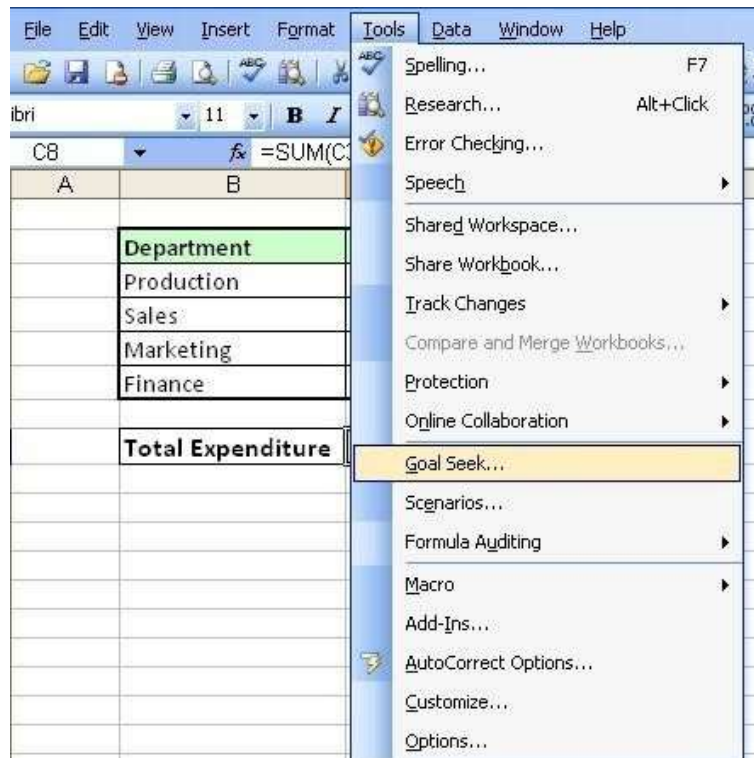
- From the table given below, reduce the total expenditure to Rs.16000 by reducing sales department's Expenditure by applying Goal seek.

Department	Expenditure Rs.
Production	4000
Sales	6000
Marketing	3000
Finance	5000
Total Expenditure	18000

- Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
- Select cell B3, type the column headings through C3. Highlight and make them in **Bold** with center alignment.
- Fill the table with given data for Department and Expenditure Rs.

	A	B	C
1			
2		Department	Expenditure Rs.
3		Production	4000
4		Sales	6000
5		Marketing	3000
6		Finance	5000
7			
8		Total Expenditure	18000
9			

- Calculate the total expenditure by adding up all departments expenditure in cell C8
=Sum(C3:C6)
- Select cell C8, Go to Tools-> Goal Seek...



6. Set Cell already contains C8.
7. Type 16000 in To Value box as we've to set Total Expenditure (C8) to 16000
8. By Changing Cell Sales Expenditure ie C4



9. Click OK
10. Goal Seek status is displayed. Observe Sales Expenditure ie C4 is adjusted to 4000 to get Total expenditure 16000

	A	B	C	D
1				
2		Department	Expenditure Rs.	
3		Production	4000	
4		Sales	4000	
5		Marketing	3000	
6		Finance	5000	
7				
8		Total Expenditure	16000	
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

Goal Seek Status

Goal Seeking with Cell C8
found a solution.

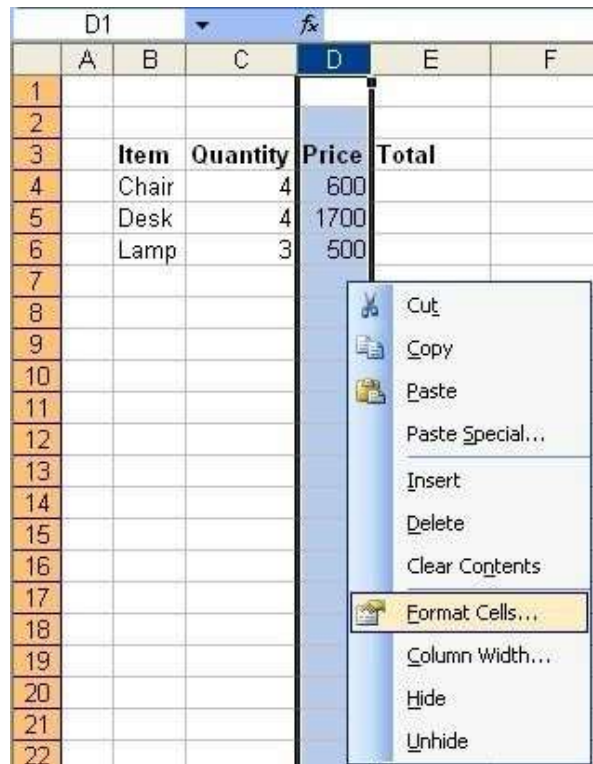
Target value: 16000
Current value: 16000

OK
Cancel
Step
Pause

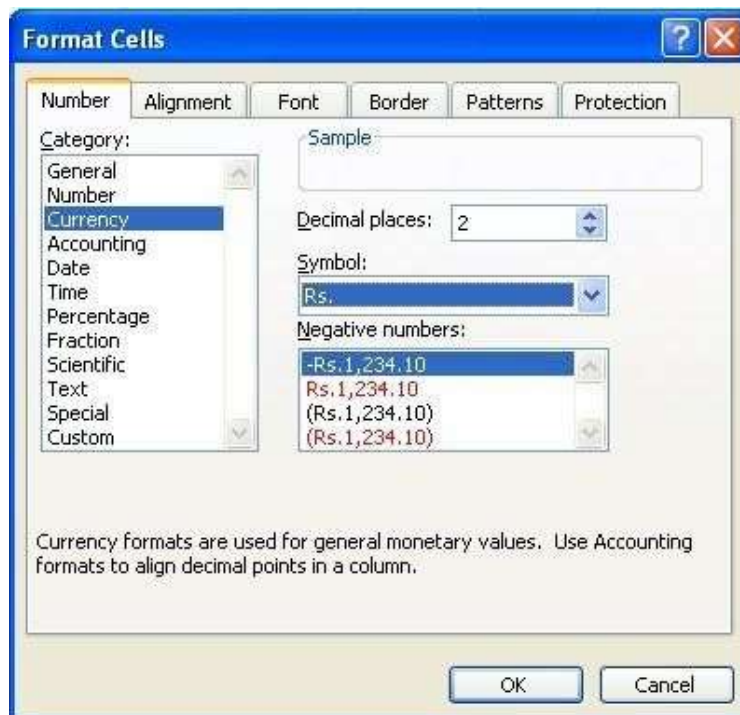
6. Create an excel worksheet to demonstrate absolute and relative cell referencing using the following table:

Item	Quantity	Price	Total
Chair	4	Rs. 600	
Desk	4	Rs. 1700	
Lamp	3	Rs. 500	

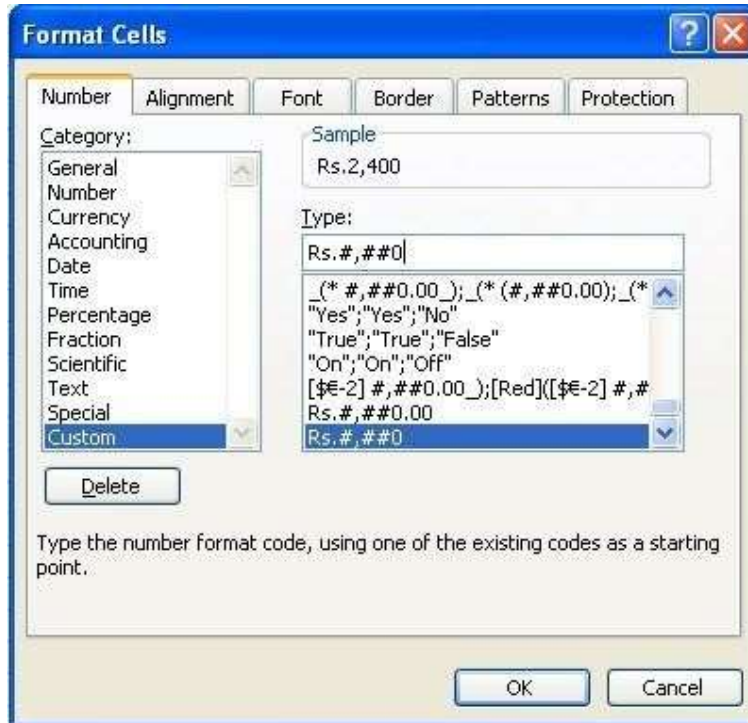
1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Select cell B3, type the column headings through E3. Highlight and make them in **Bold** with center alignment.
3. Fill the table with given data for Item, Quantity, and Price.



4. To prefix the price with Rs. Tag, Right click on the price column, go to Format Cells...
5. Select Currency from **Category:** list box. On the right side select Rs. from combo box in **Symbol:** (if you don't see Rs. in the box then change your Regional settings in the Control Panel)



- In the **Category:** List box, select Custom and type currency format as Rs.,##0



- Click OK.

	A	B	C	D	E
1					
2					
3		Item	Quantity	Price	Total
4		Chair	4	Rs.600	
5		Desk	4	Rs.1,700	
6		Lamp	3	Rs.500	

Relative Reference

- Select cell E4 and calculate the amount by multiplying quantity and price i.e.,
=C4*D4

	A	B	C	D	E
1					
2					
3		Item	Quantity	Price	Total
4		Chair	4	Rs.600	Rs.2,400
5		Desk	4	Rs.1,700	
6		Lamp	3	Rs.500	

9. Drag down the result in the E4 cell to the rest of the rows.

	A	B	C	D	E
1					
2					
3		Item	Quantity	Price	Total
4		Chair	4	Rs.600	Rs.2,400
5		Desk	4	Rs.1,700	Rs.6,800
6		Lamp	3	Rs.500	Rs.1,500

10. Here in E5 the formula is copied as

=C5*D5

11. Similarly E6 contains the formula

=C6*D6

This is called relative referencing where the row and column references change when you copy the formula to another cell because the references are actually offsets from the current row and column.

Absolute Reference

12. Assume that the Sales tax is applied on the items purchased. Then we need to calculate a fixed sales tax on every item purchased.
13. For this we use absolute referencing which allows us to calculate sales tax in the right way.
14. Assume that the Sales tax is 10%

	A	B	C	D	E	F
1						
2						
3		Item	Quantity	Price	Sales Tax	Total
4		Chair	4	Rs.600		
5		Desk	4	Rs.1,700		
6		Lamp	3	Rs.500		
7						
8						
9		Sales Tax	10%			

15. Sales Tax column is calculated as

Quantity * Price * Sales Tax

16. For this select cell E4, type

=C4*D4*\$C\$9

	E4	=C4*D4*\$C\$9				
	A	B	C	D	E	F
1						
2						
3		Item	Quantity	Price	Sales Tax	Total
4		Chair	4	Rs.600	Rs.240	
5		Desk	4	Rs.1,700		
6		Lamp	3	Rs.500		
7						
8						
9		Sales Tax	10%			

17. Drag down the result to copy the formula

	A	B	C	D	E	F
1						
2						
3		Item	Quantity	Price	Sales Tax	Total
4		Chair	4	Rs.600	Rs.240	
5		Desk	4	Rs.1,700	Rs.680	
6		Lamp	3	Rs.500	Rs.150	
7						
8						
9		Sales Tax	10%			

18. Observe you'll in cell E5 formula is
=C5*D5*\$C\$9

19. And cell E6 contains formula
=C6*D6*\$C\$9

Here the use of \$ before row and column name makes it absolute i.e., the row and column references do not change when you copy the formula because the reference is to an actual cell address. This is called absolute referencing.

20. Now calculate Total column which is calculated as
Quantity * Price + Sales Tax

21. Select cell F4, type formula
=C4*D4+E4

	F4	fx =C4*D4+E4				
	A	B	C	D	E	F
1						
2						
3		Item	Quantity	Price	Sales Tax	Total
4		Chair	4	Rs.600	Rs.240	Rs.2,640
5		Desk	4	Rs.1,700	Rs.680	
6		Lamp	3	Rs.500	Rs.150	
7						
8						
9		Sales Tax	10%			

Drag down the result in the F4 cell to the rest of the rows. This is relative referencing. Calculation of Sales Tax column is done using the absolute reference method.

	A	B	C	D	E	F
1						
2						
3		Item	Quantity	Price	Sales Tax	Total
4		Chair	4	Rs.600	Rs.240	Rs.2,640
5		Desk	4	Rs.1,700	Rs.680	Rs.7,480
6		Lamp	3	Rs.500	Rs.150	Rs.1,650
7						
8						
9		Sales Tax	10%			

7. Create an excel worksheet to demonstrate the use of mixed referencing with multiplication table.

1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Select cell B3, type the column headings through L3. Highlight and make them in **Bold**.
3. Similarly, select cell B4, type row headings through B13. Highlight & make them in **Bold**.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3		*	1	2	3	4	5	6	7	8	9	10
4		1										
5		2										
6		3										
7		4										
8		5										
9		6										
10		7										
11		8										
12		9										
13		10										
14												

Mixed References

- To create a multiplication table we make use of mixed references. The formulas in the table calculate the multiplication for number 1 to 10. The formula in cell C4 is $=\$B4*C\3

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3		*	1	2	3	4	5	6	7	8	9	10
4		1	1									
5		2										
6		3										
7		4										
8		5										
9		6										
10		7										
11		8										
12		9										
13		10										
14												

- Notice that both cell references are mixed. The reference to cell B4 uses an absolute reference for the column ($\$B$), and the reference to cell C3 uses an absolute reference for the row ($\$3$).
- As a result, this formula from cell C4 can be copied down and across, and the calculations will be correct.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3		*	1	2	3	4	5	6	7	8	9	10
4		1	1	2	3	4	5	6	7	8	9	10
5		2	2	4	6	8	10	12	14	16	18	20
6		3	3	6	9	12	15	18	21	24	27	30
7		4	4	8	12	16	20	24	28	32	36	40
8		5	5	10	15	20	25	30	35	40	45	50
9		6	6	12	18	24	30	36	42	48	54	60
10		7	7	14	21	28	35	42	49	56	63	70
11		8	8	16	24	32	40	48	56	64	72	80
12		9	9	18	27	36	45	54	63	72	81	90
13		10	10	20	30	40	50	60	70	80	90	100
14												

7. For example, the formula in cell F7 is
 $=\$B7*F\3

If C4 used either absolute or relative references, copying the formula would produce incorrect results.

Formula where either the row or column reference is relative, and the other is absolute is called mixed referencing.

8. **Create an excel worksheet with the data as follows:**

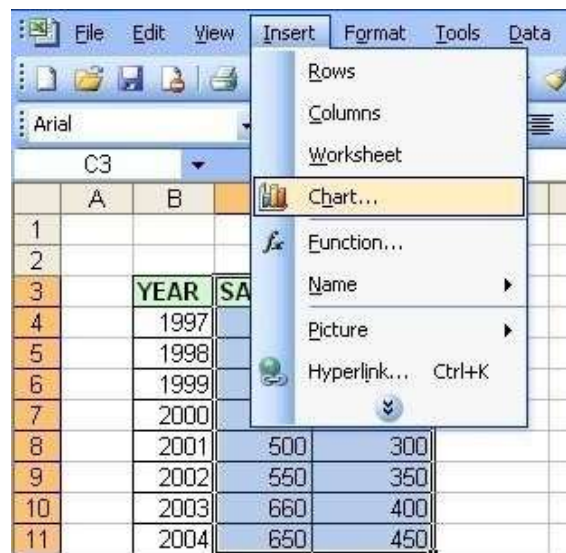
AMOUNT IN CRORES		
YEAR	SALES	EXPENSE
1997	250	100
1998	300	150
1999	350	200
2000	430	250
2001	500	300
2002	550	350
2003	600	400
2004	650	450

Use the above table to create Column Chart

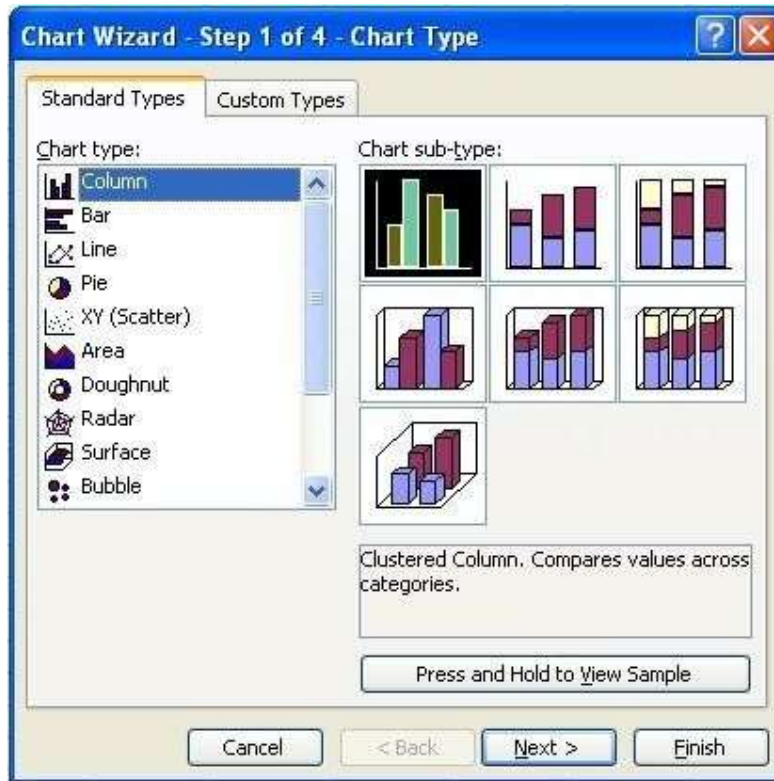
-
1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
 2. Select cell B3, type the column headings through D3. Highlight and make them in **Bold**.
 3. Fill the table with given data for Year, Sales, and Expense.

	A	B	C	D
1				
2				
3		YEAR	SALES	EXPENSE
4		1997	250	110
5		1998	300	150
6		1999	350	200
7		2000	430	250
8		2001	500	300
9		2002	550	350
10		2003	660	400
11		2004	650	450
12				


4. Select the cells C3 to D11, go to **Insert** menu select **Chart...** option



5. On the Chart Wizard Step 1 of 4, in the Chart Type list box, click Column. In the Chart Sub-type list, click the first chart: Clustered Column



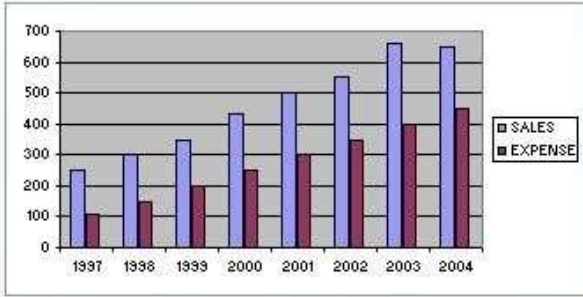
6. Click Next
7. In the Chart Wizard Step 2 of 4, make sure the Columns radio button is selected.

8. In the Chart Wizard Step 2 of 4, select Series tab, in the Category (X) axis labels, select column from B4:B11 by clicking on the  button.

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3		YEAR	SALES	EXPENSE							
4		1997	250	110							
5		1998	300	150							
6		1999	350	200							
7		2000	430	250							
8		2001	500	300							
9		2002	550	350							
10		2003	660	400							
11		2004	650	450							
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											

Source Data

Data Range Series



Series

SALES
EXPENSE

Name: =8!\$C\$3

Values: =8!\$C\$4:\$C\$11

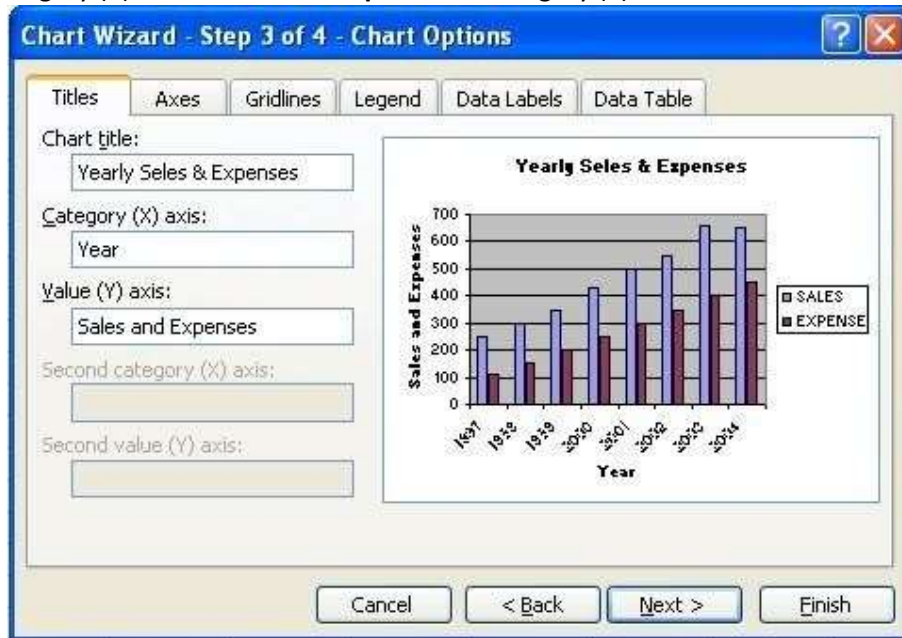
Add Remove

Category (X) axis labels: =8!\$B\$4:\$B\$11

Cancel < Back Next > Finish

9. Click Next

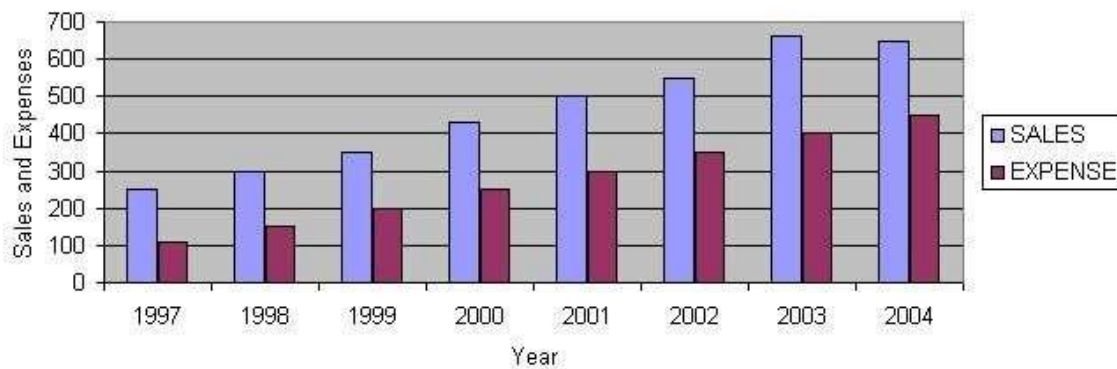
10. In the Chart Wizard Step 3 of 4, Type **Yearly Sales & Expenses** as Chart Title, **Year** in Category (X) axis and **Sales & Expenses** in Category (Y) axis. Click Next



11. In step 4 of 4, click Finish

YEAR	SALES	EXPENSE
1997	250	110
1998	300	150
1999	350	200
2000	430	250
2001	500	300
2002	550	350
2003	660	400
2004	650	450

Yearly Seles & Expenses



9. Create an excel worksheet with the data as follows for Life Expectancy at birth:

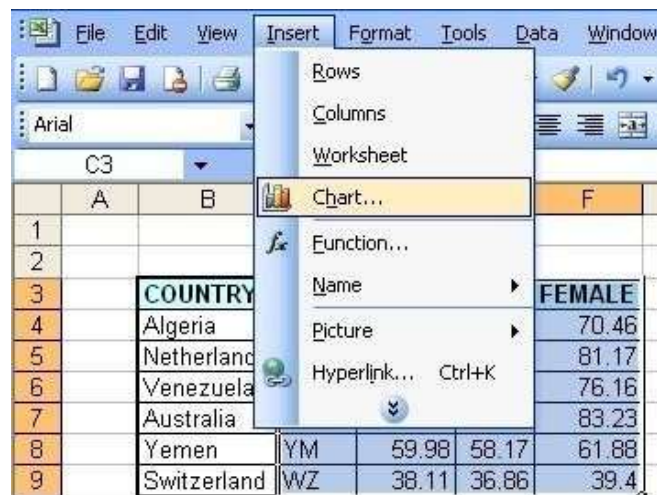
COUNTRY	CODE	TOTAL	MALE	FEMALE
Algeria	AG	69.24	68.97	70.46
Netherlands	NL	78.15	75.28	81.17
Venezuela	VE	72.95	69.97	76.16
Australia	AS	80.14	77.22	83.23
Yemen	YM	59.98	58.17	61.88
Switzerland	WZ	38.11	36.86	39.4

Use the above table to create Bar Chart

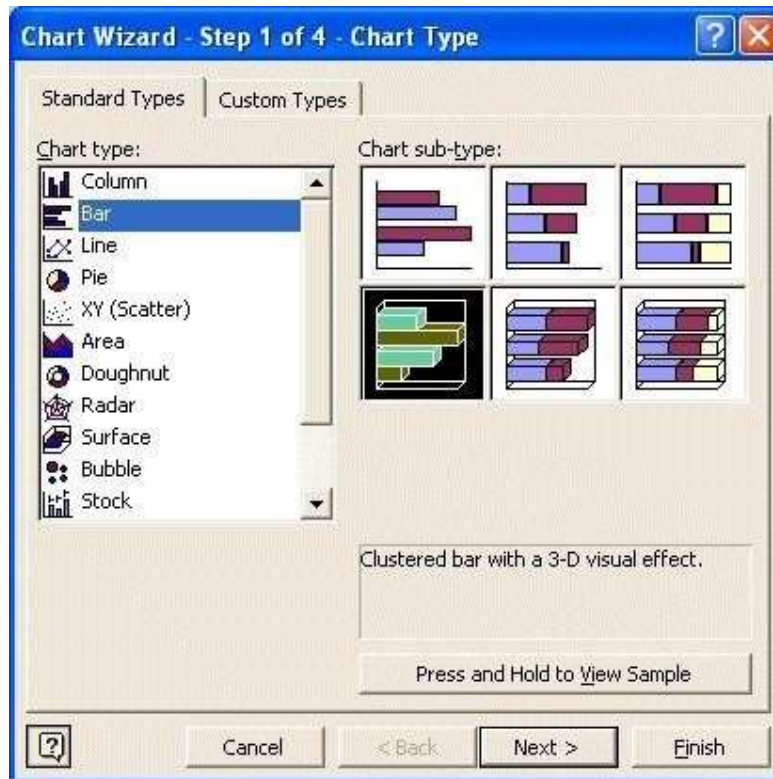
1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Select cell B3, type the column headings through D3. Highlight and make them in **Bold**.
3. Fill the table with given data for Country, Code, Total, Male and Female.

	A	B	C	D	E	F
1						
2						
3		COUNTRY	CODE	TOTAL	MALE	FEMALE
4		Algeria	AG	69.24	68.97	70.46
5		Netherlands	NL	78.15	75.28	81.17
6		Venezuela	VE	72.95	69.97	76.16
7		Australia	AS	80.14	77.22	83.23
8		Yemen	YM	59.98	58.17	61.88
9		Switzerland	WZ	38.11	36.86	39.4

4. Select the cells D3 to F9, go to **Insert** menu select **Chart...** option

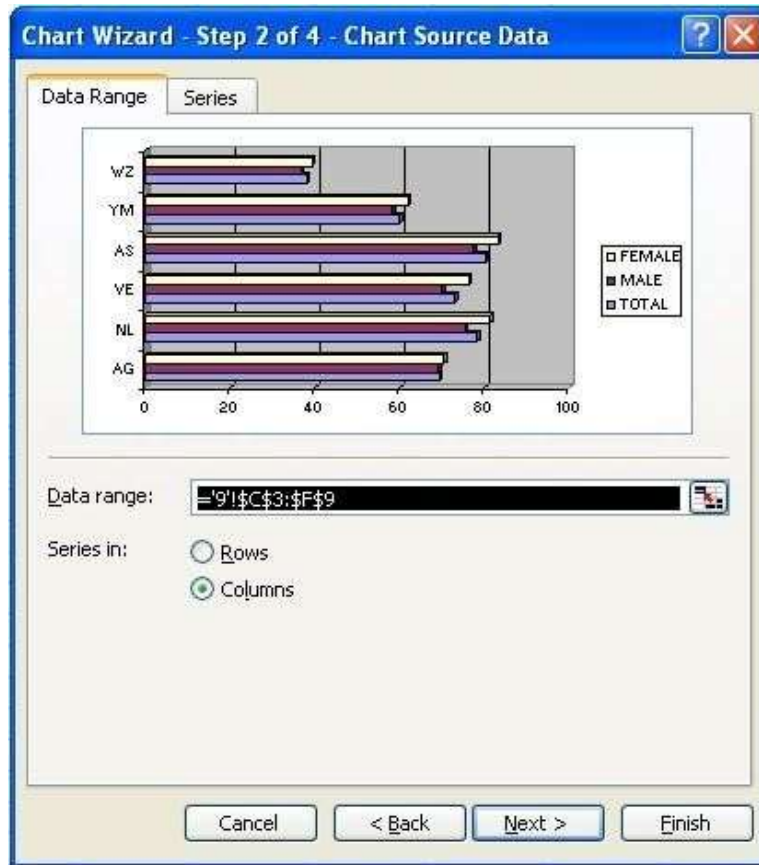


5. On the Chart Wizard Step 1 of 4, in the Chart Type list box, click Bar. In the Chart Sub-type list, click the chart on 1st column, 2nd row: Clustered Bar With 3-D Visual Effect

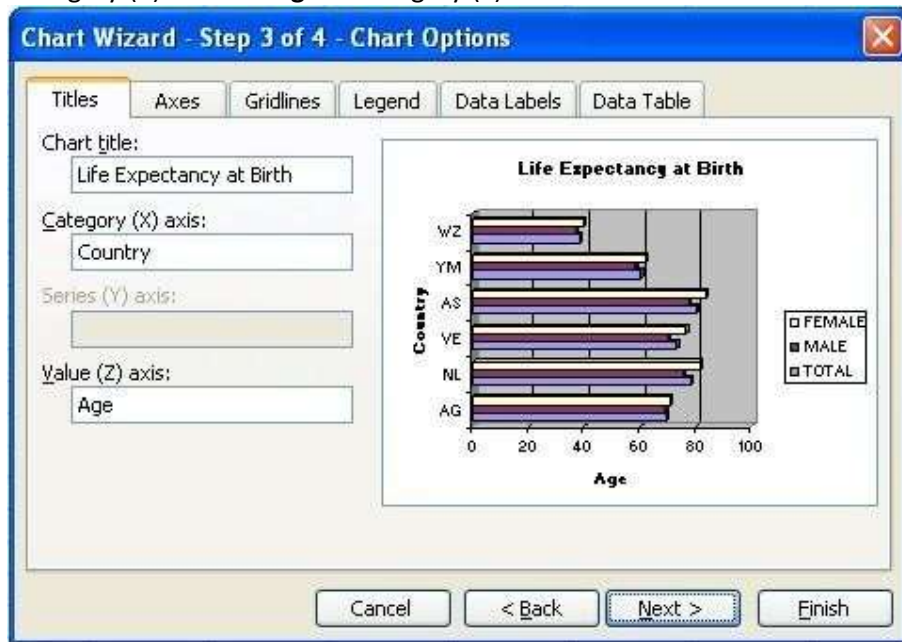


6. Click Next

7. In the Chart Wizard Step 2 of 4, make sure the Columns radio button is selected. Click Next

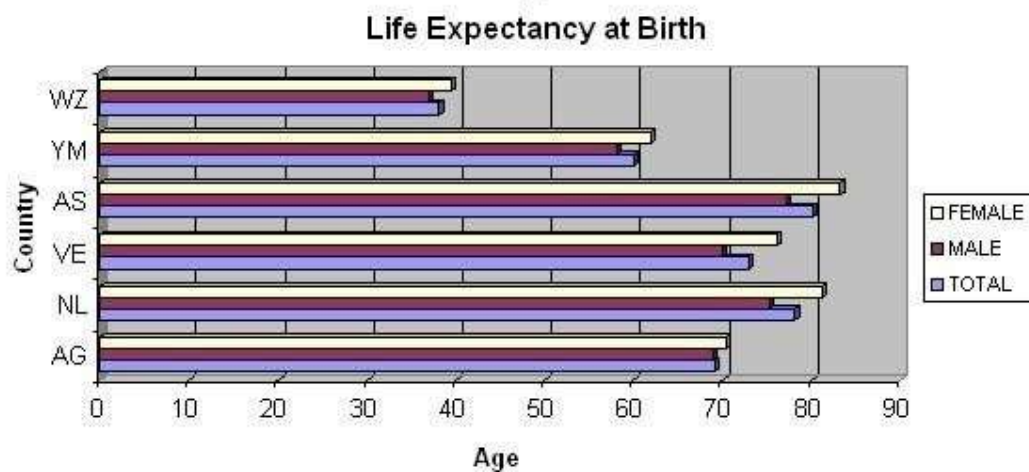


- In the Chart Wizard Step 3 of 4, type **Life Expectancy at Birth** in Chart Title, **Country** in Category (X) axis and **Age** in Category (Z) axis. click Next



- In step 4 of 4, click Finish

COUNTRY	CODE	TOTAL	MALE	FEMALE
Algeria	AG	69.24	68.97	70.46
Netherlands	NL	78.15	75.28	81.17
Venezuela	VE	72.95	69.97	76.16
Australia	AS	80.14	77.22	83.23
Yemen	YM	59.98	58.17	61.88
Switzerland	WZ	38.11	36.86	39.4



10. Create an excel worksheet with the data as follows:

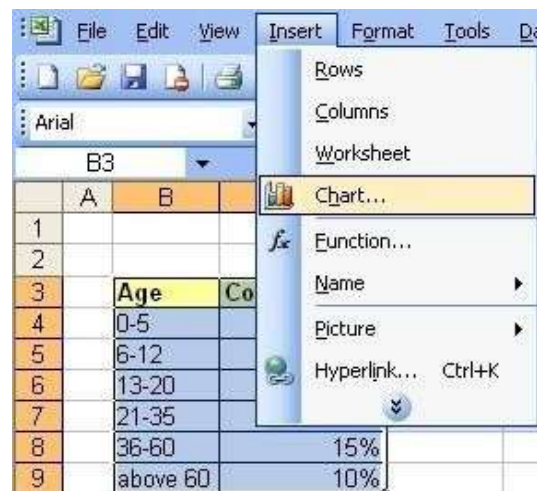
Age	Consumption
0-5	5%
6-12	15%
13-20	25%
21-35	30 %
36-60	15%
above 60	10%

Use the above table to create Column Chart

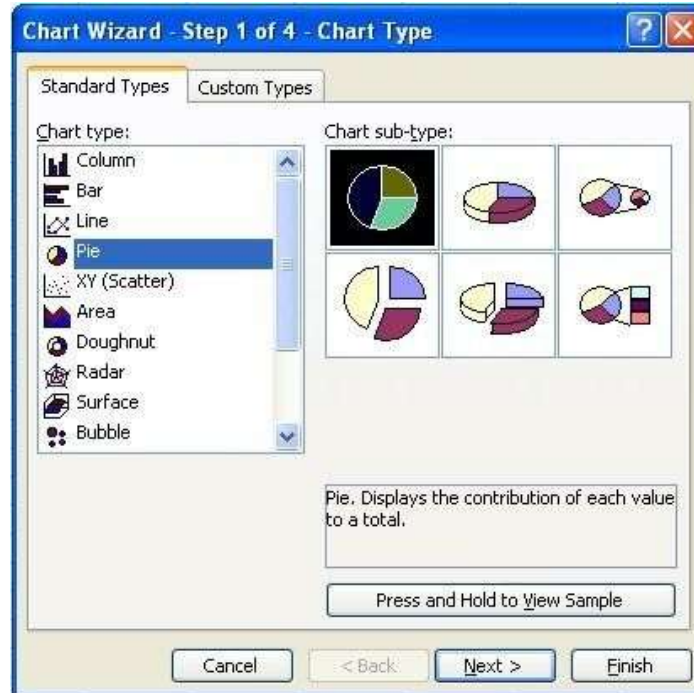
1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Select cell B3, type the column headings through C3. Highlight and make them in **Bold**.
3. Fill the table with given data for Age, and Consumption.

	A	B	C
1			
2			
3		Age	Consumption
4		0-5	5%
5		6-12	15%
6		13-20	25%
7		21-35	30%
8		36-60	15%
9		above 60	10%

4. Select the complete table, go to **Insert** menu select **Chart...** option



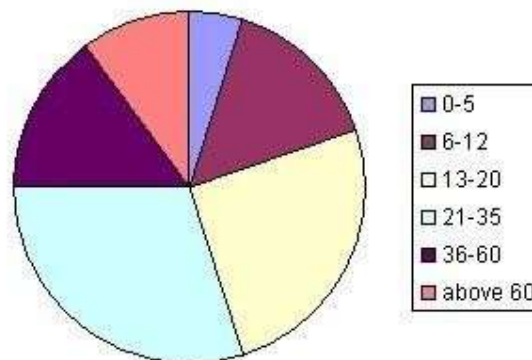
- In the Chart Wizard Step 1 of 4, in the Chart Type list box, click Pie. In the Chart Sub-type list, click the first. Click Next



- In the Chart Wizard Step 2 of 4, make sure the Columns radio button is selected. Click Next
- In the Chart Wizard Step 3 of 4, click Next
- In step 4 of 4, click Finish

Age	Consumption
0-5	5%
6-12	15%
13-20	25%
21-35	30%
36-60	15%
above 60	10%

Consumption

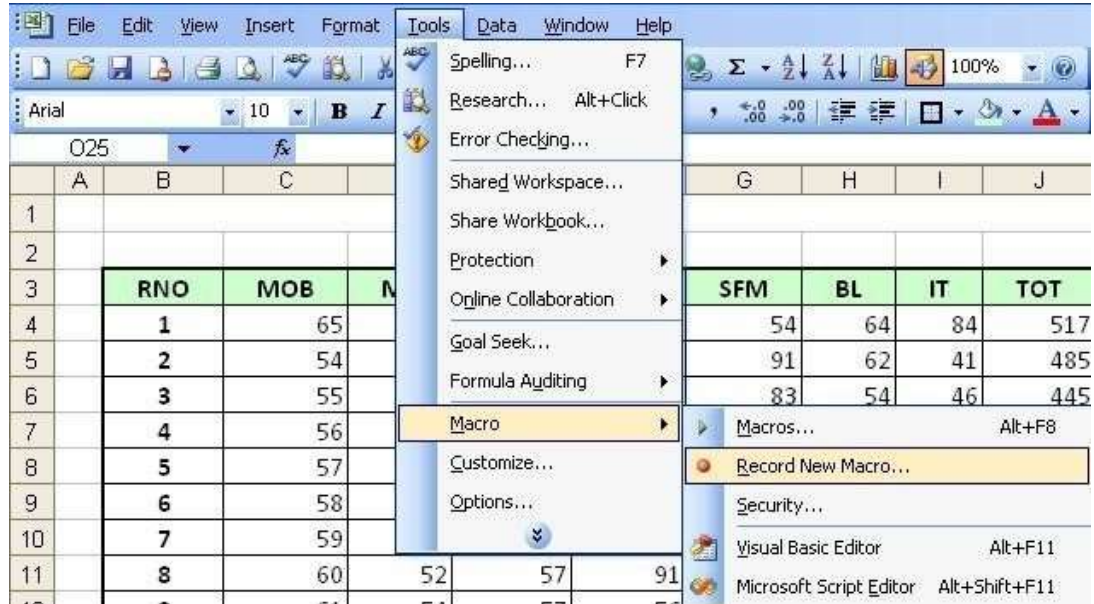


11. Create an excel worksheet to demonstrate macros.

1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Select cell B3, type the column headings through J3. Highlight and make them in **Bold** with center alignment.
3. Fill the table with sample data for RNO, MOB, ME AFM, MM, SFM, BL, IT and calculate the Total.

	A	B	C	D	E	F	G	H	I	J	K
1		MARKS LIST									
2											
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT	
4		1	65	98	65	87	54	64	84	517	
5		2	54	80	84	73	91	62	41	485	
6		3	55	62	69	76	83	54	46	445	
7		4	56	44	85	79	67	55	51	437	
8		5	57	46	53	82	40	56	56	390	
9		6	58	48	75	85	64	74	61	465	
10		7	59	50	75	88	65	45	66	448	

4. From the **Tools** menu, point to **Macro** and click on **Record New Macro**.



5. From the **Record Macro** dialog box displayed, enter a name for the macro in the **Macro name:** text box as Toppers and assign a shortcut key t (ctrl+t).

	A	B	C	D	E	F	G	H	I	J
1		MARKS LIST								
2										
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT
4		1	65	98	65	87	54	64	84	517
5		2						62	41	485
6		3						54	46	445
7		4						55	51	437
8		5						56	56	390
9		6						74	61	465
10		7						45	66	448
11		8						85	71	482
12		9						65	76	436
13		10						44	81	440
14		11						64	86	447

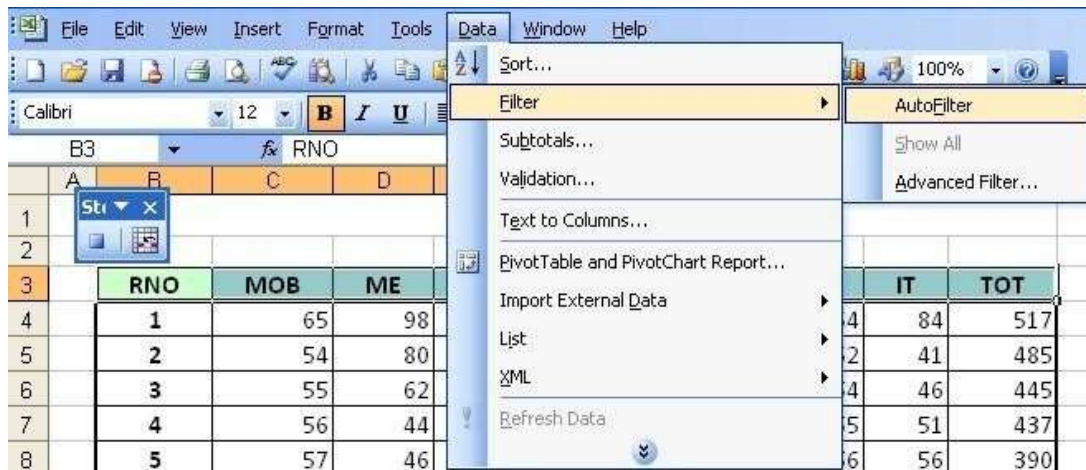
Record Macro

Macro name:

Shortcut key: Store macro in:

Description:

6. The default description is displayed in the **Description:** text box, and contains the date and user name. If required, change it.
7. To begin recording, click **OK**.
8. We will filter top 10 students of the class. For this select header rows, from RNO to TOT then go to Data->Filter-> AutoFilter



9. All the headers are now having small drop down arrows. Click on arrow of TOT field, select Top 10

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

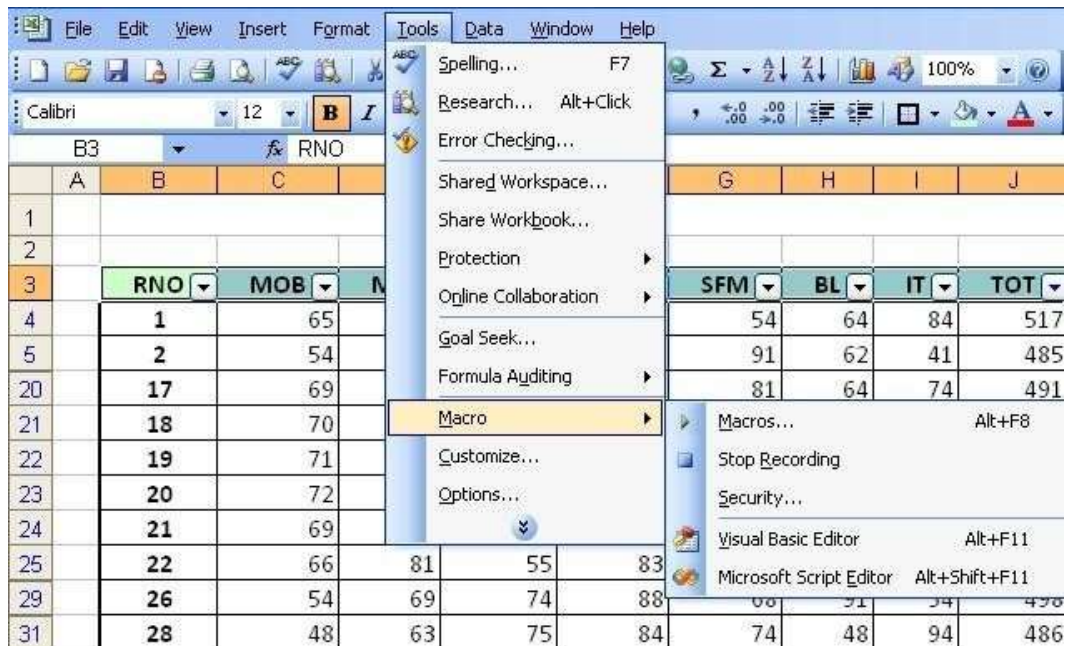
10. TOP 10 AutoFilter dialog box appears, make sure 10 is selected in the second box, click OK.

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

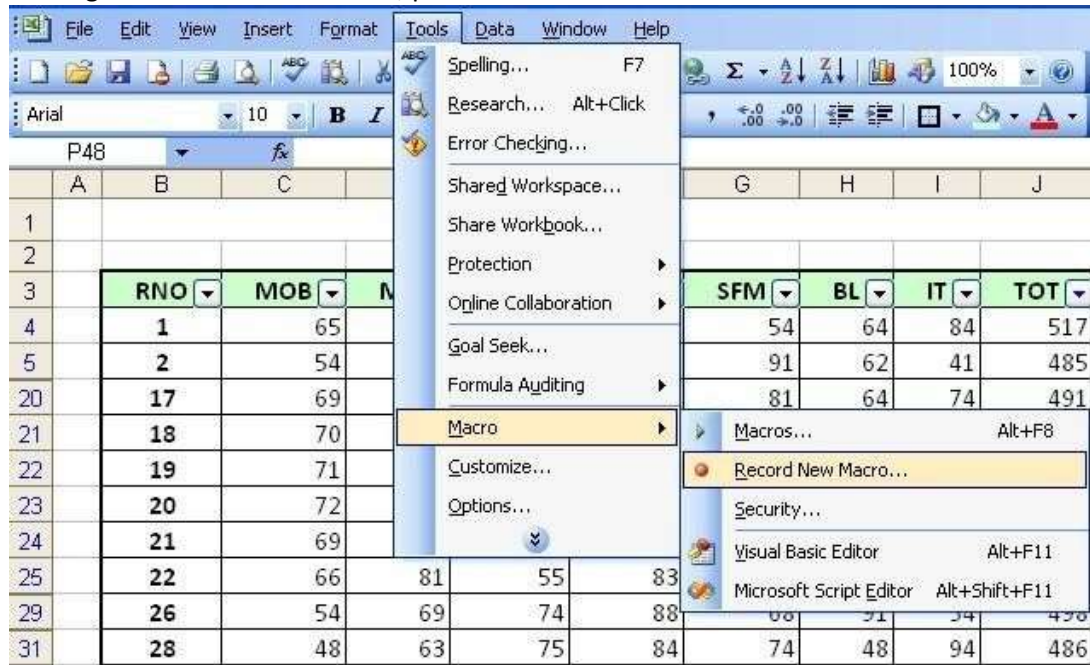
11. You'll get 10 students names who got highest marks in the class.

	A	B	C	D	E	F	G	H	I	J
1	MARKS LIST									
2										
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT
4		1	65	98	65	87	54	64	84	517
5		2	54	80	84	73	91	62	41	485
20		17	69	70	70	63	81	64	74	491
21		18	70	45	69	67	83	89	72	495
22		19	71	45	68	71	85	87	70	497
23		20	72	87	67	75	87	63	63	514
24		21	69	84	66	79	44	67	89	498
25		22	66	81	55	83	74	76	64	499
29		26	54	69	74	88	68	91	54	498
31		28	48	63	75	84	74	48	94	486

12. To stop recording, either click the stop button from small menu displayed on the left side of the window or from the **Tools** menu, point to **Macro** and click on **Stop Recording**.



13. Now we'll create a macro that will remove autoFilter and display all content. For this again From the **Tools** menu, point to **Macro** and click on **Record New Macro**

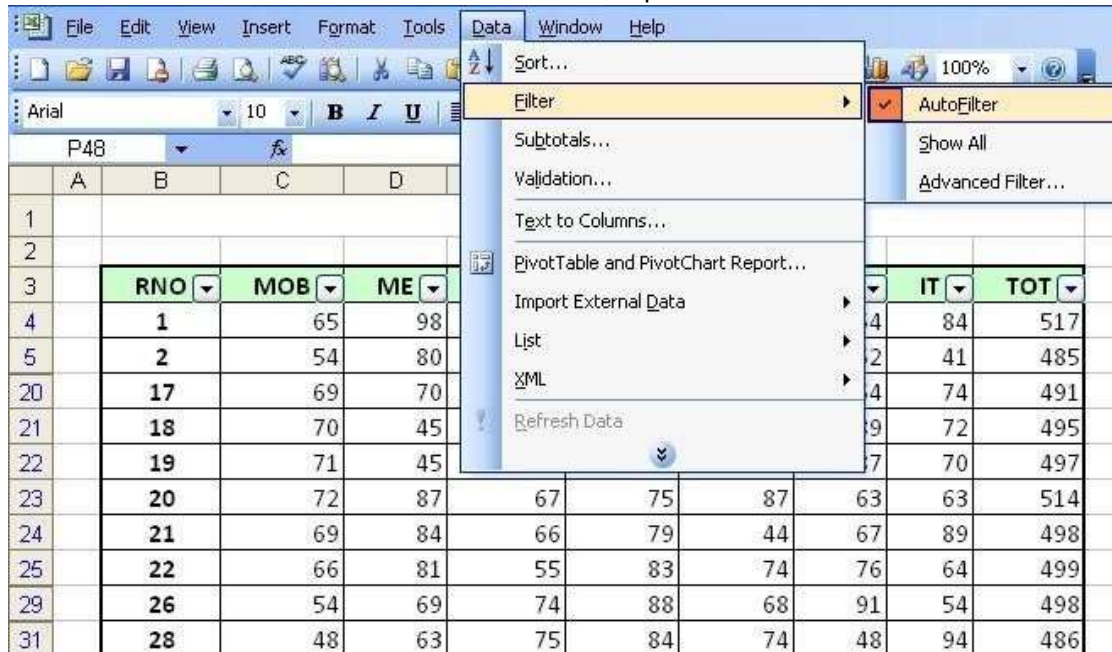


14. From the **Record Macro** dialog box displayed, enter a name for the macro in the **Macro name:** text box as **Stoppers** and assign a shortcut key **p** (ctrl+p).



15. To begin recording, click **OK**.

16. We will stop filtering top 10 students of the class. For this go to Data->Filter->AutoFilter which will deselect the AutoFilter option.



17. To stop recording, from the **Tools** menu, point to **Macro** and click on **Stop Recording**.



18. To create a button and assign an Excel macro to it

19. If the **Forms** toolbar is not displayed, right click on any toolbar that is visible and from the pop-up menu that is displayed select **Forms**.

20. To create a button, click the **Button** icon on the **Forms** toolbar.



21. Then, click and drag the mouse to the intended button size.

22. Rename the button with "Top 10"

23. Right-click on the button corner and select "Assign Macro..."

RNO	MOB	ME	AFM	M	IT	TOT	
1	65	98	65		64	84	517
2	54	80	84		62	41	485
3	55	62	69		54	46	445
4	56	44	85		55	51	437
5	57	46	53		56	56	390
6	58	48	75		74	61	465
7	59	50	75		45	66	448
8	60	52	57		85	71	482

24. The Assign Macro dialog box will be displayed.

RNO	MOB	TOT
1		517
2		485
3		445
4		437
5		390
6		465
7		448
8		482
9		436
10		440
11		447
12		466
13		421
14		458

25. Select the **Toppers** Macro and Click on the **OK** button.

26. Similarly create another button and assign **Stoppers** macro to it and click OK button

27. As a result you'll have two buttons that displays top 10 students and another resets the filter.

	A	B	C	D	E	F	G	H	I	J
1		MARKS LIST								
2				Top 10				Stop		
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT
4		1	65	98	65	87	54	64	84	517
5		2	54	80	84	73	91	62	41	485
6		3	55	62	69	76	83	54	46	445
7		4	56	44	85	79	67	55	51	437
8		5	57	46	53	82	40	56	56	390
9		6	58	48	75	85	64	74	61	465
10		7	59	50	75	88	65	45	66	448
11		8	60	52	57	91	66	85	71	482

To run a macro using the Tools Macro command

- From the **Tools** menu, point to **Macro** and click on **Macros**.
- From the **Macro** dialog box displayed, click on the name of the macro you wish to run in the **Macro name:** list box.
- Click the **Run** button.

To run a macro using the assigned shortcut key

- Press **Ctrl+?**, with ? is the letter which you assigned.

To delete a button

- Click on button and press the **Delete** key.

12. Create the following worksheet in Excel.

RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT	AVG	GRADE	MAX	MIN
1												
2												
3												
4												
5												


- Fill the TOTAL column.
- Fill the AVERAGE column.
- Grade as

If average ≥ 70 , Distinction
 If average ≥ 60 and average < 70 , 1st class
 If average ≥ 50 and average < 60 , 2nd class
 If average ≥ 40 and average < 50 , 3rd class
 Else fail.

- Min
- Max

- Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
- Select cell B3, type the column headings through N3. Highlight and make them in **Bold** with center alignment.
- Fill the table with sample data for marks of MOB, ME, AFM, MM, SFM, BL, and IT.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT	AVG	GRAD	MAX	MIN
4		1	65	98	65	87	54	64	84					
5		2	54	80	84	73	91	62	41					
6		3	55	62	69	76	83	54	46					
7		4	56	44	85	79	67	55	51					
8		5	57	46	53	82	40	56	56					

- Select cell J4, click on  button on formula bar; select **Sum** from Insert Function dialog box. Select cells C4 through I4, select OK the formula will look like

=SUM(C4,D4,E4,F4,G4,H4,I4) or =SUM(C4:I4)

J4		fx =SUM(C4:I4)												
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT	AVG	GRAD	MAX	MIN
4		1	65	98	65	87	54	64	84	517				
5		2	54	80	84	73	91	62	41					
6		3	55	62	69	76	83	54	46					
7		4	56	44	85	79	67	55	51					
8		5	57	46	53	82	40	56	56					

5. Drag down the result to copy function on to other rows
6. Similarly select cell K4 and calculate average as

=AVERAGE (C4,D4,E4,F4,G4,H4,I4) or =AVERAGE(C4:I4) or = J4/7

K4		fx =AVERAGE(C4:I4)												
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT	AVG	GRAD	MAX	MIN
4		1	65	98	65	87	54	64	84	517	73.9			
5		2	54	80	84	73	91	62	41	485				
6		3	55	62	69	76	83	54	46	445				
7		4	56	44	85	79	67	55	51	437				
8		5	57	46	53	82	40	56	56	390				

7. Drag down the result to copy function on to other rows

12. Similarly select cell N4 and calculate minimum marks as

=MIN (C4,D4,E4,F4,G4,H4,I4) or =MIN(C4:I4)

N4														=MIN(C4:I4)
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT	AVG	GRAD	MAX	MIN
4		1	65	98	65	87	54	64	84	517	73.9	Distinction	98	54
5		2	54	80	84	73	91	62	41	485	69.3	First	91	
6		3	55	62	69	76	83	54	46	445	63.6	First	83	
7		4	56	44	85	79	67	55	51	437	62.4	First	85	
8		5	57	46	53	82	40	56	56	390	55.7	Second	82	

13. Drag down the result to copy function on to other rows

14. To add title to it, select cells B1 through N1 and click on **Merge and Center** button from formatting toolbar, Type PROGRESS REPORT, bold the font and increase the font size, the final report can be saved to disk or printed.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	PROGRESS REPORT													
2														
3		RNO	MOB	ME	AFM	MM	SFM	BL	IT	TOT	AVG	GRAD	MAX	MIN
4		1	65	98	65	87	54	64	84	517	73.9	Distinction	98	54
5		2	54	80	84	73	91	62	41	485	69.3	First	91	41
6		3	55	62	69	76	83	54	46	445	63.6	First	83	46
7		4	56	44	85	79	67	55	51	437	62.4	First	85	44
8		5	57	46	53	82	40	56	56	390	55.7	Second	82	40

13. Calculate the mean, median, and mode from the following data of marks obtained by 10 students. Also demonstrate how to transpose rows into columns.

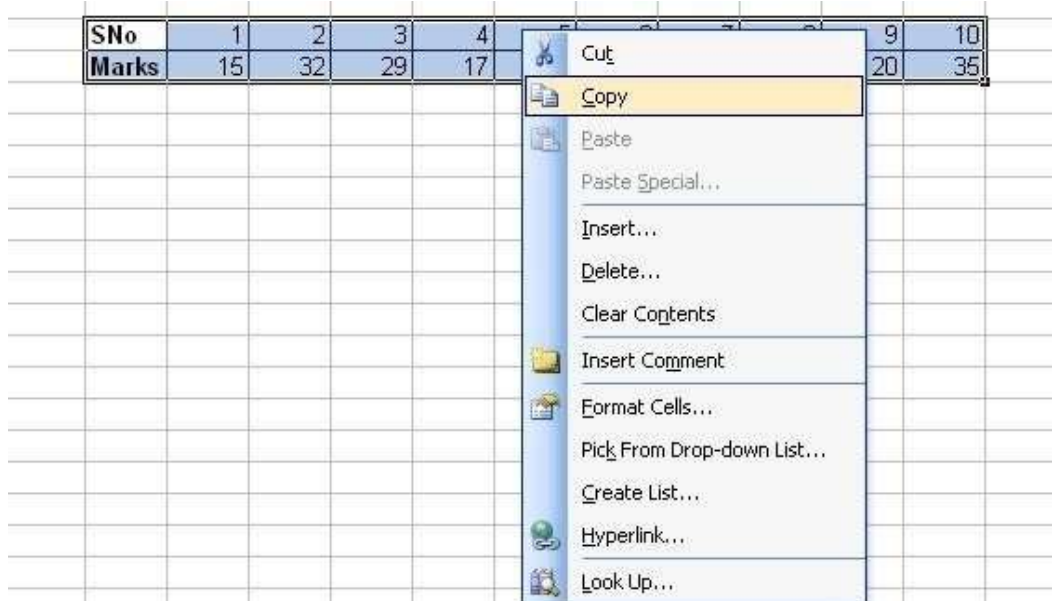
S. No.:	1	2	3	4	5	6	7	8	9	10
Marks:	15	32	29	17	32	32	25	29	20	35

1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Design the table with given data for SNo and Marks in horizontal format.

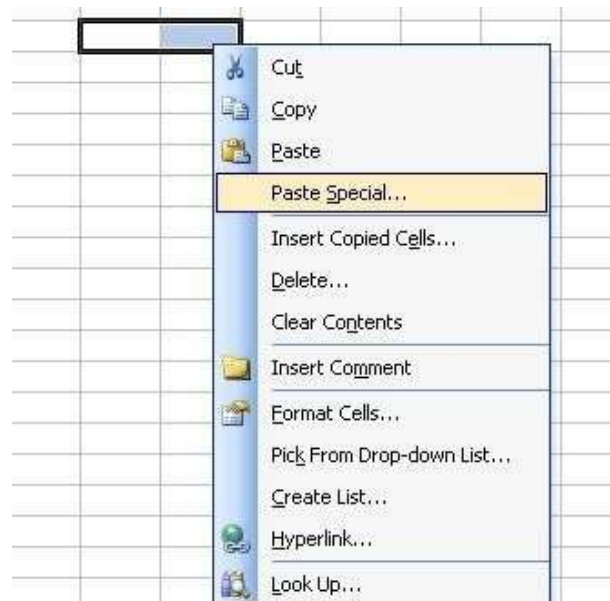
SNo	1	2	3	4	5	6	7	8	9	10
Marks	15	32	29	17	32	32	25	29	20	35

Move data between rows and columns

3. COPY the table data by selecting the table.



4. Before you paste the copied data, right-click your destination cells and then click **Paste Special**.



5. In the **Paste Special** dialog box, select **Transpose**, and then click **OK**.
You'll find the **Transpose** check box in the lower-right corner of the dialog box:



Excel pastes the data in vertical format.

SNo	Marks
1	15
2	32
3	29
4	17
5	32
6	32
7	25
8	29
9	20
10	35

6. Design the table in the following way:

	A	B	C	D
1				
2				
3		SNo.	Marks	
4		1	15	
5		2	32	
6		3	29	
7		4	17	
8		5	32	
9		6	32	
10		7	25	
11		8	29	
12		9	20	
13		10	35	
14				
15		Mean		
16		Median		
17		Mode		

7. Calculate Mean in cell C15 as
=AVERAGE(C4:C13)

	A	B	C	D
1				
2				
3		SNo.	Marks	
4		1	15	
5		2	32	
6		3	29	
7		4	17	
8		5	32	
9		6	32	
10		7	25	
11		8	29	
12		9	20	
13		10	35	
14				
15		Mean	26.6	
16		Median		
17		Mode		

8. Calculate Median in cell C16 as
 =MEDIAN(C4:C13)

C16		=MEDIAN(C4:C13)	
	A	B	C
1			
2			
3		SNo.	Marks
4		1	15
5		2	32
6		3	29
7		4	17
8		5	32
9		6	32
10		7	25
11		8	29
12		9	20
13		10	35
14			
15		Mean	26.6
16		Median	29
17		Mode	

9. Calculate Mode in cell C17 as
 =MODE(C4:C13)

C17		=MODE(C4:C13)	
	A	B	C
1			
2			
3		SNo.	Marks
4		1	15
5		2	32
6		3	29
7		4	17
8		5	32
9		6	32
10		7	25
11		8	29
12		9	20
13		10	35
14			
15		Mean	26.6
16		Median	29
17		Mode	32
18			

13. Taj wants to start a business. He estimated that it will cost him Rs. 3,75, 000 to start the business and expects to earn a net income of Rs. 75,000, Rs. 1,02,500, Rs. 90,000, Rs. 62,500, Rs. 1,20,000, and Rs. 1,22,500 respectively, in the first six months. Calculate the Internal Rate of Return (IRR)

1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Design the worksheet as follows:

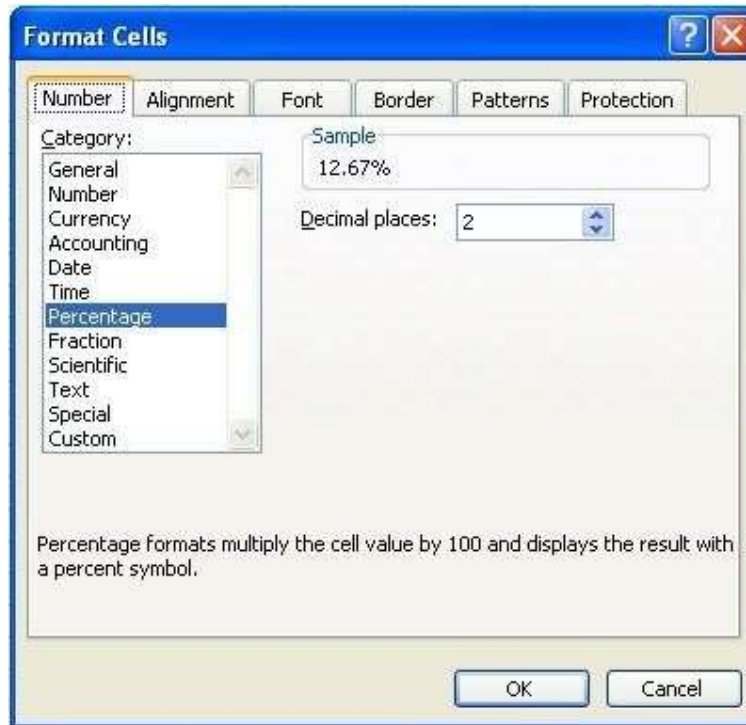
	A	B	C	D
1				
2			Taj & Associates	
3				
4			Investment Goal	-Rs.375,000.00
5			1st Month	Rs.75,000.00
6			2nd Month	Rs.102,500.00
7			3rd Month	Rs.90,000.00
8			4th Month	Rs.62,500.00
9			5th Month	Rs.120,000.00
10			6th Month	Rs.122,500.00
11			Guess	
12			Internal Rate of Return	

Function **Internal Rate of Return**,
IRR (values, guess)

3. Click cell D12 and type =IRR(
4. Select cells D4:D10 and, on the Formula Bar, click the Enter button 

	A	B	C	D
1				
2			Taj & Associates	
3				
4			Investment Goal	-Rs.375,000.00
5			1st Month	Rs.75,000.00
6			2nd Month	Rs.102,500.00
7			3rd Month	Rs.90,000.00
8			4th Month	Rs.62,500.00
9			5th Month	Rs.120,000.00
10			6th Month	Rs.122,500.00
11			Guess	
12			Internal Rate of Return	12.67%
13				

5. Right-Click on Cell D12, go to Format cell and select **Percentage** in **Category** list box.



6. In cell D11, type **12** and click cell D12
7. In the Formula Bar, change the function to **=IRR(D4:D10, D11)** and press Enter (you shouldn't need any significant difference unless you change the range of cells such as D4:D8)
8. Save the workbook

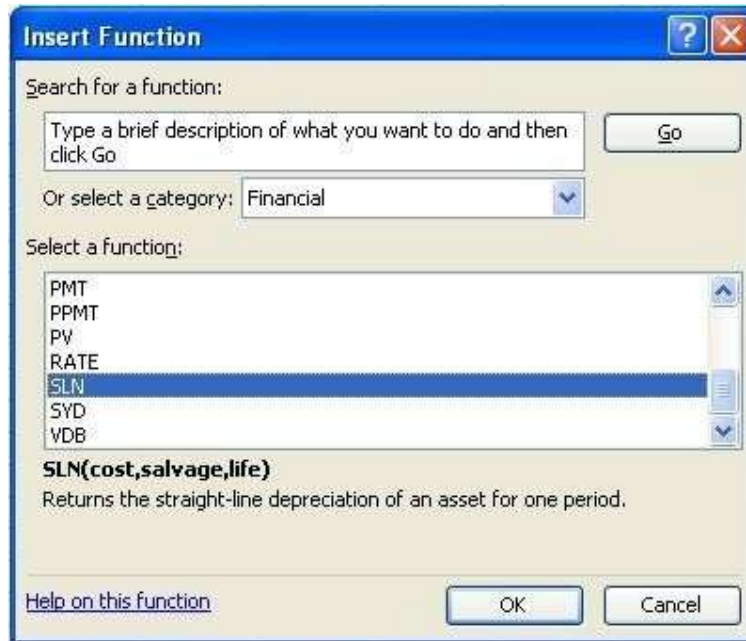
14. A motorcar is purchased for Rs. 8, 12, 500 that has a life of 5 years and salvage value of Rs. 1, 25, 000. Calculate depreciation by straight line method. (Use SLN financial function).

1. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.
2. Design the worksheet as follows:

	A	B	C
1			
2		Rent Me Center	
3			
4		Cost	812500
5		Salvage	125000
6		Life(Years)	5
7		Depreciation	
8			

3. Click cell C7 and, on the main menu, click Insert -> Function...

4. In the Paste Function dialog box, in the Function Category list, click Financial. In the Function Name list, double-click SLN.



5. Move the SLN window so you can see the values on the worksheet.
6. Click the box to the right of Cost and, on the worksheet, click cell C4
7. In the SLN window, click the box to the right of Salvage and, on the worksheet, click cell C5
8. In the SLN window, click the box to the right of Life and, on the worksheet, click cell C6

	A	B	C	D	E	F	G
1							
2		Rent Me Center					
3							
4		Cost	812500				
5		Salvage	125000				
6		Life(Years)	5				
7		Depreciation	=SLN(C4,C5,C6)				

Function Arguments

SLN

Cost C4 = 812500

Salvage C5 = 125000

Life C6 = 5

= 137500

Returns the straight-line depreciation of an asset for one period.

Life is the number of periods over which the asset is being depreciated (sometimes called the useful life of the asset).

Formula result = Rs.137,500.00

[Help on this function](#) OK Cancel

9. Click OK

	A	B	C
1			
2		Rent Me Center	
3			
4		Cost	812500
5		Salvage	125000
6		Life(Years)	5
7		Depreciation	Rs.137,500.00
8			
9			

15. Tenley Investments has got investments of Rs. 7, 25, 000 and has a lifetime of 10 years. The salvage value of the investment is Rs. 67, 500. Using DDB function; calculate depreciation over the life of the investment for first two months.
-

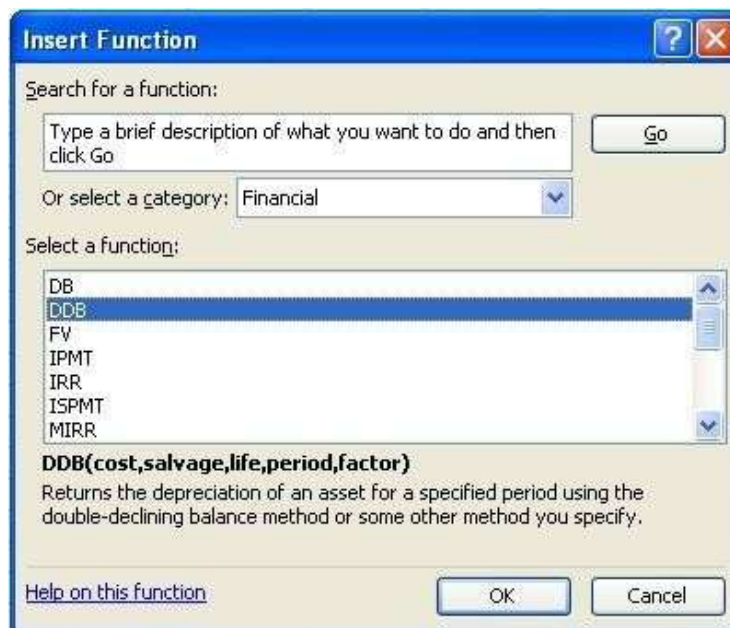
10. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Excel 2003.

11. This will start a new workbook then fill up Sheet as follows:

	A	B	C	D
1				
2		Tenley Investments		
3				
4		Cost	725000	
5		Salvage	67500	
6		Life	120	
7		Period	2	
8		Depreciation		
9				

12. Click cell C8 and, on the main menu, click Insert -> Function...

13. In the Paste Function dialog box, in the Function Category list, click Financial. In the Function Name list, double-click DDB.



14. Move the DDB window so you can see the values on the worksheet

	A	B	C	D	E	F	G
1							
2		Tenley Investments					
3							
4		Cost	725000				
5		Salvage	67500				
6		Life	120				
7		Period	2				
8		Depreciation	=DDB(C4,C5,C6,C7,2)				

Function Arguments

DDB

Cost C4 = 725000

Salvage C5 = 67500

Life C6 = 120

Period C7 = 2

Factor 2 = 2

= 11881.94444

Returns the depreciation of an asset for a specified period using the double-declining balance method or some other method you specify.

Factor is the rate at which the balance declines. If Factor is omitted, it is assumed to be 2 (the double-declining balance method).

Formula result = 11881.94444

[Help on this function](#)

OK Cancel

15. In the DDB window, Click the box to the right of Cost and, on the worksheet, click cell C4
16. Click the box to the right of Salvage and, on the worksheet, click cell C5
17. In the DDB window, click the box to the right of Life and, on the worksheet, click cell C6
18. Click the box to the right of Period and, on the worksheet, click cell C7
19. In the DDB window, click the box to the right of Factor and type 2 (because double-declining method always takes 2 as factor even if omitted). Click OK

	A	B	C	D
1				
2		Tenley Investments		
3				
4		Cost	725000	
5		Salvage	67500	
6		Life	120	
7		Period	2	
8		Depreciation	Rs.11,881.94	

Microsoft **Access**

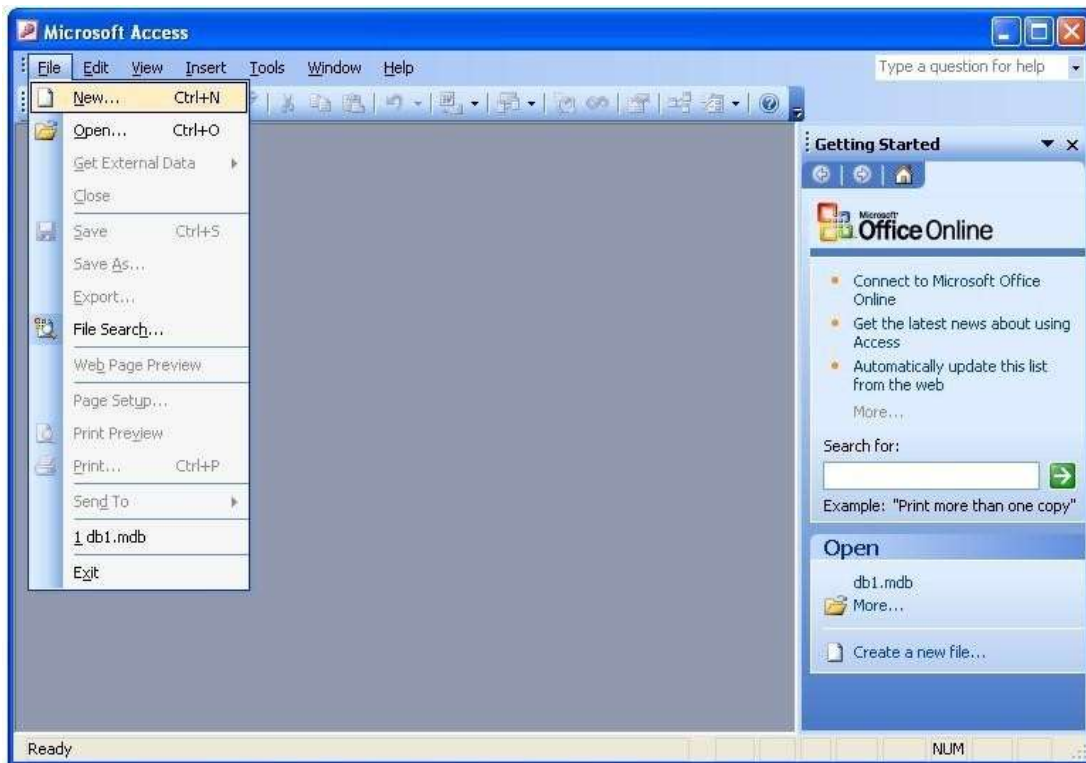
16. Create a database called "dbStudent" and create three tables with names tblStudent, tblCourse, and tblStudentCourse respectively with the following details:

Table: tblCourse	
Field Name	Data Type
CourseID	Number
CourseTitle	Text
CreditHour	Number
Description	Memo

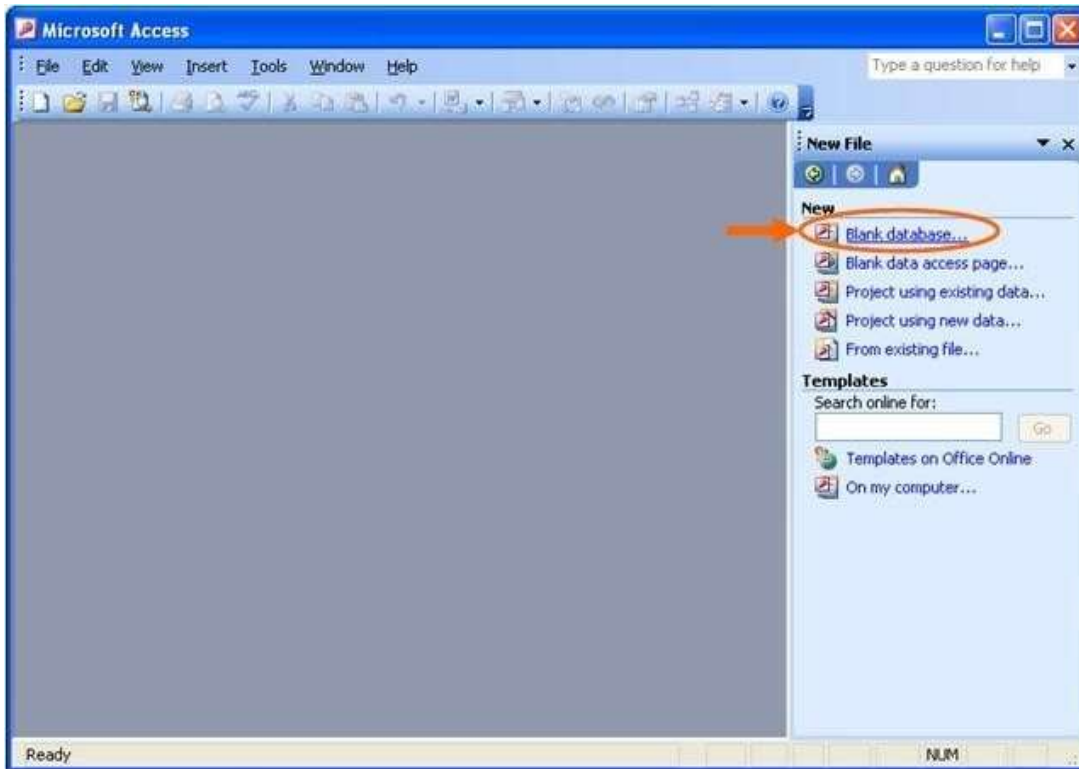
Table: tblStudent	
Field Name	Data Type
StudentID	Number
SName	Text
GPA	Number

Table: tblStudentCourse	
Field Name	Data Type
StudentID	Number
CourseID	Number
DateTaken	Date/Time
Seat	Text

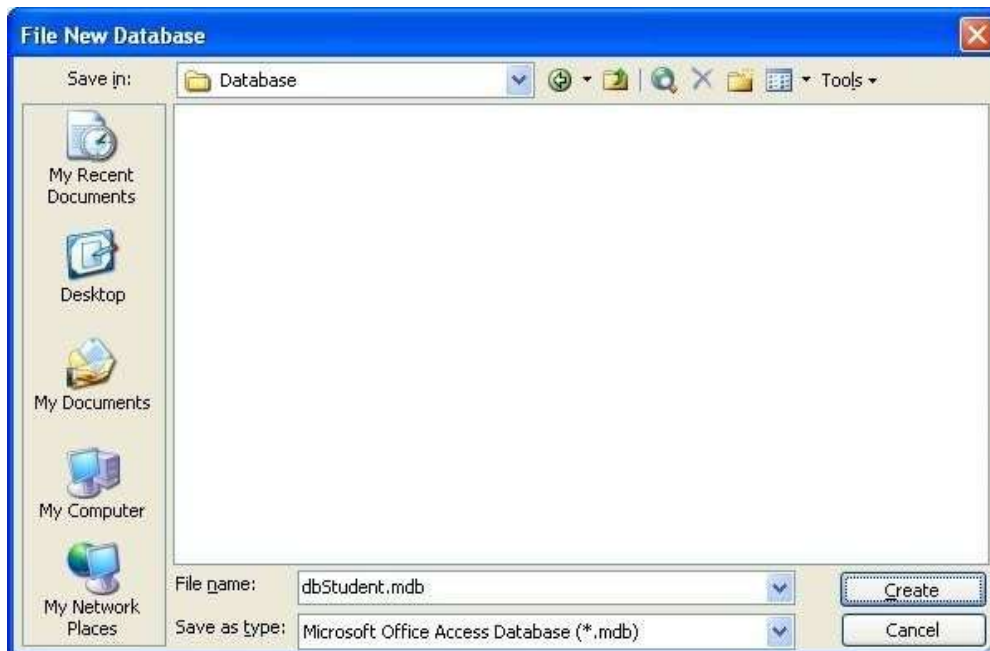
1. First, you need to create a directory in My Document with name "database"
2. Click MS Access icon from Start menu or on your desktop.



3. Select Blank database from right panel.

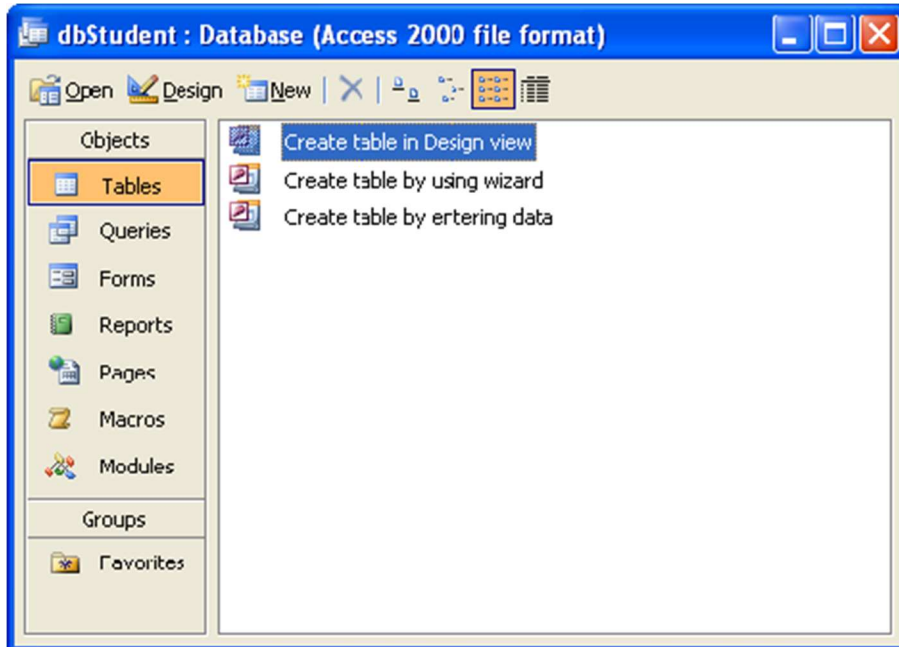


4. Find the directory you just created and type the database name, say "dbStudent" in this case, and then click "Create" button.

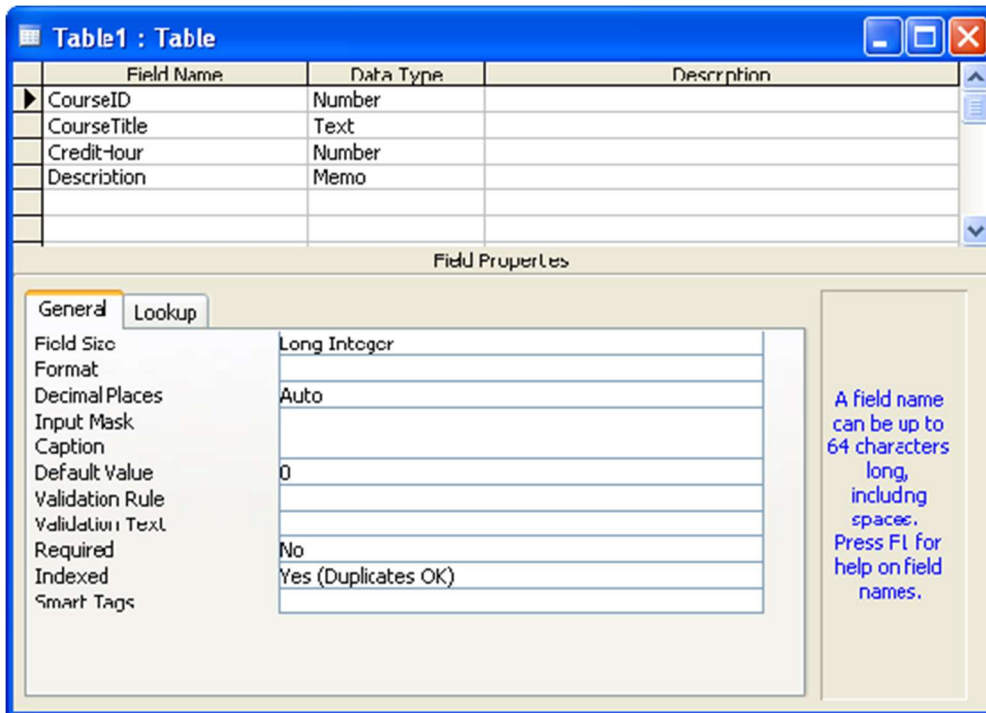


To create tblCourse in Design View:

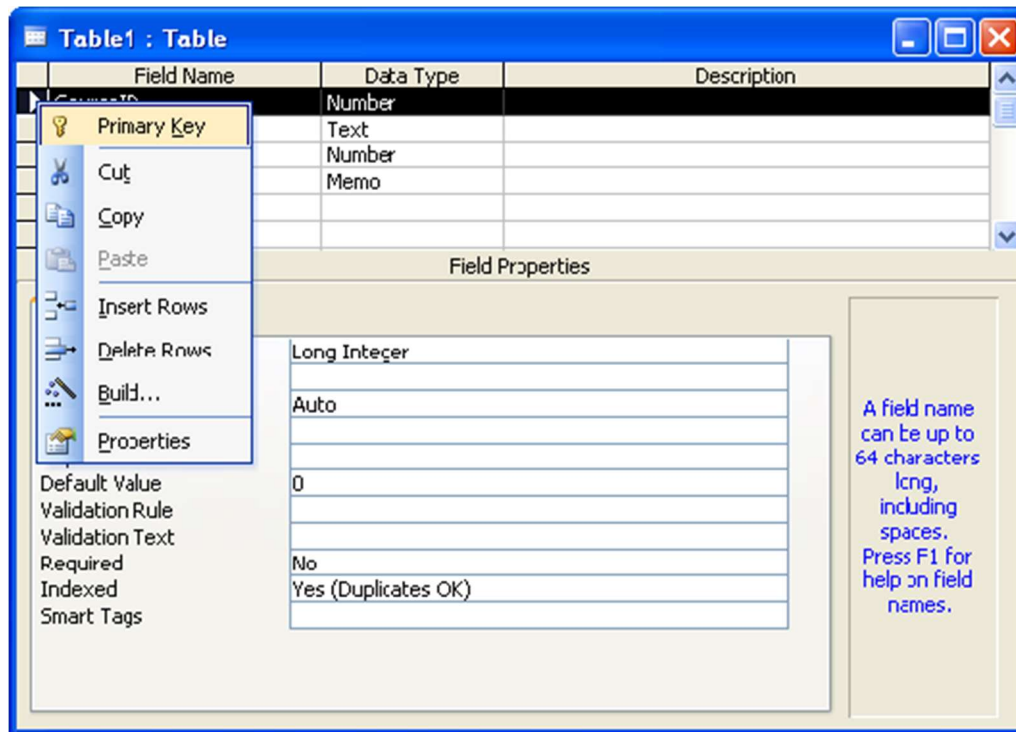
5. Double-Click on **Create table in Design view**



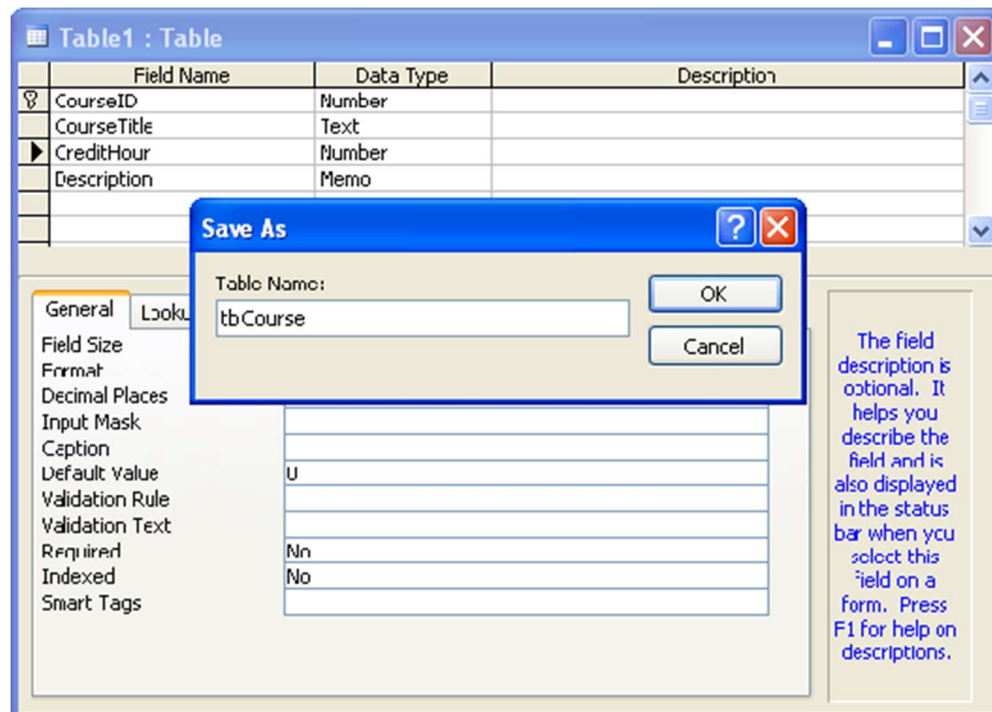
6. Design the table with the given FieldName and DataType.



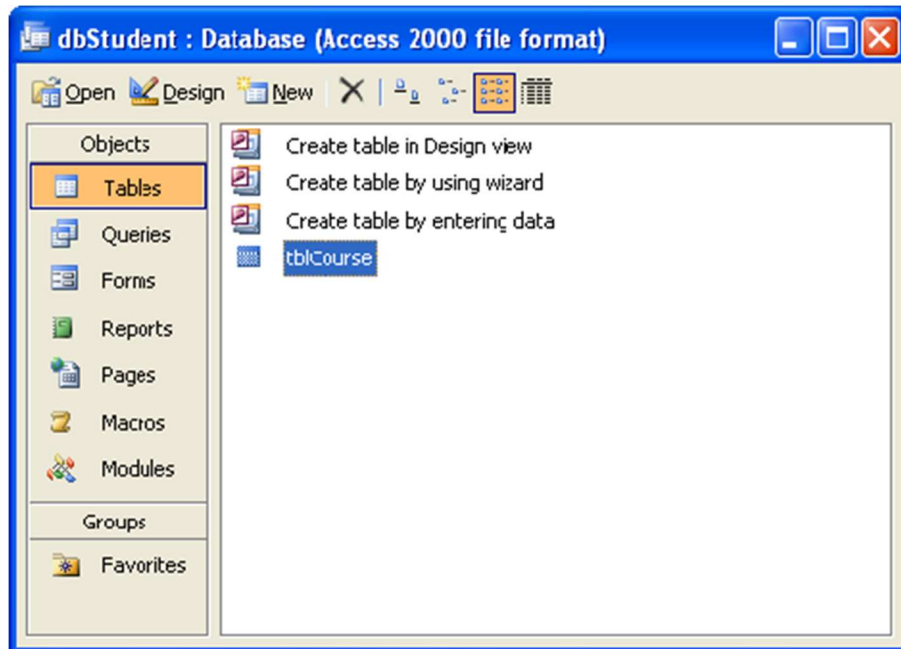
7. Right-click on the CourseID. Set it as Primary Key.



8. Save the table with tblCourse name.



9. Close the window. Observe tblCourse table is created in dbStudent database.



10. Double-click on the tblCourse to fill the table with sample data.

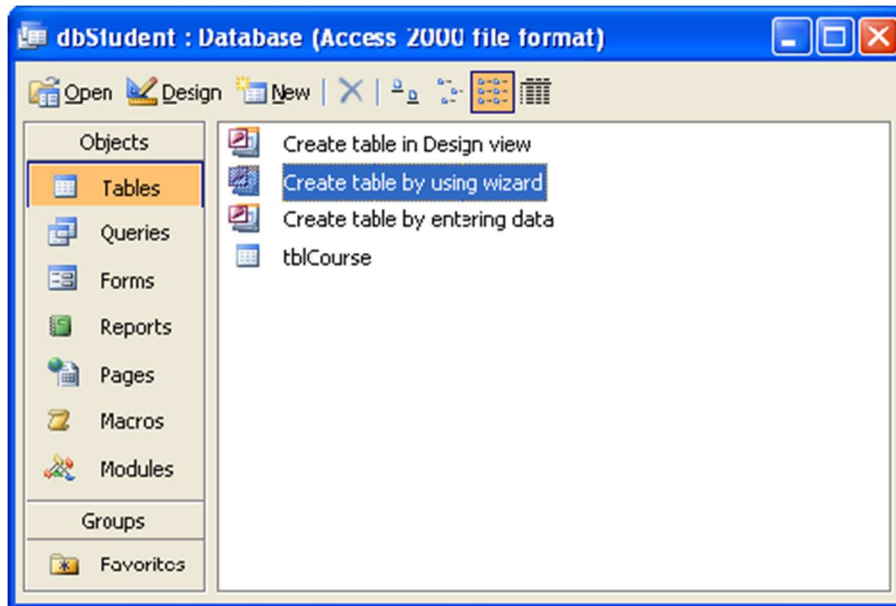
The screenshot shows the 'tblCourse : Table' window in Microsoft Access 2000. The table contains the following data:

CourseID	CourseTitle	CreditHour	Description
1	MBA(HR)	4	Masters of Business Administra
2	MBA(IT)	3	Masters of Business Administra
3	MBA(Finance)	5	Masters of Business Administra
4	MBA(Marketing)	4	Masters of Business Administra
*	0	0	

At the bottom of the window, the record navigation bar shows 'Record: 1 of 4'.

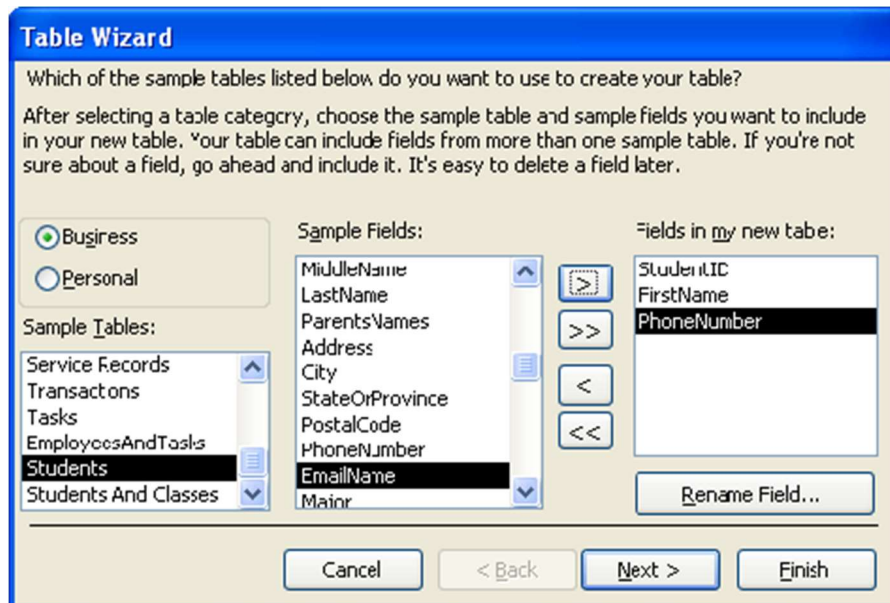
To create tblStudent using Wizard:


11. Double-Click on **Create table by using wizard**.

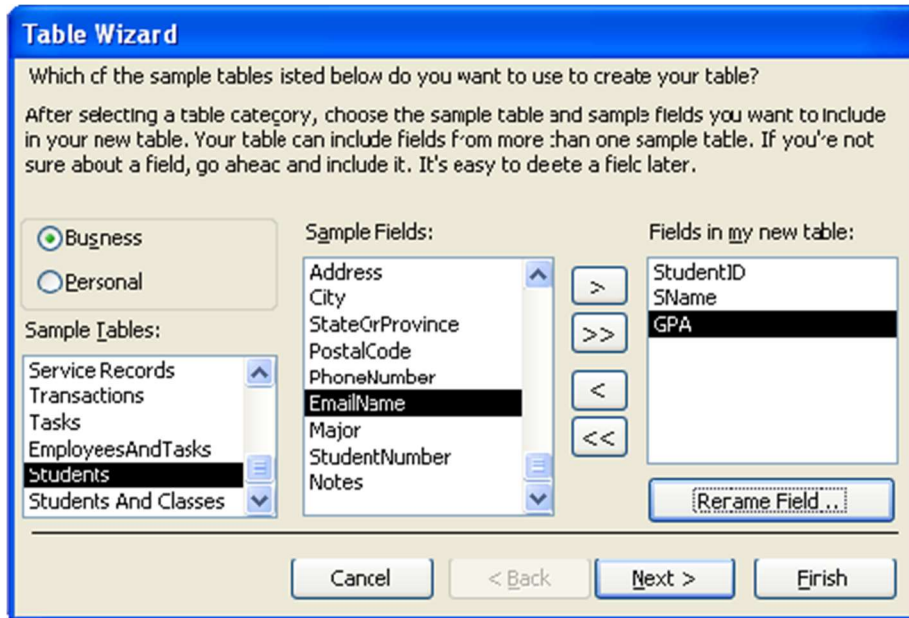


12. TableWizard window appears. Make sure Business option is selected.

13. Choose **Students** from **Sample Tables** list box.



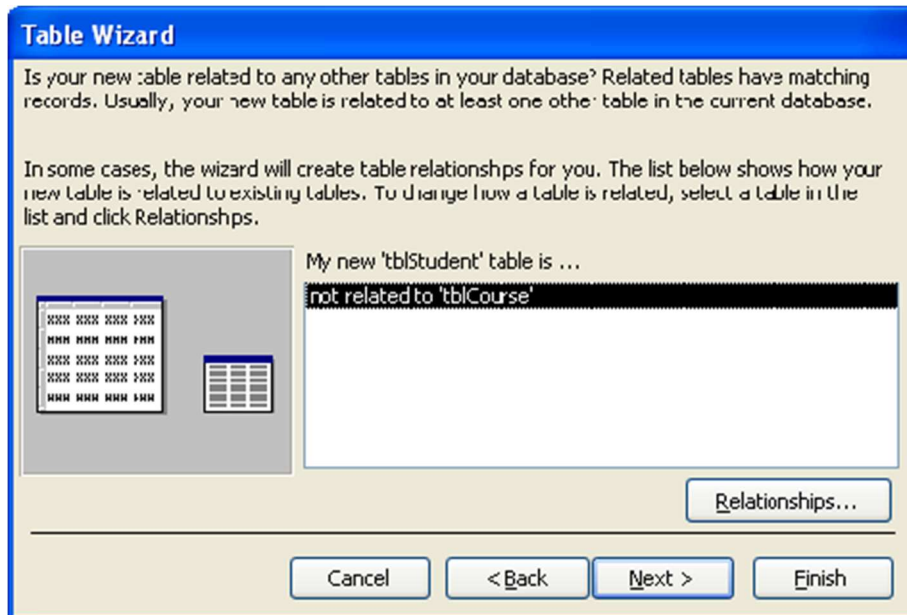
14. Select StudentID, FirstName and PhoneNumber from Sample Fields list box using  button. Renam FirstName to SName and PhoneNumber to GPA



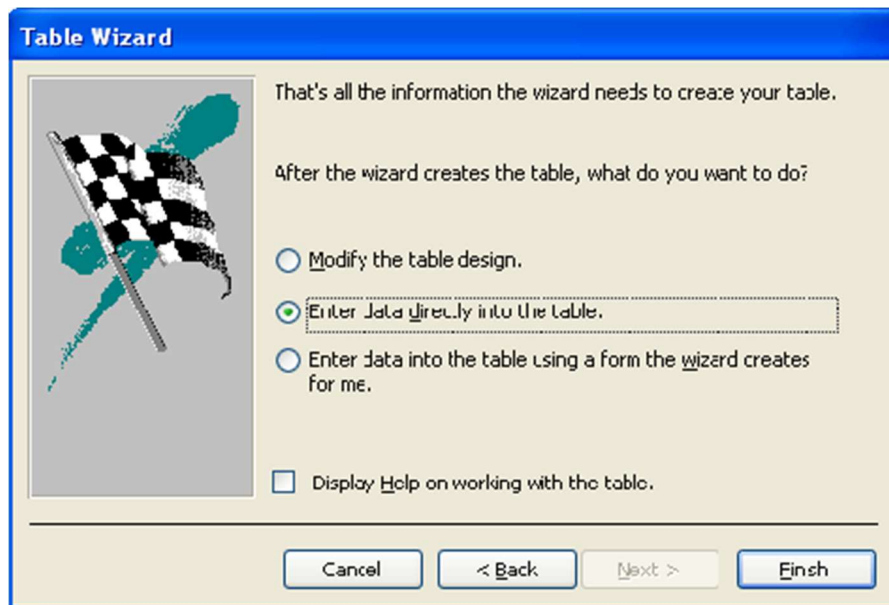
15. Give table name as "tblStudent" and make sure "Yes, set a primary key for me." option is selected.



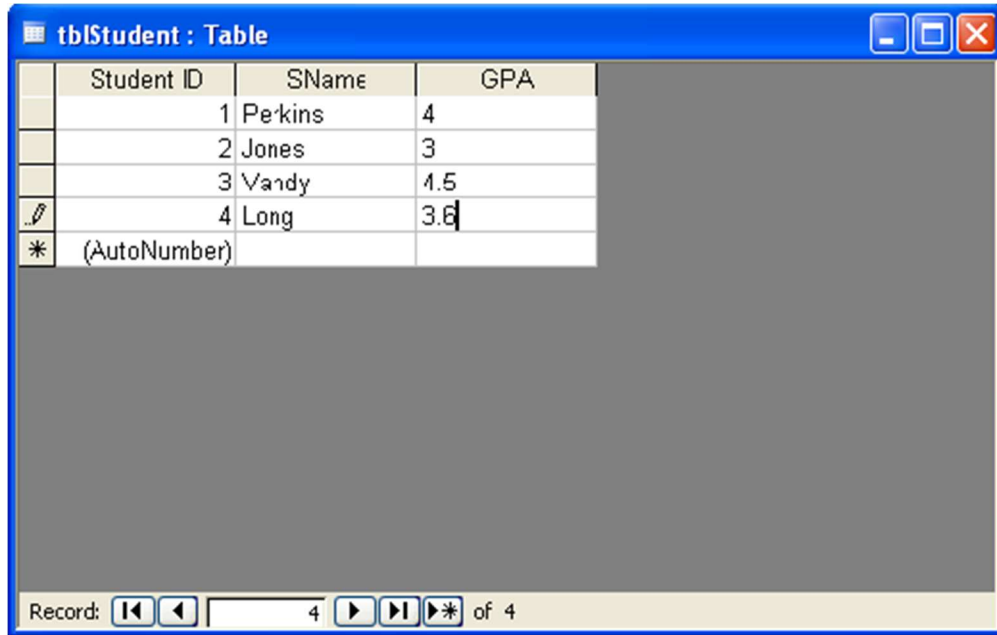
16. In the next step, Click on Next button.



17. In the next step, "Enter data directly into the table." Select Finish.



18. Start entering sample data

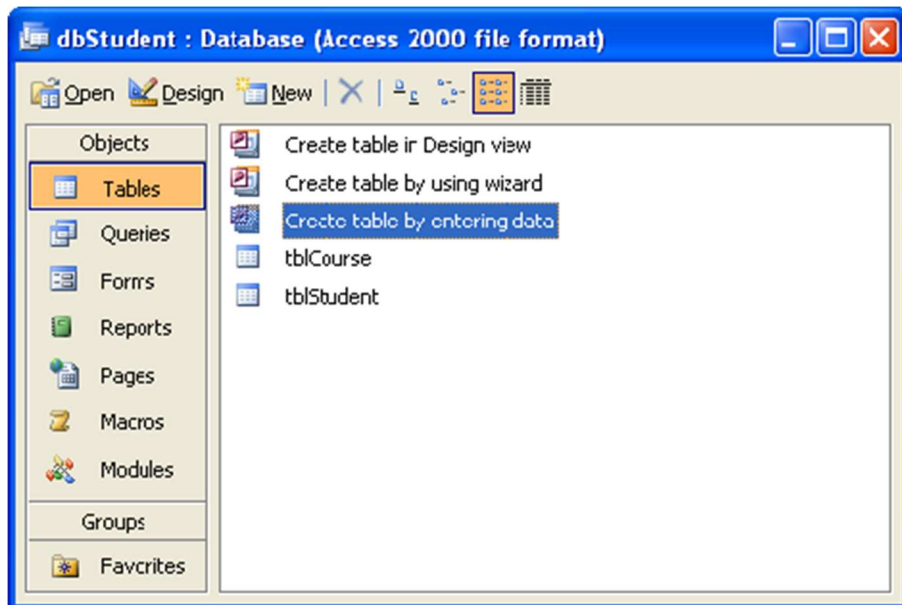


The screenshot shows a window titled "tblStudent : Table" with a table containing four records. The first three records are Perkins (ID 1, GPA 4), Jones (ID 2, GPA 3), and Vandy (ID 3, GPA 4.5). The fourth record is Long (ID 4, GPA 3.6) and is currently being edited, as indicated by a pencil icon in the first column. Below the table, a status bar shows "Record: 4 of 4".

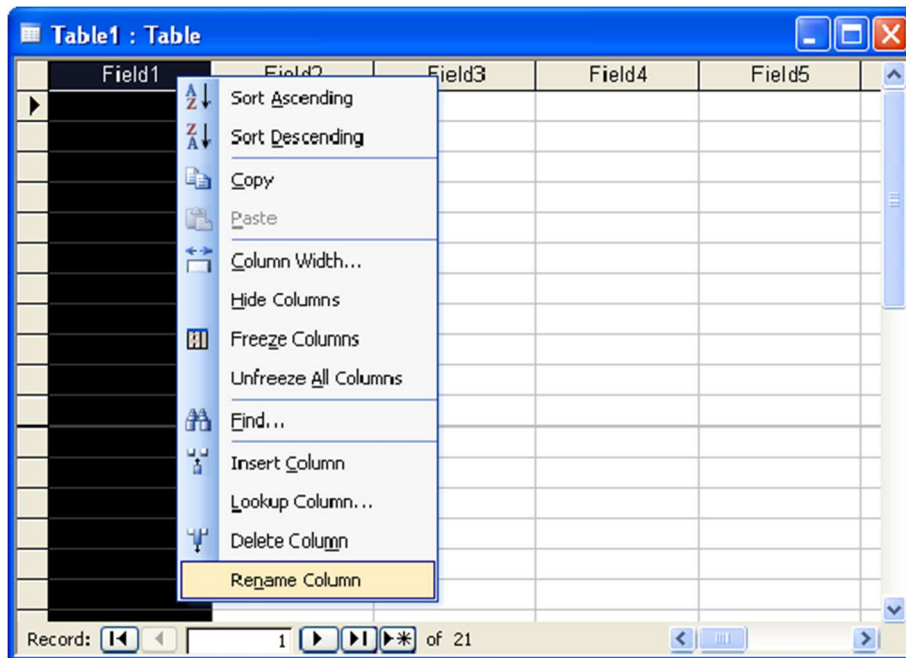
	Student ID	SName	GPA
	1	Perkins	4
	2	Jones	3
	3	Vandy	4.5
	4	Long	3.6
*	(AutoNumber)		

To create tblStudentCourse by entering data:

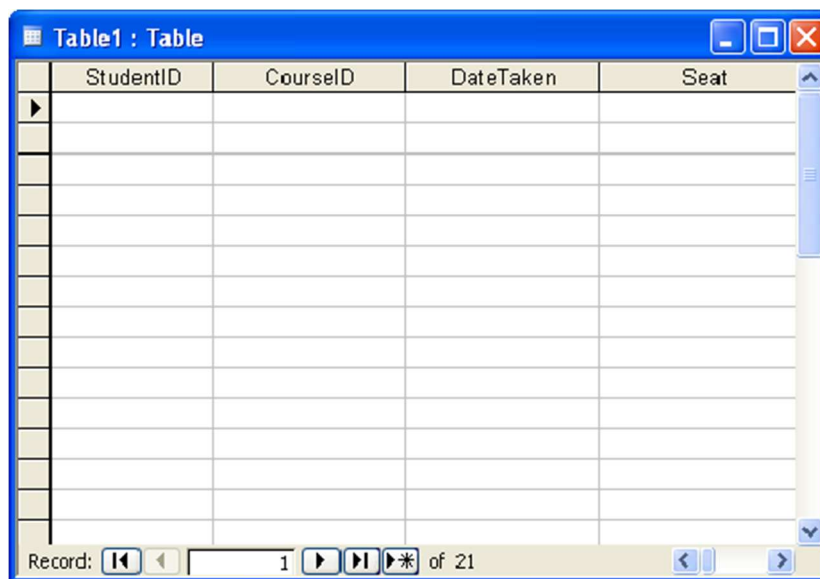
19. Double-click on the **Create table by entering data**.



20. A new window appears; right-click on the fields and select Rename Column option to rename the fields.



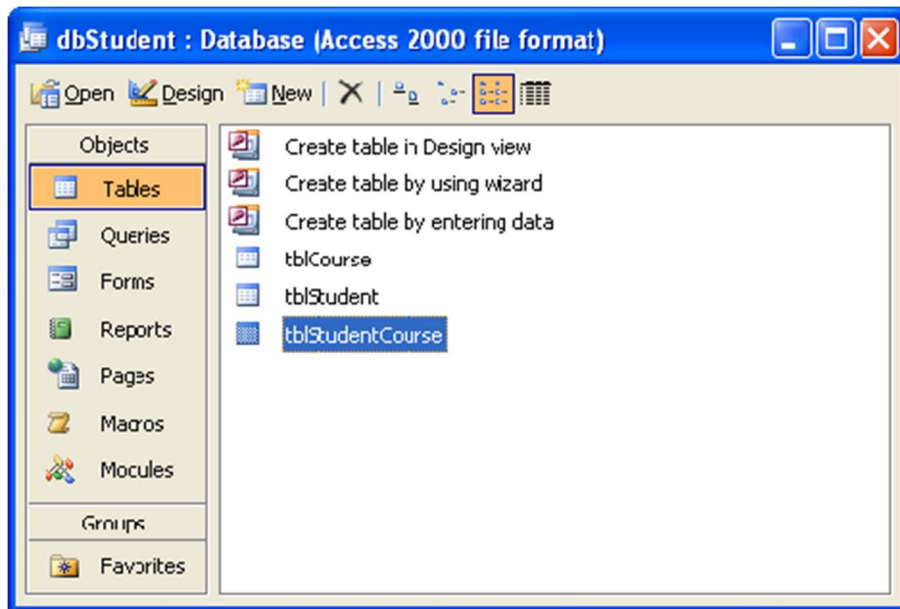
21. Rename all the fields as given. Make sure you are not filling the table with any data.



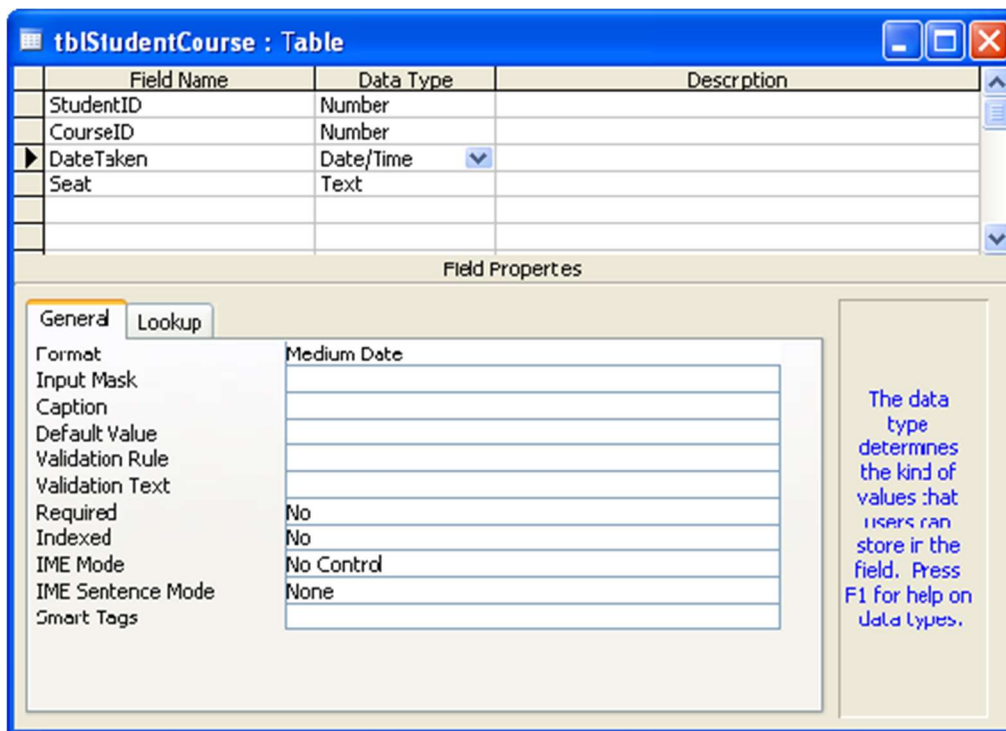
22. Save it with tblStudentCourse name.



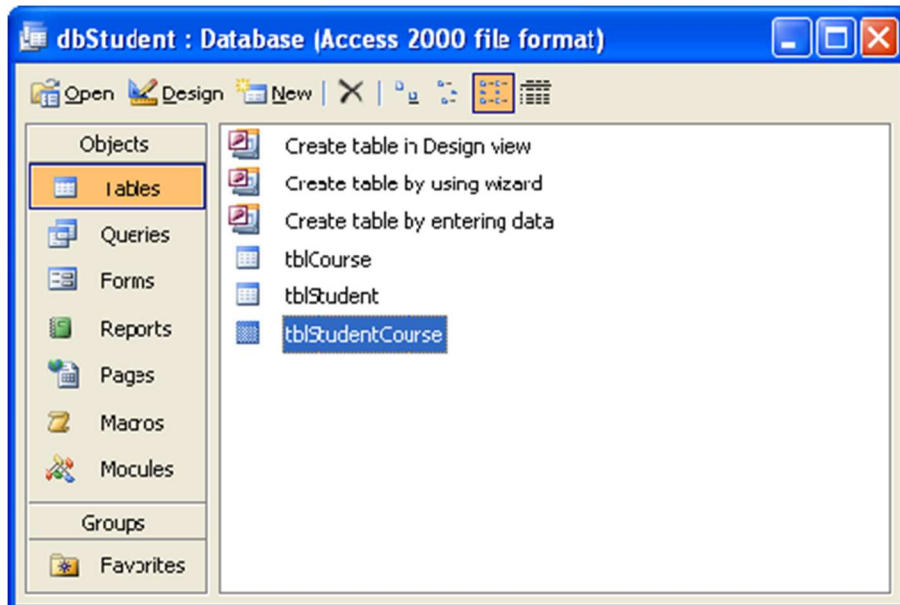
23. Right-click on tblStudentCourse and select design view.



24. Change the data types as given in the question. In data and time data type. Select Format as Medium Date.



25. Close above window, you'll again be seeing window shown below.



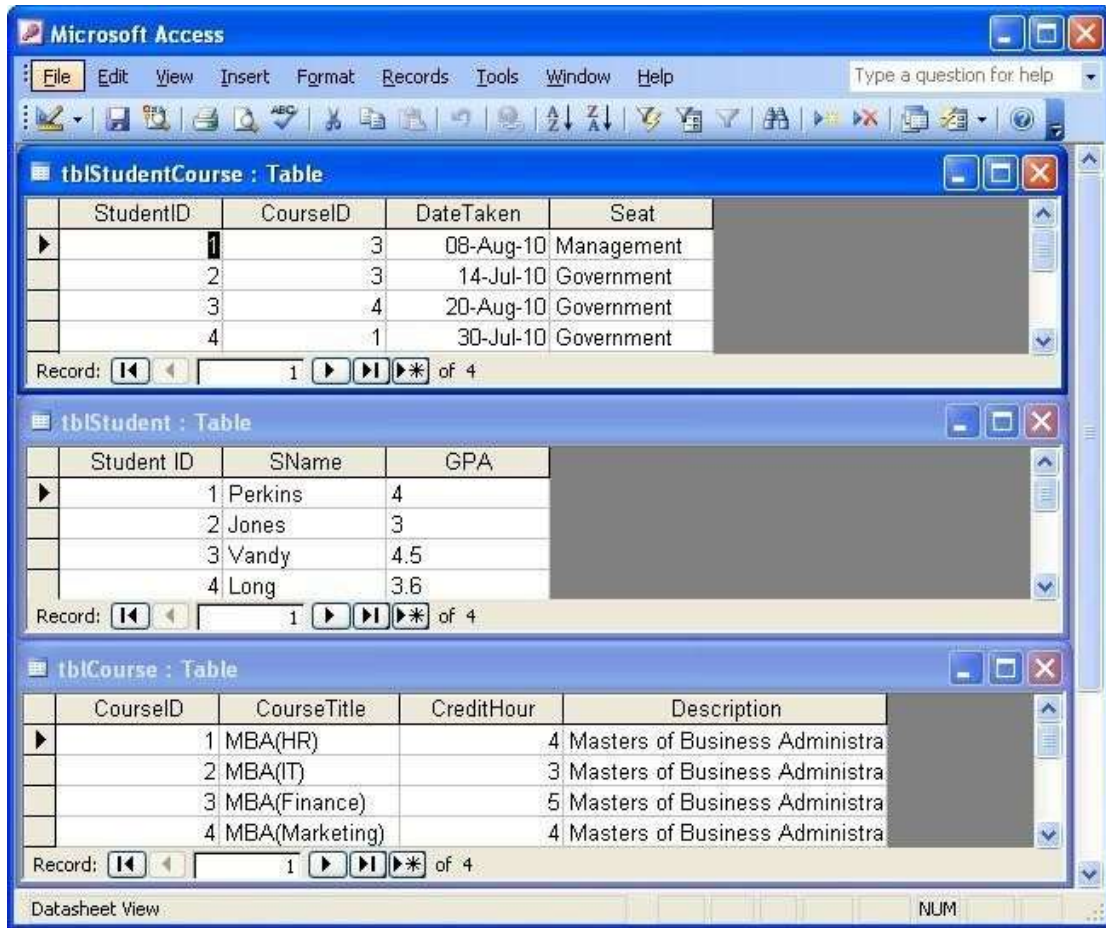
26. Double-click on the tblStudentCourse and start entering sample data

The screenshot shows the 'tblStudentCourse : Table' window in Microsoft Access. The data grid contains the following information:

	Studen:ID	CourseID	DateTaken	Seat
▶	1	3	08-Aug-10	Management
	2	3	14-Jul-10	Government
	3	4	20-Aug-10	Government
	4	1	30-Jul-10	Government
*	0	0		

Record: 1 of 4

Three tables are created with three different methods in Access.



17. Create a database dbEmployee and create tables tblEmployee and tblDepartment.

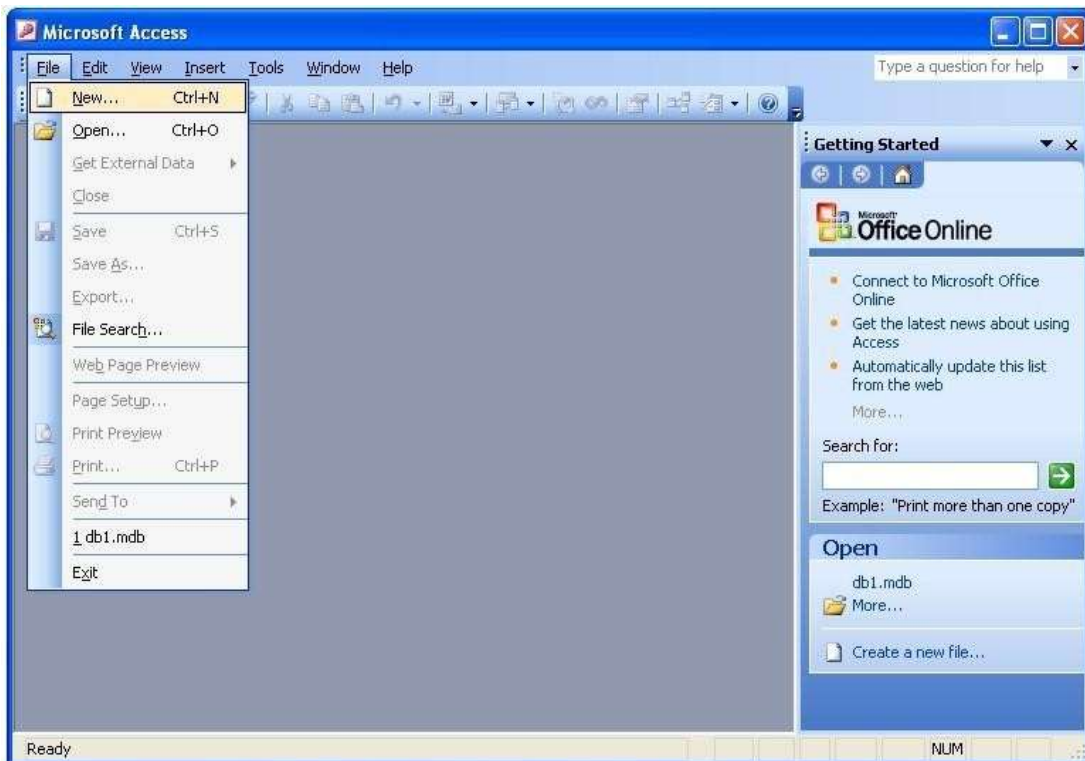
- Build Relationships between tblEmployee and tblDepartment.
- Create a report on tblEmployee.

Table: tblEmployee	
Field Name	Data Type
EmployeeID	Number
EName	Text
Designation	Text
Salary	Number
DepartmentID	Number

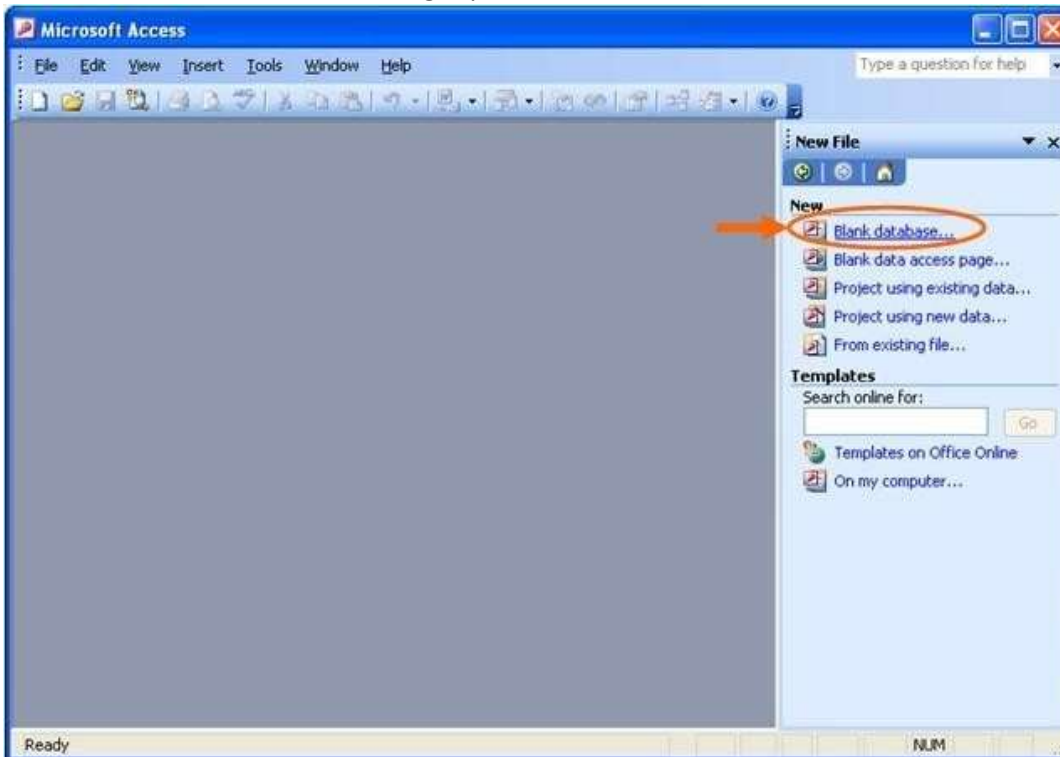
Table: tblDepartment	
Field Name	Data Type
DepartmentID	Number
DepartmentName	Text
Description	Memo

-
1. First, you need to create a directory in My Document with name "database"

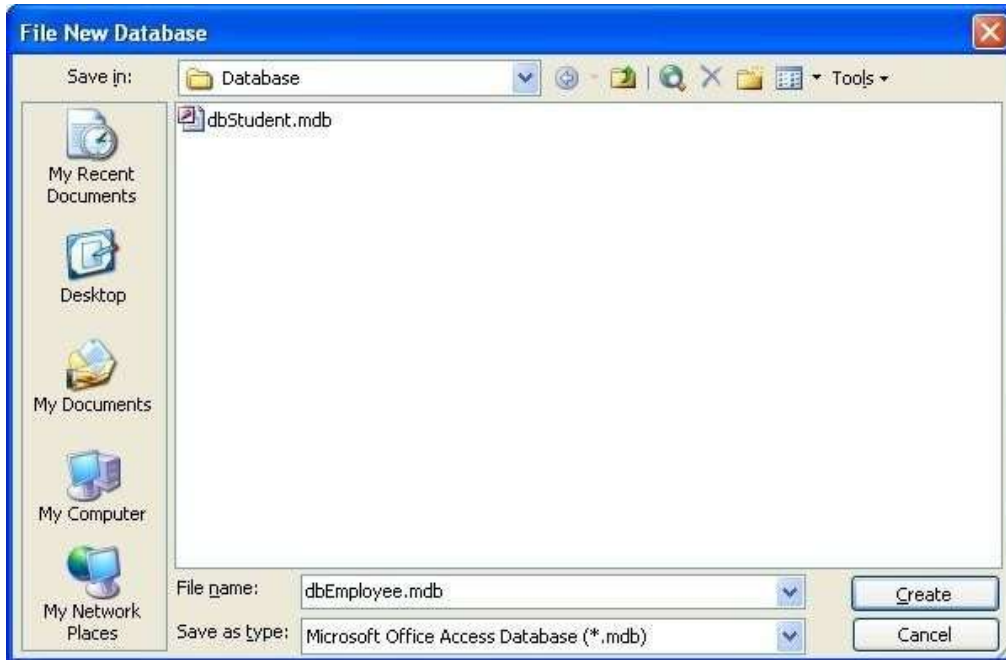
2. Click MS Access icon from Start menu or on your desktop.



3. Select Blank database from right panel.

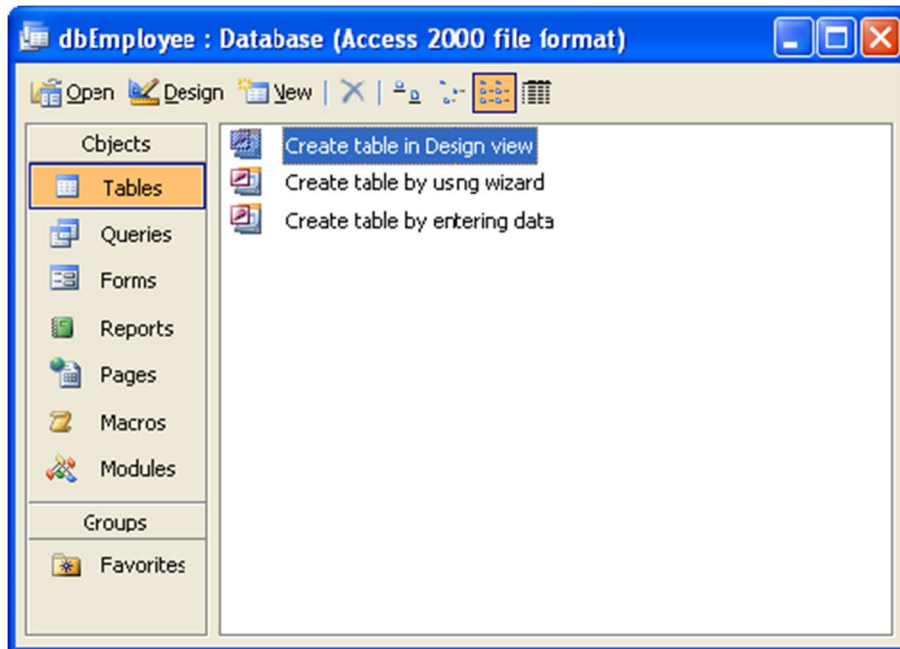


4. Find the directory you just created and type the database name, say “dbStudent” in this case, and then click “Create” button.



To create tblEmployee in Design View:

5. Double-Click on **Create table in Design view**



6. Design the table with the given FieldName and DataType.
7. Right-click on the EmployeeID. Set it as Primary Key.

10. Double-click on the tblEmployee to fill the table with sample data.

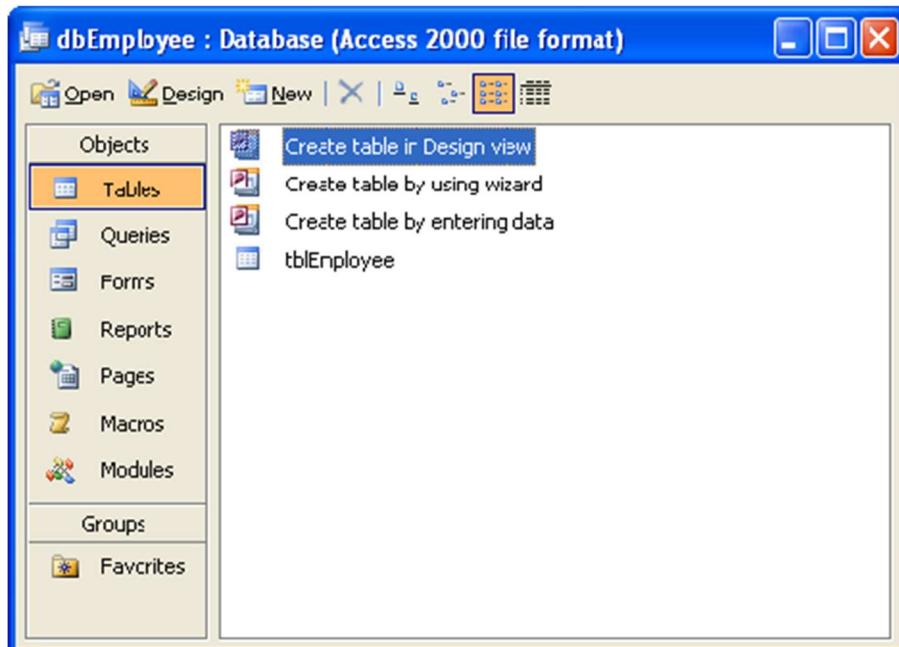


The screenshot shows a window titled "tblEmployee : Table" with a data grid containing five records. The columns are EmployeeID, EName, Designation, Salary, and DepartmentID. The records are: (100, Edward, Manager, 40000, 3), (101, Michelle, Supervisor, 20000, 5), (102, Annic, General Manager, 50000, 2), (103, Doe, Clerk, 10000, 1), and (104, Mark, Manager, 15000, 4). Below the grid, there is a status bar showing "Record: 1 of 5".

EmployeeID	EName	Designation	Salary	DepartmentID
100	Edward	Manager	40000	3
101	Michelle	Supervisor	20000	5
102	Annic	General Manager	50000	2
103	Doe	Clerk	10000	1
104	Mark	Manager	15000	4

To create tblDepartment in using Wizard:

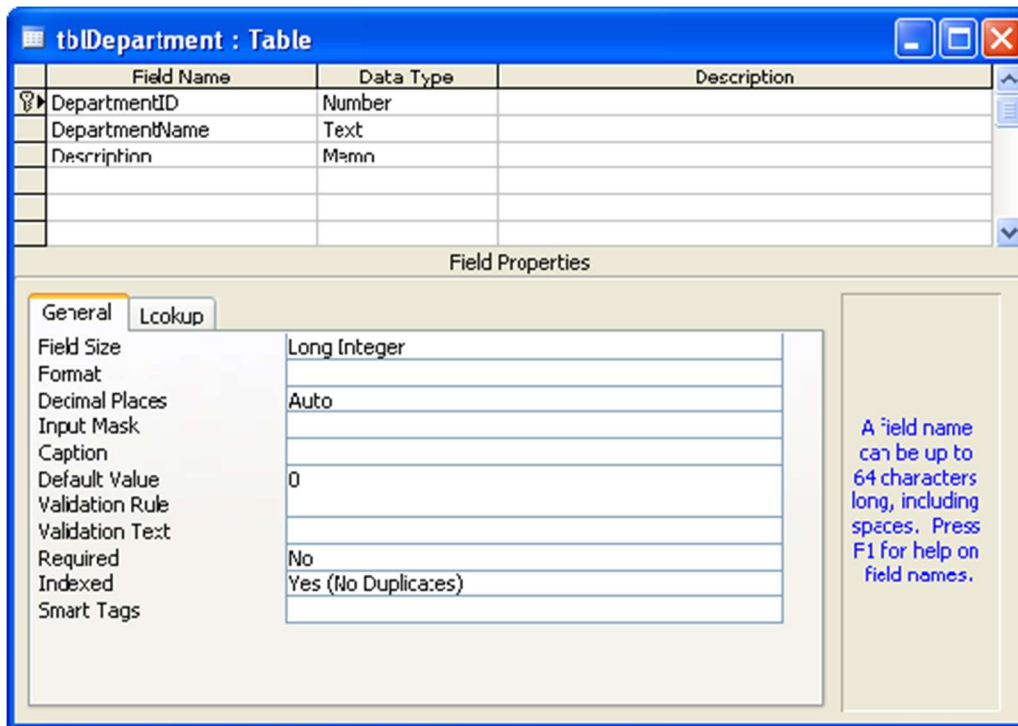
11. Double-Click on **Create table in Design view**



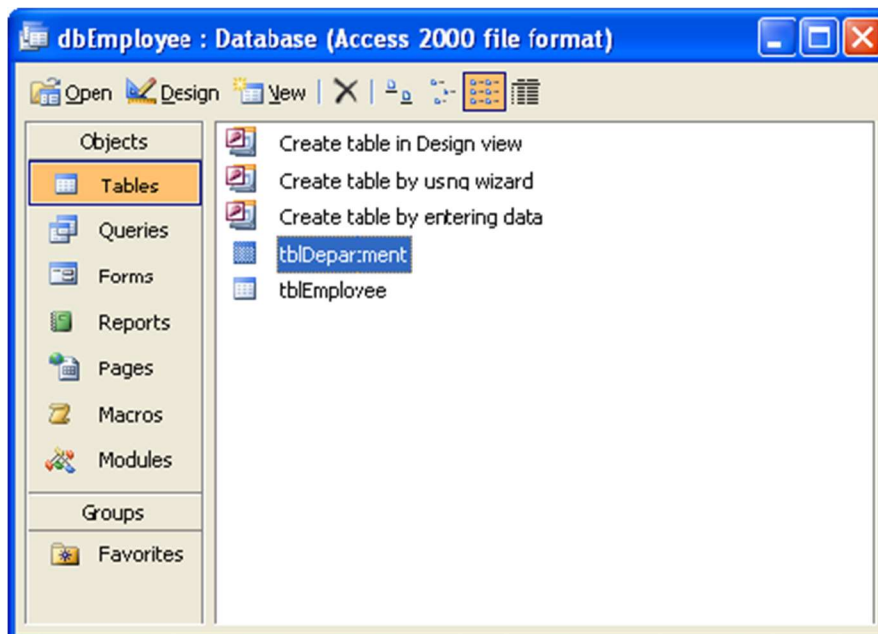
12. Design the table with the given FieldName and DataType for second table.

13. Right-click on the DepartmentID. Set it as Primary Key.

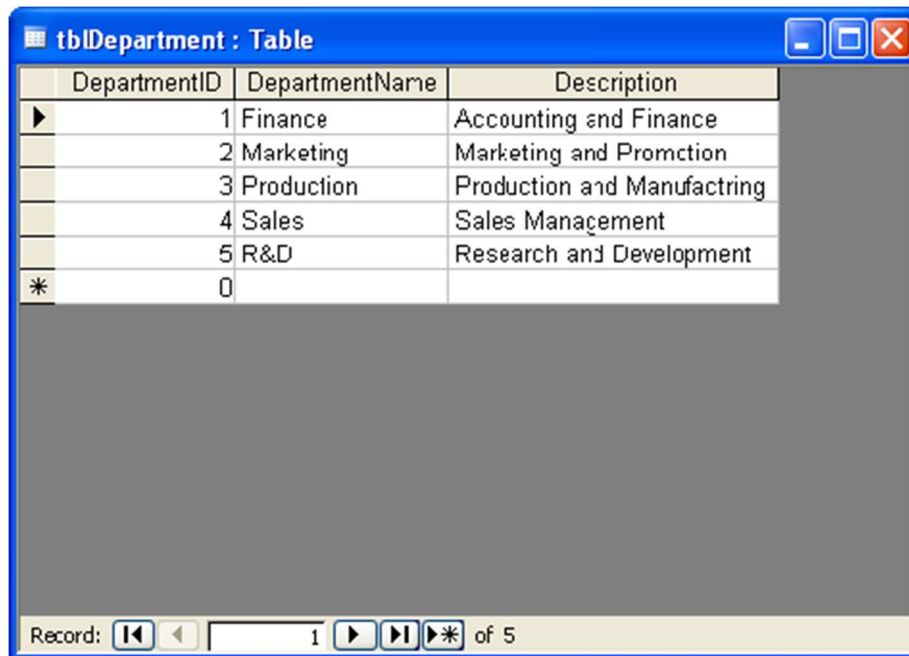
14. Save the table with tblDepartment name.



15. Close the window. Observe tblDepartment table is created in dbEmployee database.



16. Double-click on the tblDepartment to fill the table with sample data.



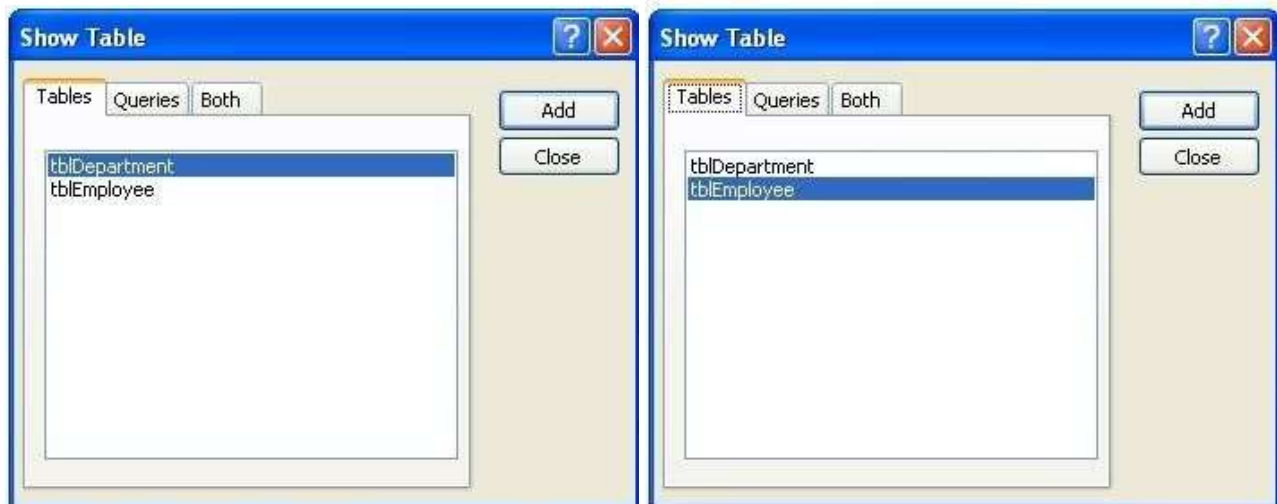
DepartmentID	DepartmentName	Description
1	Finance	Accounting and Finance
2	Marketing	Marketing and Promotion
3	Production	Production and Manufacturing
4	Sales	Sales Management
5	R&D	Research and Development
*	0	

To Build Relationships between tblEmployee and tblDepartment:

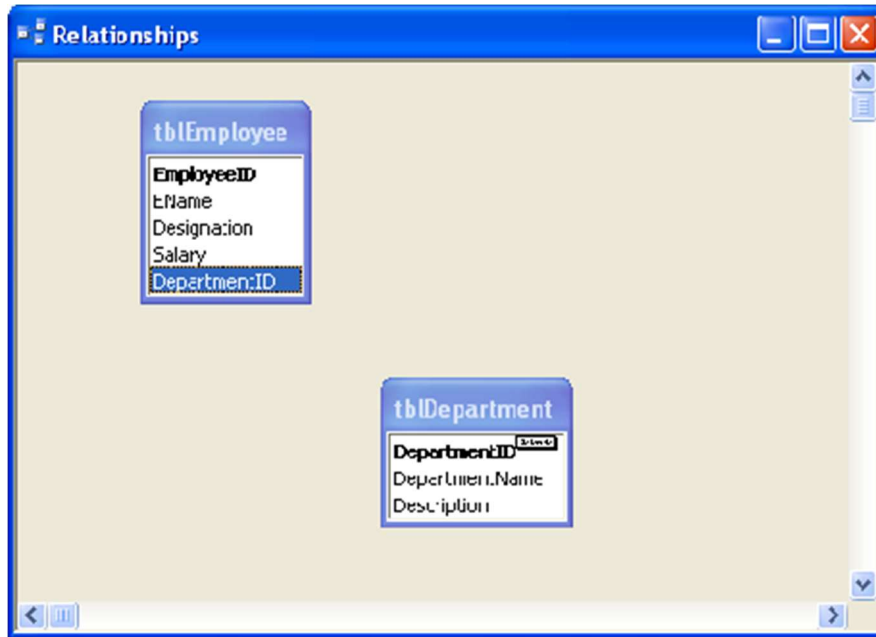
We can establish relationships between two or more tables by associating common fields. In the dbEmployee database, the DepartmentID is a common field in both tables. It is the primary field in tblDepartment table. To establish relationships between the DepartmentID fields in the tblEmployee and tblDepartment, proceed as follows:

17. Use the Tools->Relationships menu option to display the **Show Table** dialog box. Once displayed,

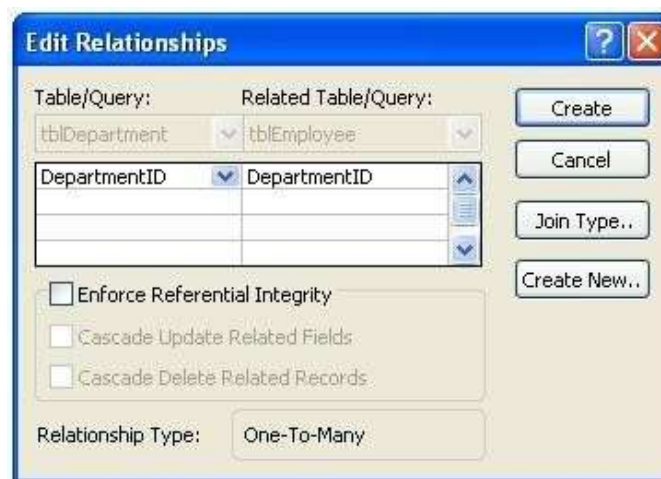
- a. select **tblDepartment** and Click **Add**
- b. select **tblEmployee** and Click **Add**



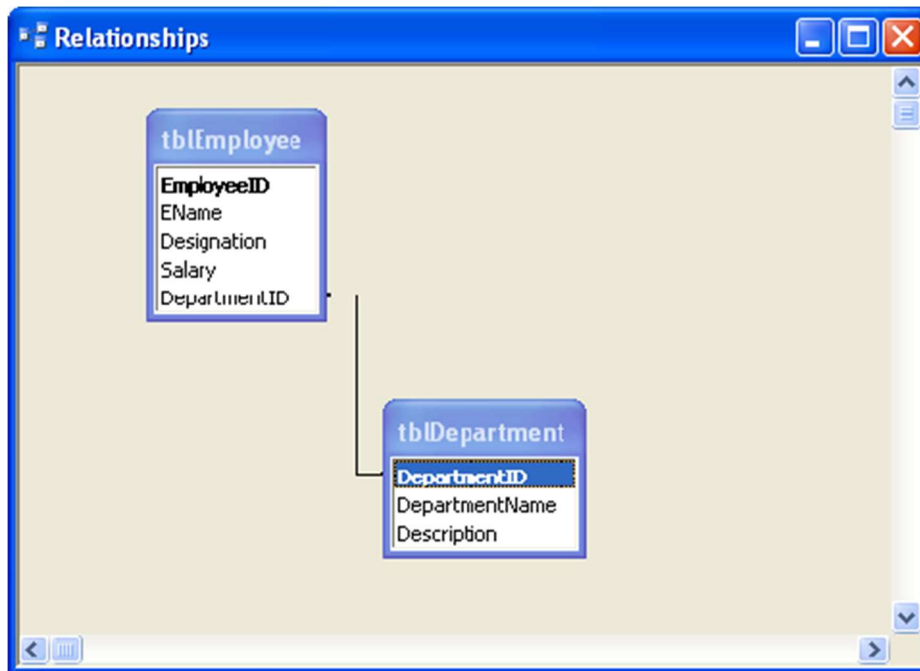
18. Close the Show Table dialog box.
19. Now drag the table boxes so they are positioned approximately as shown in the following illustration.
20. Establish the join lines (relationships) by selecting DepartmentID in the tblEmployee box and dragging to tblDepartment box and release the mouse button.



21. Edit Relationships dialog box appears. Make sure that DepartmentID is selected in both the boxes in Edit Relationships dialog box and click **Create** button.

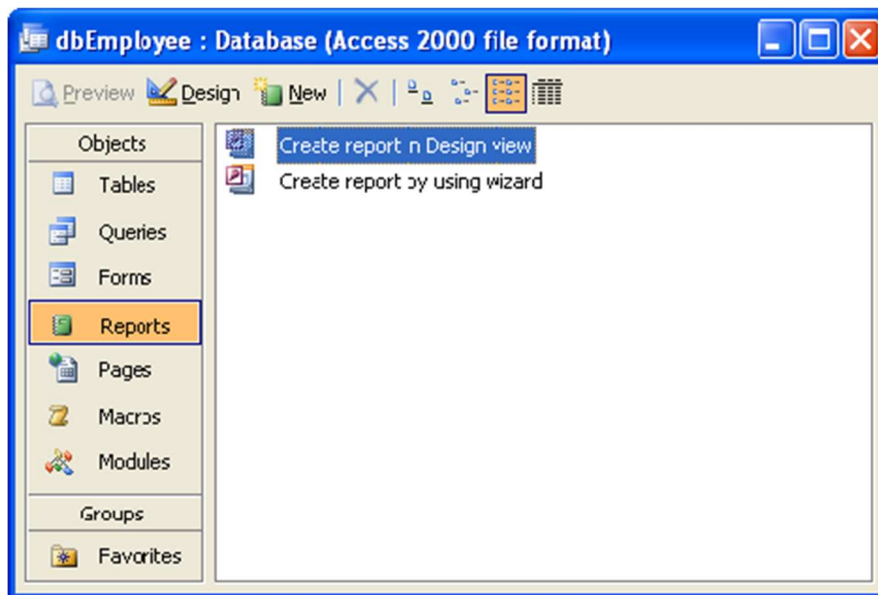


22. Verify that your join lines resemble those shown in the illustration below. The **Close** and click **Yes** to save the relationships.



To Create a report on **tblEmployee**:

23. In the Database window, click Reports under Objects.



24. Click the New button on the Database window toolbar.

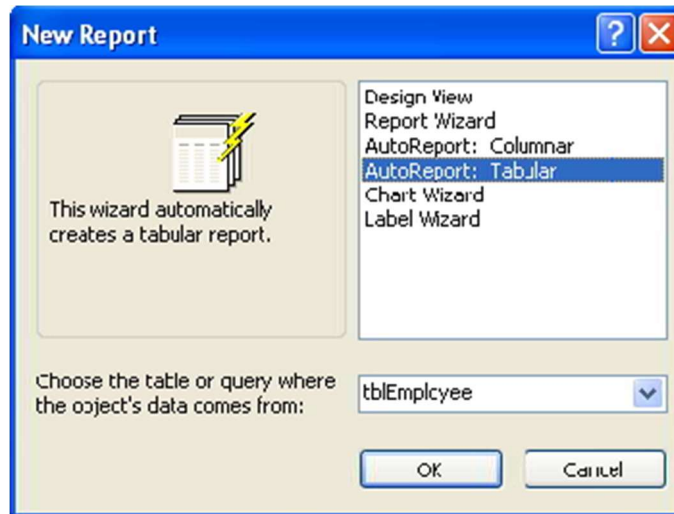


In the New Report dialog box you can see six ways to create reports in Microsoft Access:

Design View	Begins with blank page. You lay out the report the way you want using the design tools in the toolbox.
Report Wizard	Choice of fields, sort criteria, & report layout used. Creates tabular or columnar report.
Columnar AutoReport	One or more records displayed vertically. Selected from a single table or query. Each field appears on a separate line with a label to its left.
Tabular AutoReport	Rows and columns grouped by field values. Selected from a single table or query. The fields in each record appear on one line, & the labels print once at the top of each page.
Chart Wizard	Leads you through creation of a report containing a chart and associated data.
Label Wizard	Helps you create mailing labels from data.

- If you clicked **Report Wizard**, **Chart Wizard**, or **Label Wizard** then you can follow the directions in the wizard dialog boxes,
- If you click **AutoReport: Tabular** or **AutoReport: Columnar**, MS Access automatically creates your report.
- If the resulting report doesn't look the way you want, you can change it in **Design View**.

25. Select the **AutoReport: Tabular** and select the table **tblEmployee** from box given below. Remember AutoReport displays all the fields & records in the underlying table or query.



26. Click OK. tblEmployee report is generated as follows:

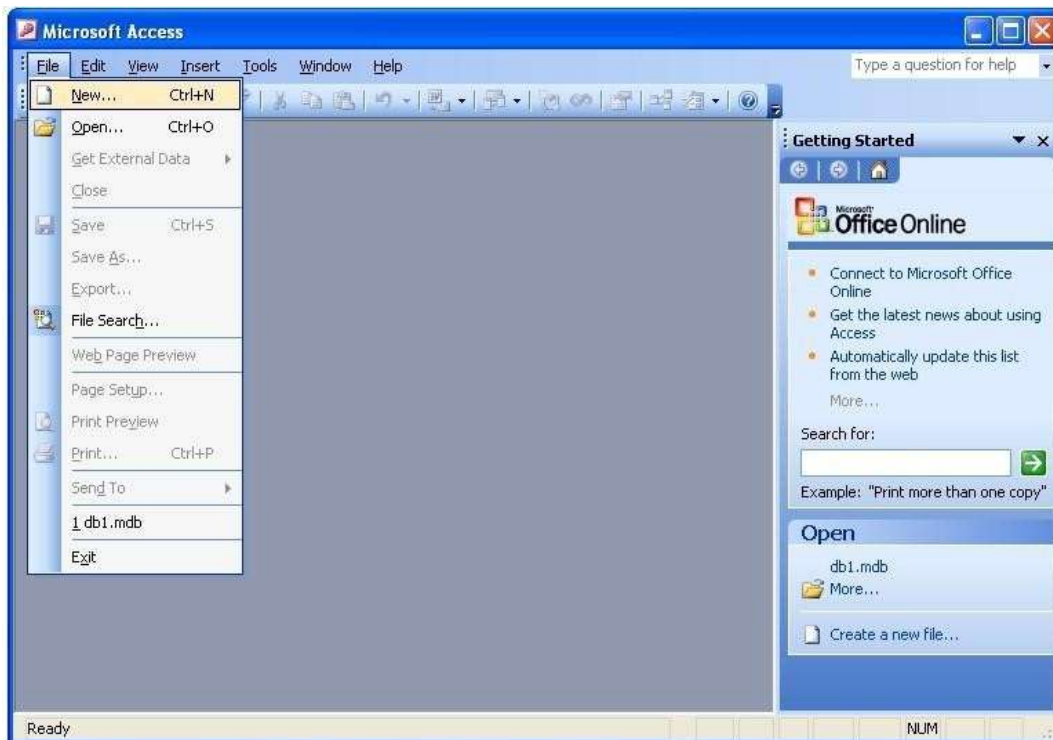
<i>EmployeeID</i>	<i>EName</i>	<i>Designation</i>	<i>Salary</i>	<i>DepartmentID</i>
100	Edward	Manager	40000	3
101	Michelle	Supervisor	20000	5
102	Annie	General Manager	50000	2
103	Doe	Clerk	10000	1
104	Mark	Manager	15000	4

18. Create Employee salary table and give 5 records.

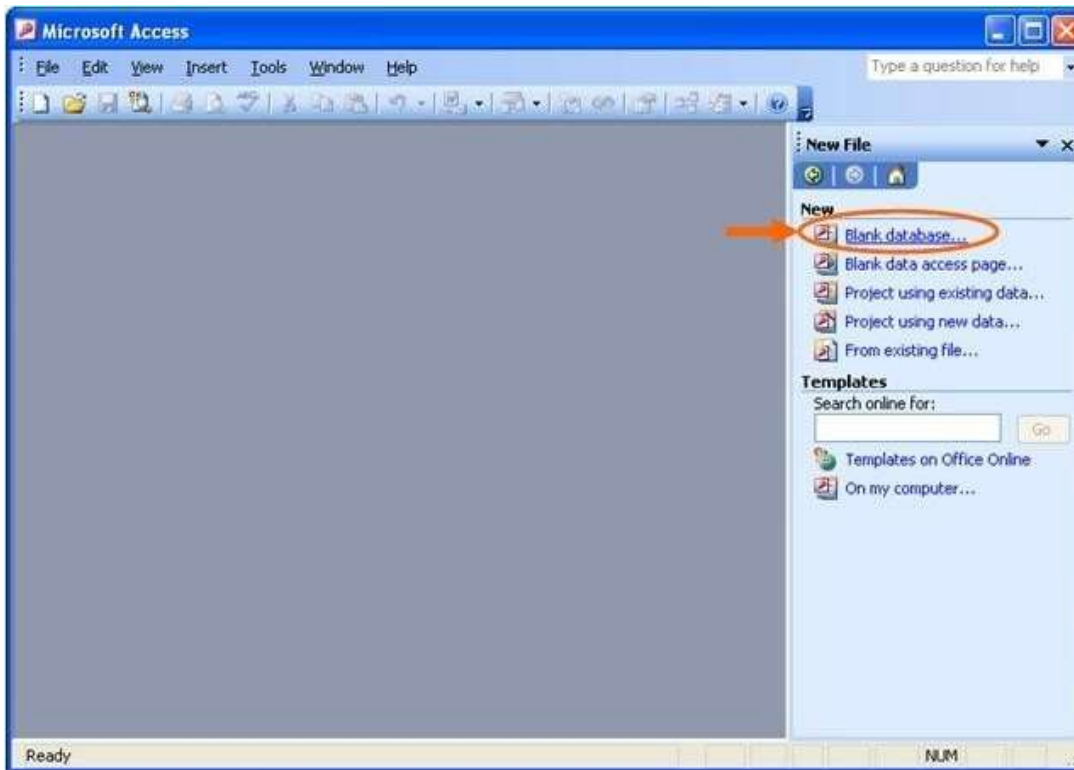
- The salary field cannot accept > 40,000
- Sort Salary field
- Write a query to display the records for salary > 20,000

Table: tblEmp	
Field Name	Data type
EmpNo	Number
EmpName	Text
Designation	Text
Department	Text
Salary	Number

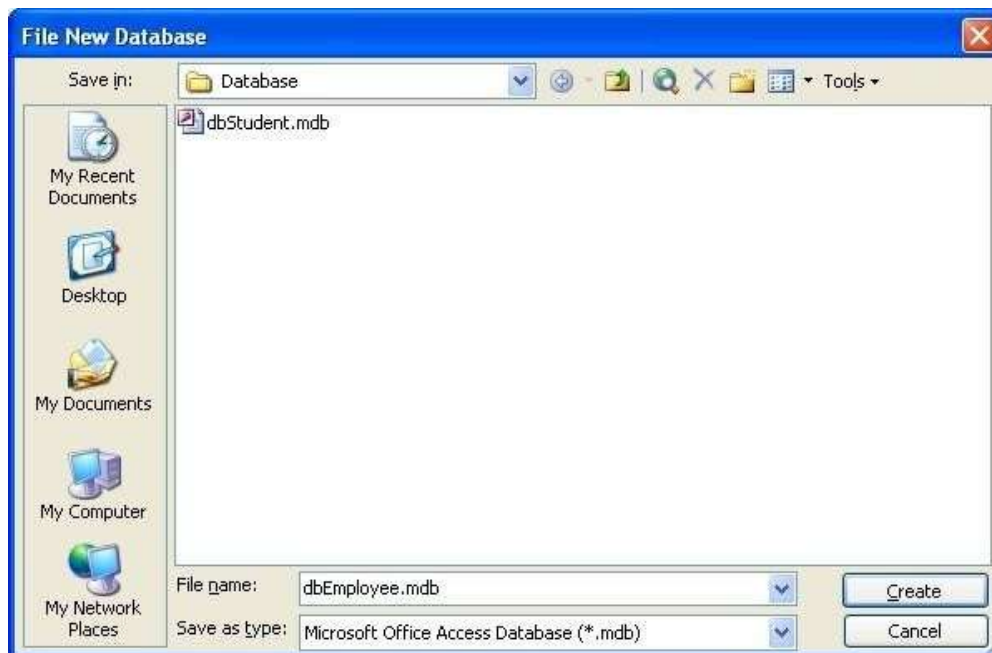
1. First, you need to create a directory in My Document with name "database"
2. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Access 2003.



3. Select Blank database from right panel.

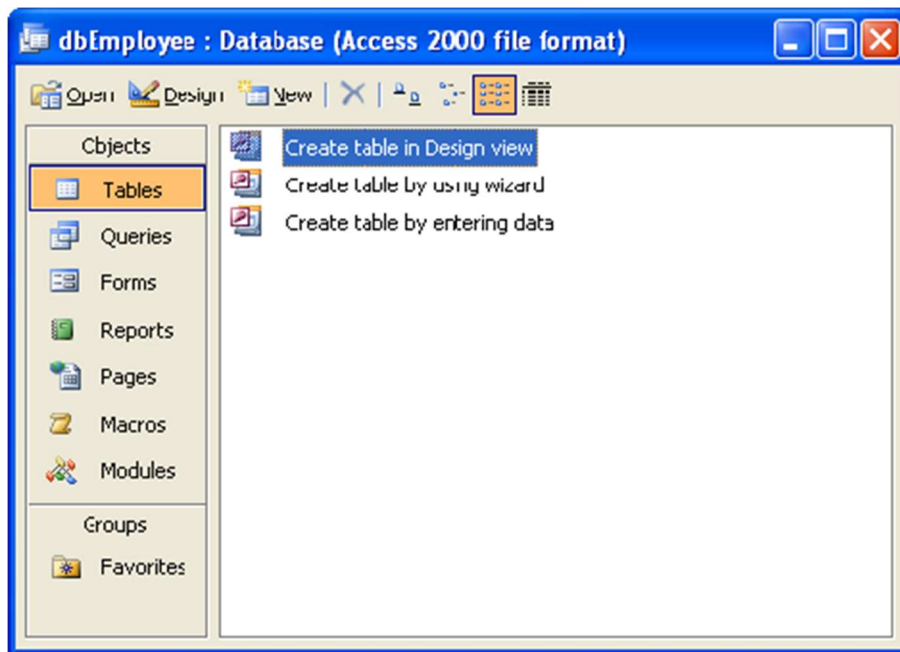


4. Find the directory you just created and type the database name, say “dbEmployee” in this case, and then click “Create” button.

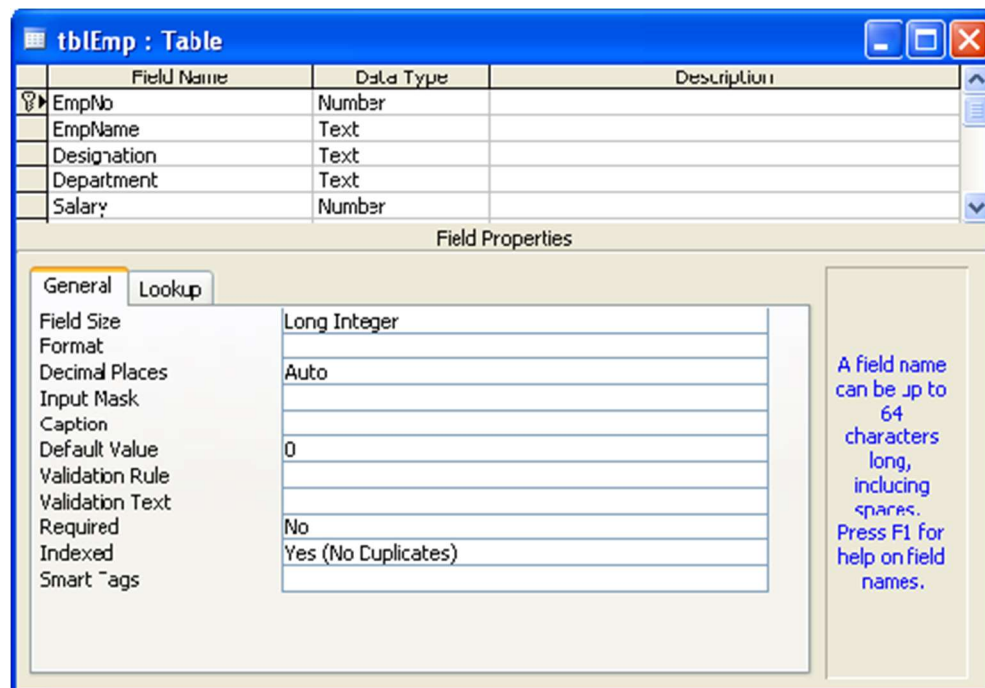


Create tblEmp in Design View:

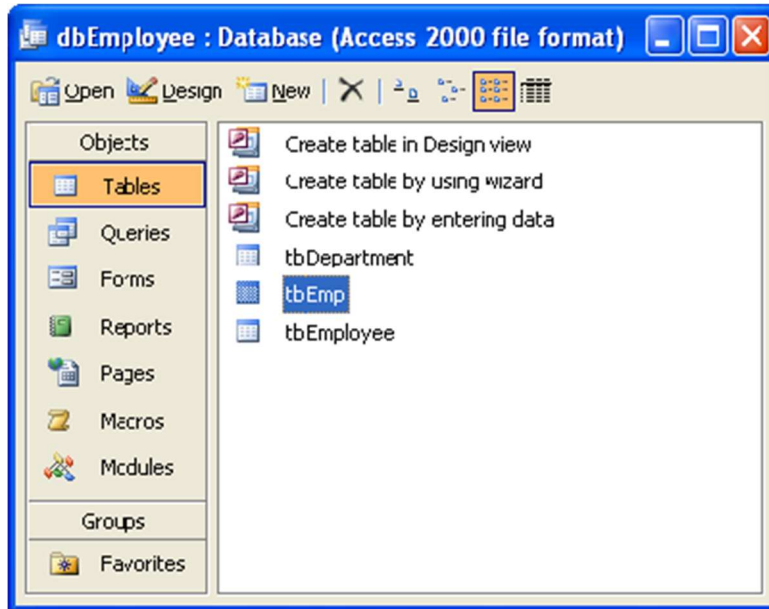
5. Double-Click on **Create table in Design view**



6. Design the table with the given FieldName and DataType.
7. Right-click on the EmpNo. Set it as Primary Key.
8. Save the table with **tblEmp** name.



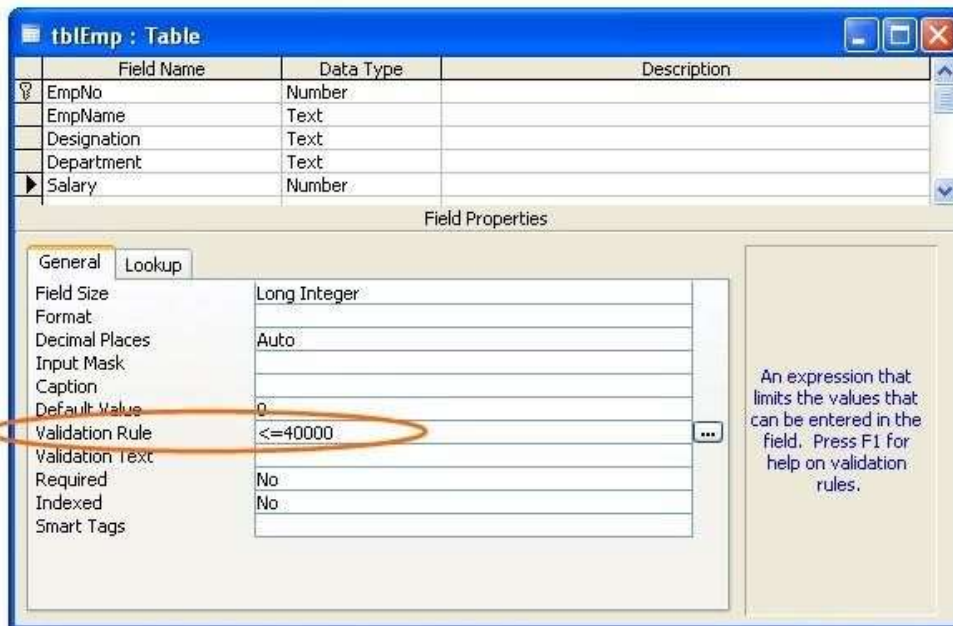
9. Observe that the dbEmployee database contains tblEmp table in the database window.



Salary field cannot accept > 40,000

To restrict fields from accepting a range of values, we can give validation rules in Design View.

10. To restrict Salary field not to accept Salary more than 40000, click Salary field of tblEmp table, in field properties, locate Validation Rule and type <= 40000.

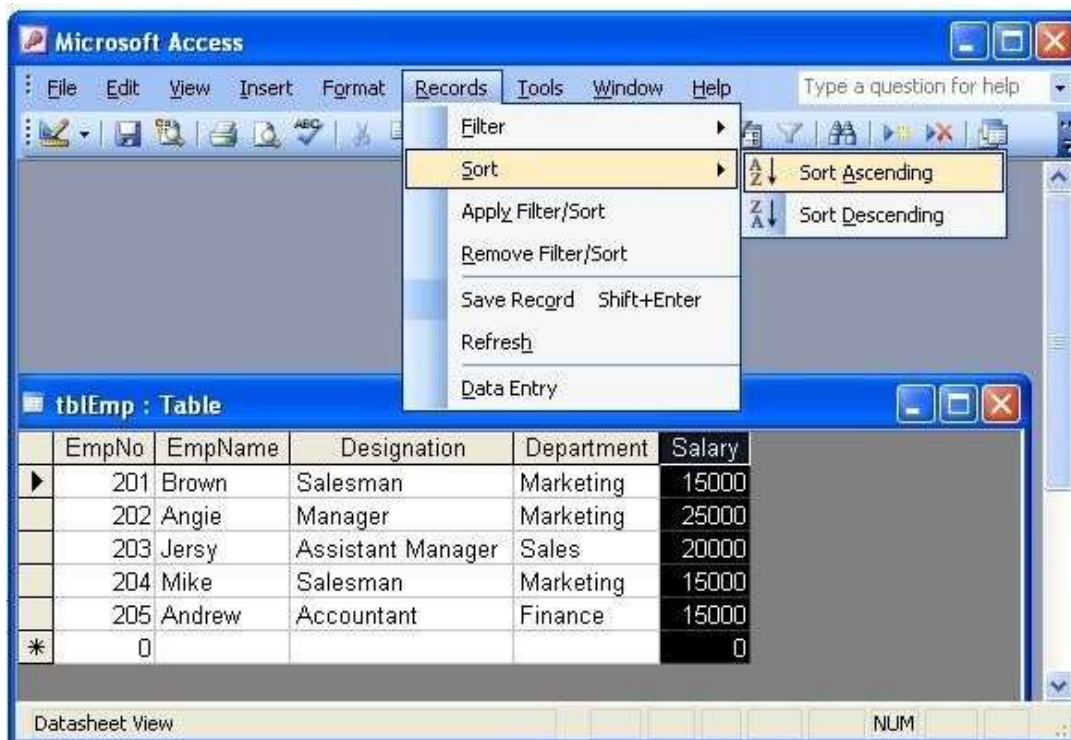


11. You can fill the table with sample data. If you attempt to give any number greater than 40000, it'll show violation error.

EmpNo	EmpName	Designation	Department	Salary
201	Brown	Salesman	Marketing	15000
202	Angie	Manager	Marketing	25000
203	Jersey	Assistant Manager	Sales	20000
204	Mike	Salesman	Marketing	15000
205	Andrew	Accountant	Finance	15000
*	0			0

Sort Salary field

12. To sort Salary field, Select the field content, go to Sort-> Sort Ascending (to sort in increasing order of Salary) or Sort Descending. In this example we select Sort Ascending



Sorted result is displayed in the illustration below:

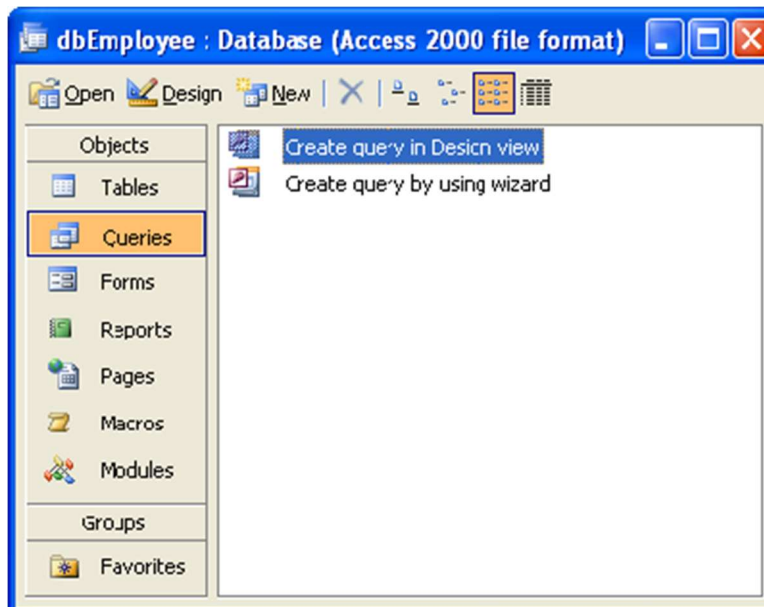


	EmpNo	EmpName	Designation	Department	Salary
▶	205	Andrew	Accountant	Finance	15000
	204	Mike	Salesman	Marketing	15000
	201	Brown	Salesman	Marketing	15000
	203	Jersy	Assistant Manager	Sales	20000
	202	Angie	Manager	Marketing	25000
*	0				0

Recrdd: 1 of 5

Write a query to display the records for salary > 20,000

13. In the **Database** window, select Queries under **Objects**:

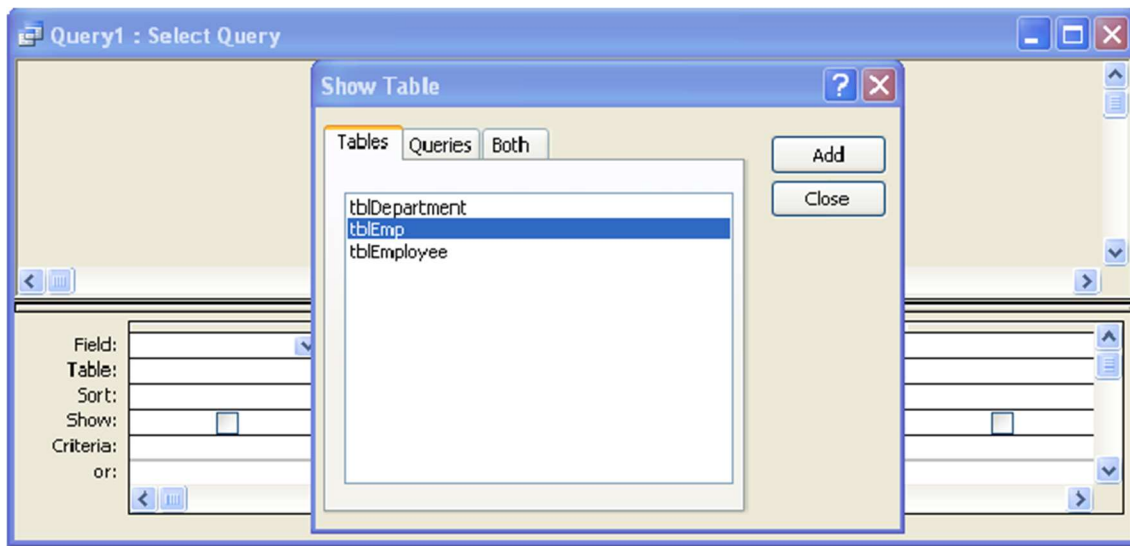


14. Double click on **Create Query in Design View**

Select Query window along with **Show Table** dialog box appears.

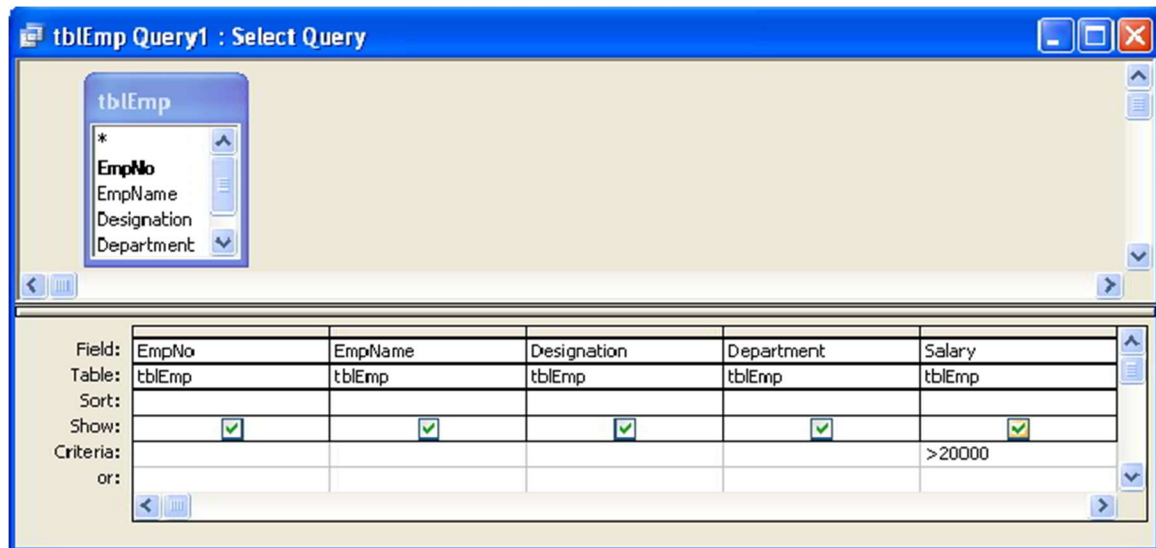
15. Select table **tblEmp** and click on **Add** button.

16. Close the **Show Table** dialog box



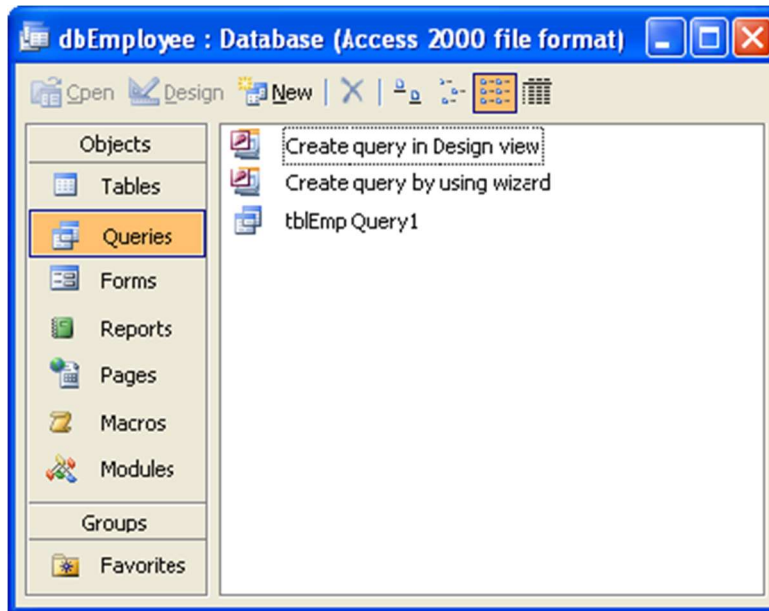
17. In the Select Query window, drag and drop fields of tblEmp table in the Filed row.

18. In the Criteria row, select the cell that intersects with Salary. Type >20000, since our query is to display all the records that contain salary >20000,



19. Save and name the query as **tblEmp Query1**

20. To run the query, double-click on the **tblEmp Query1**



The result will be displayed on the screen.

The screenshot shows the results of the 'tblEmp Query1' query displayed in a table view. The table has the following columns: EmpNo, EmpName, Lesignation, Department, and Salary. The first row shows a record for 'Angie', a Manager in the Marketing department with a salary of 25000. The second row is a summary row with an asterisk in the EmpNo column and a '0' in the Salary column.

	EmpNo	EmpName	Lesignation	Department	Salary
▶	202	Angie	Manager	Marketing	25000
*	0				0

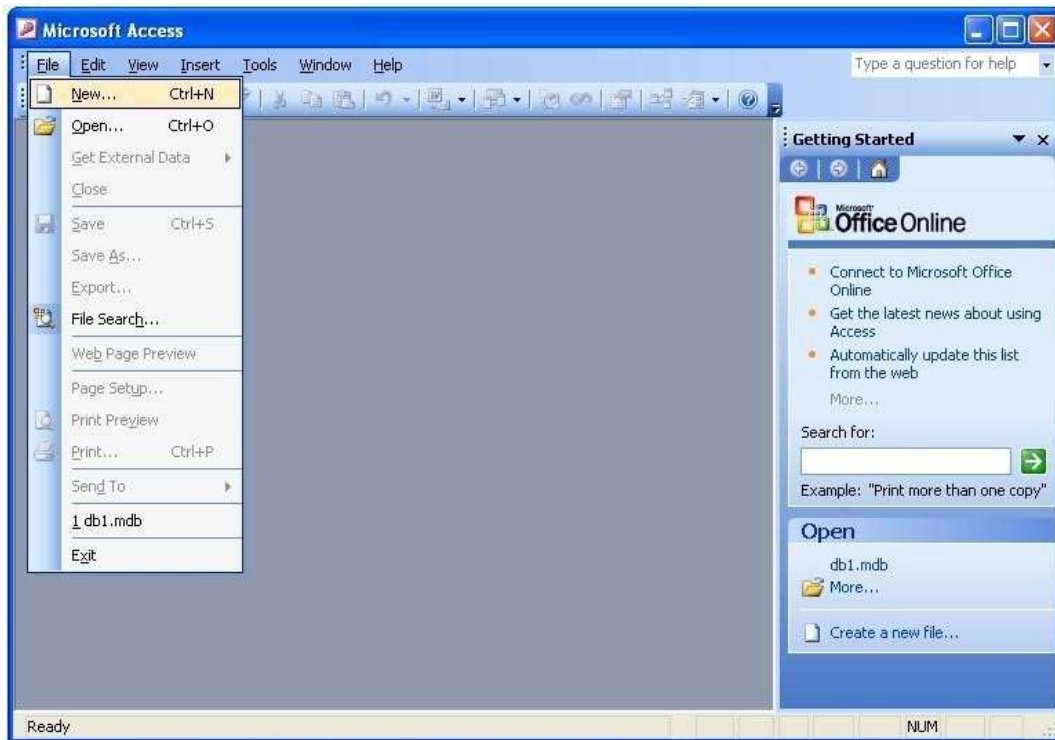
Record: 1 of 1

19. Create a database dbBusiness and a table tblBill.

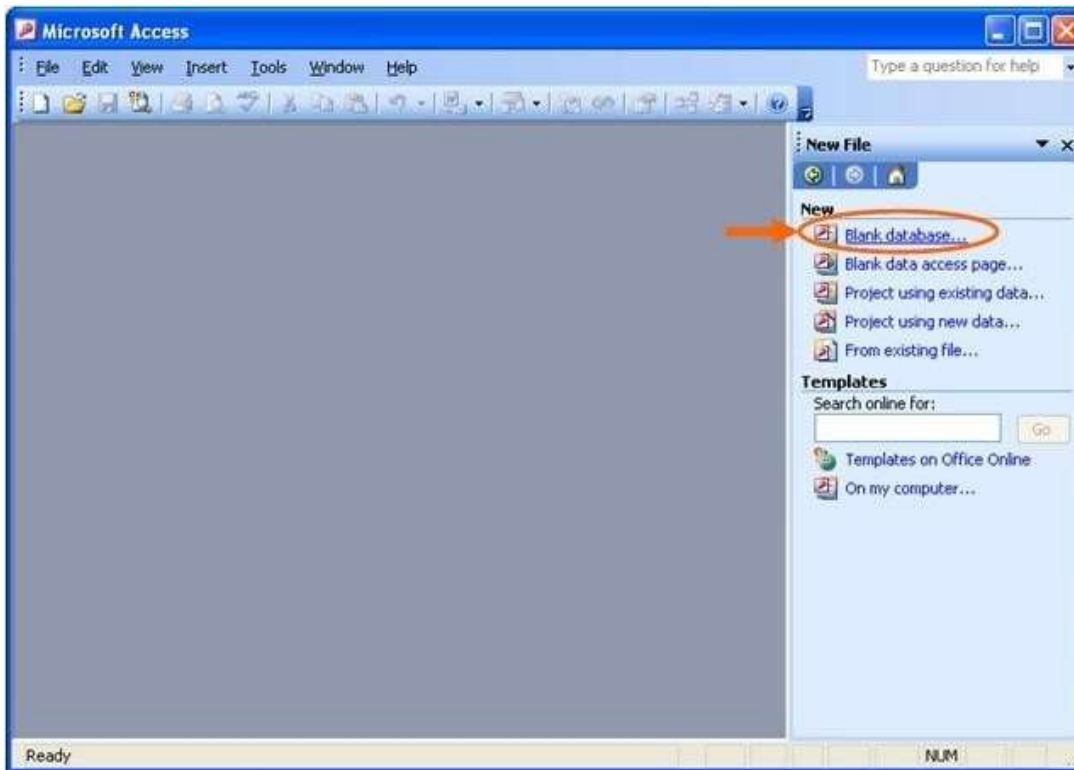
Table: tblBill	
Field Name	Data type
BillNo	AutoNumber
ItemNo	Number
ItemName	Text
ItemPrice	Number
Quantity	Number
Total	Number

- Create Query to calculate Total
- Create a Form using tblBill table.
- Create Macro to Open Form to Fill data in Table.

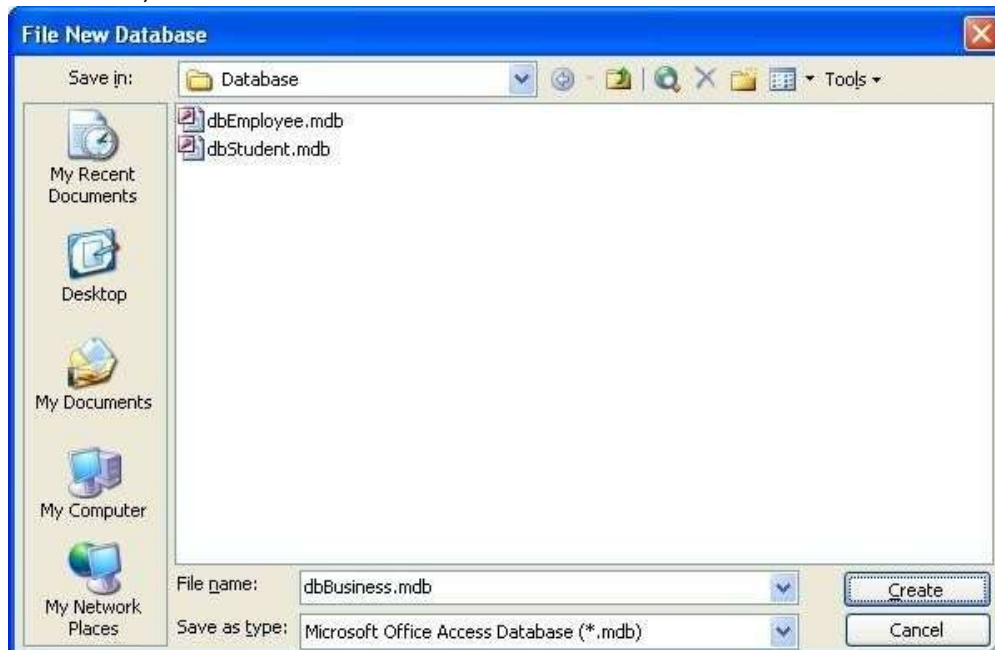
1. First, you need to create a directory in My Document with name "database"
2. Click on the Start button, point to Programs, followed by Microsoft Office and click on Microsoft Office Access 2003.



3. Select Blank database from right panel.

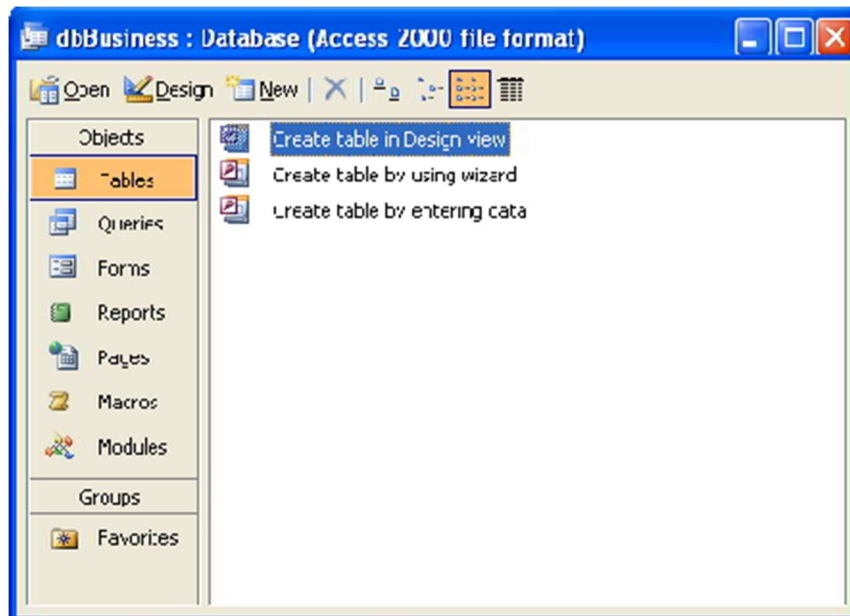


4. Find the directory you just created and type the database name, say “dbBusiness” in this case, and then click “Create” button.

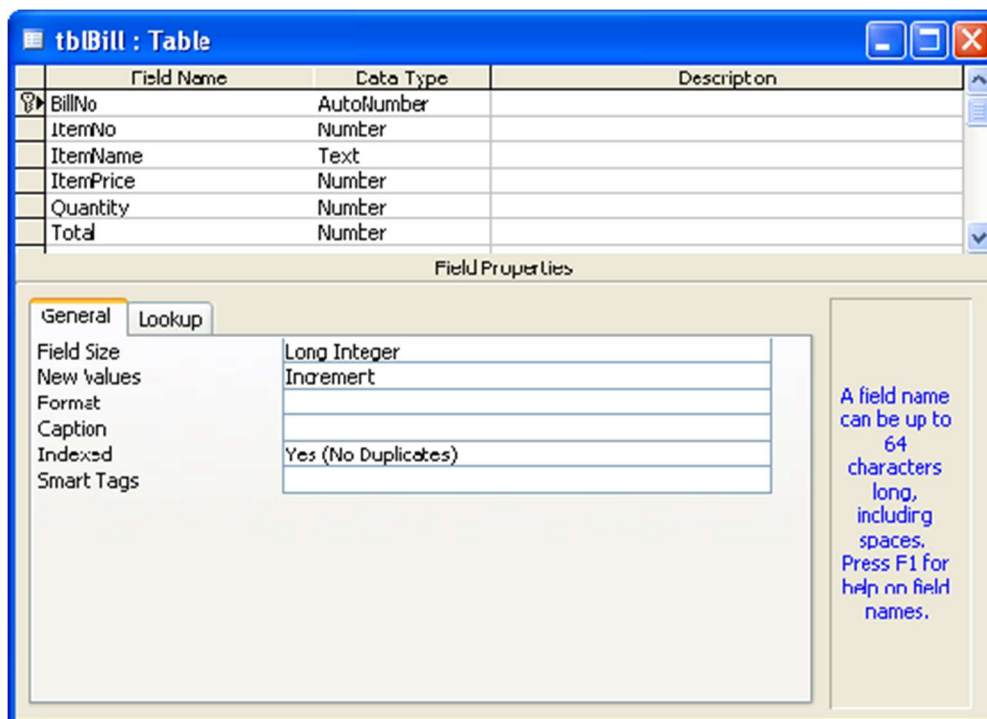


Create tblBill in Design View:

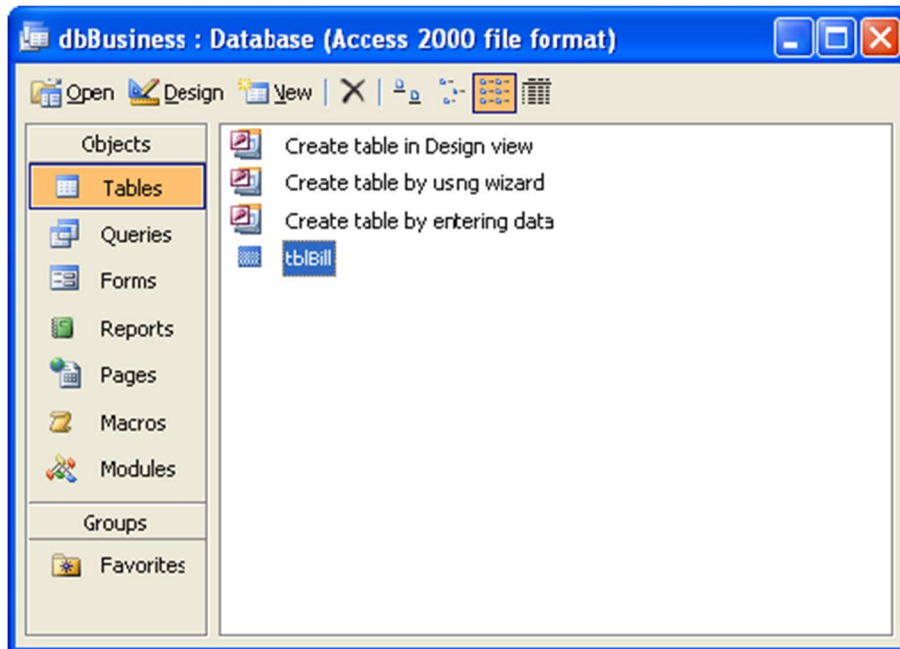
5. Double-Click on **Create table in Design view**



6. Design the table with the given FieldName and DataType.
7. Right-click on the BillNo. Set it as Primary Key.
8. Save the table with **tblBill** name.

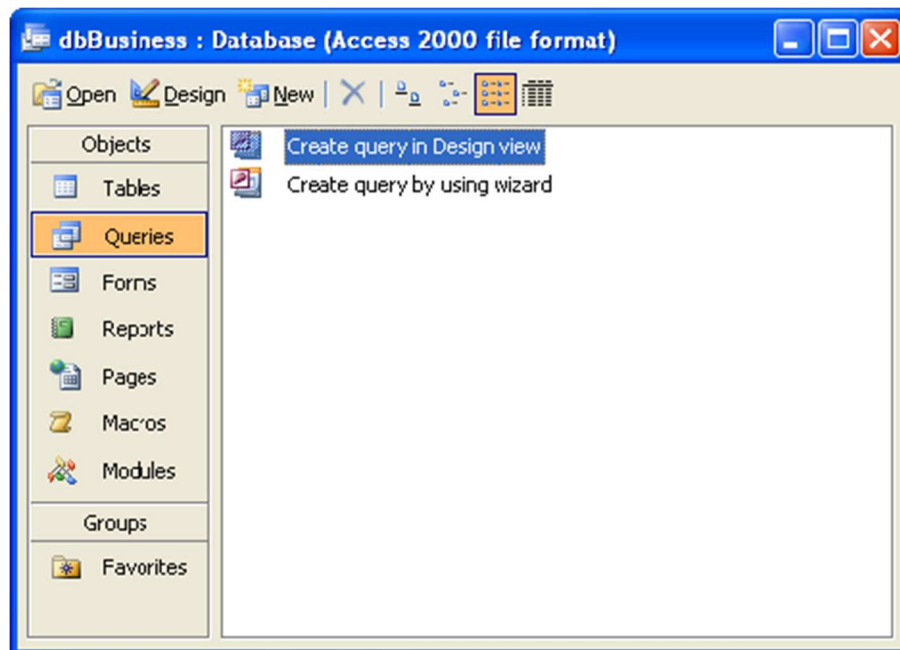


9. Observe that the **dbBusiness** database contains **tblBill** table in the database window.



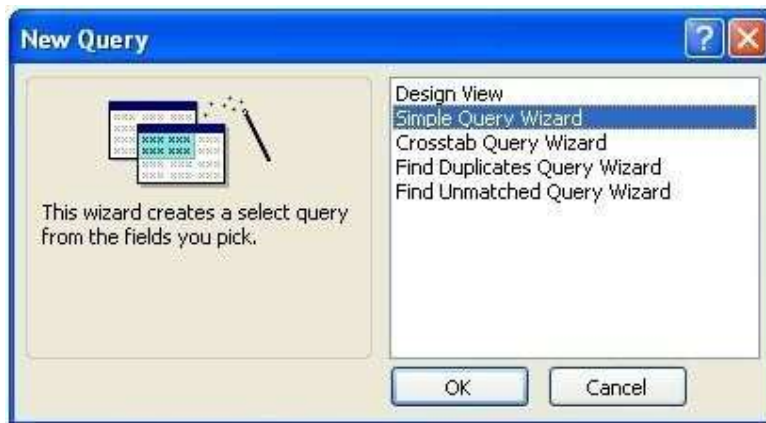
Query

10. Create a query that calculates $Total = ItemPrice * Quantity$.
11. To do this, in the **Database** window Click **Queries** from **Objects** panel.

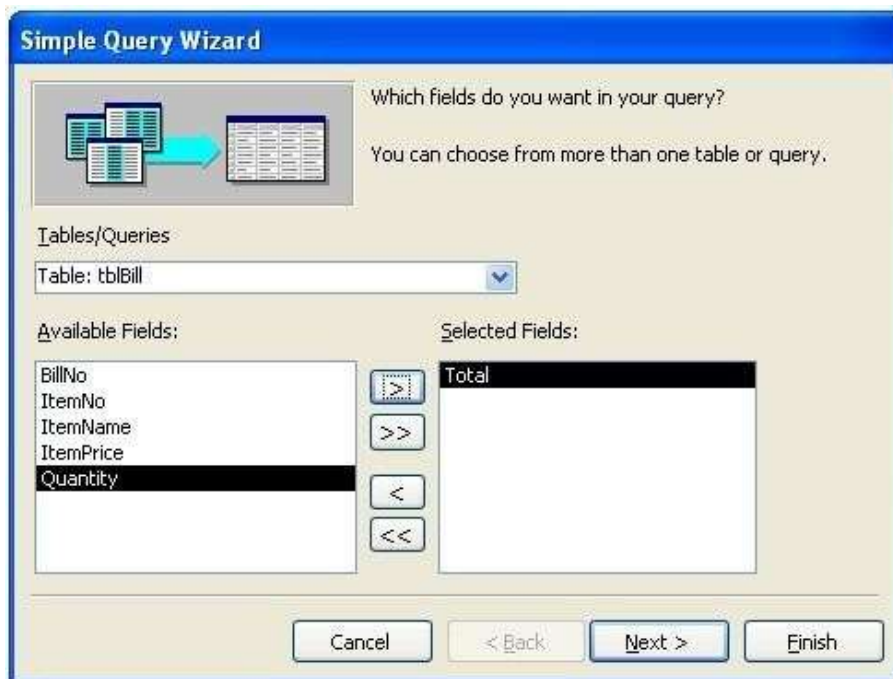


12. Click on New button. New Query dialog box appears.

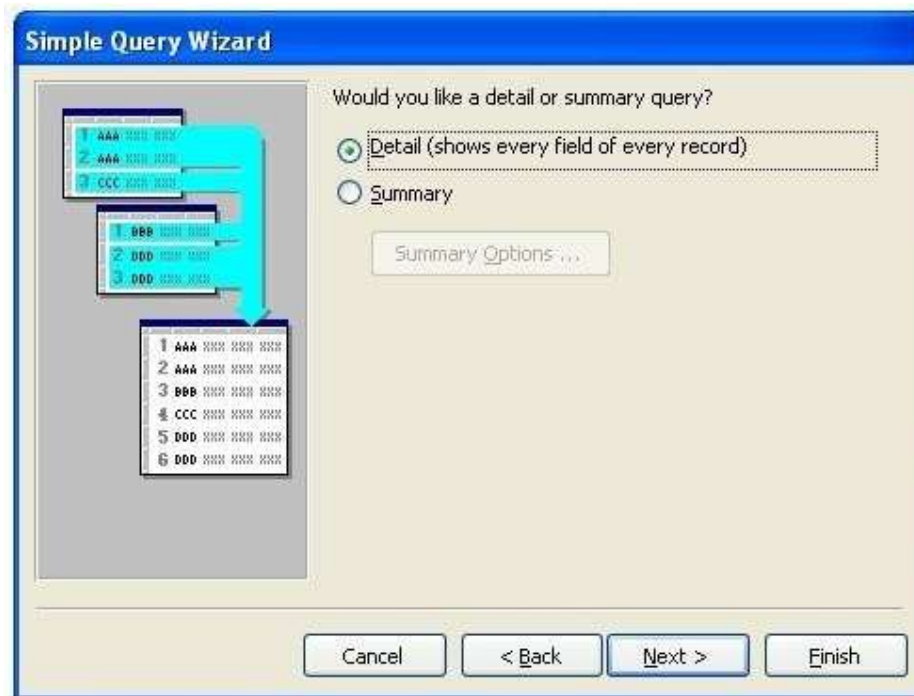
13. Select Simple Query Wizard. Click OK



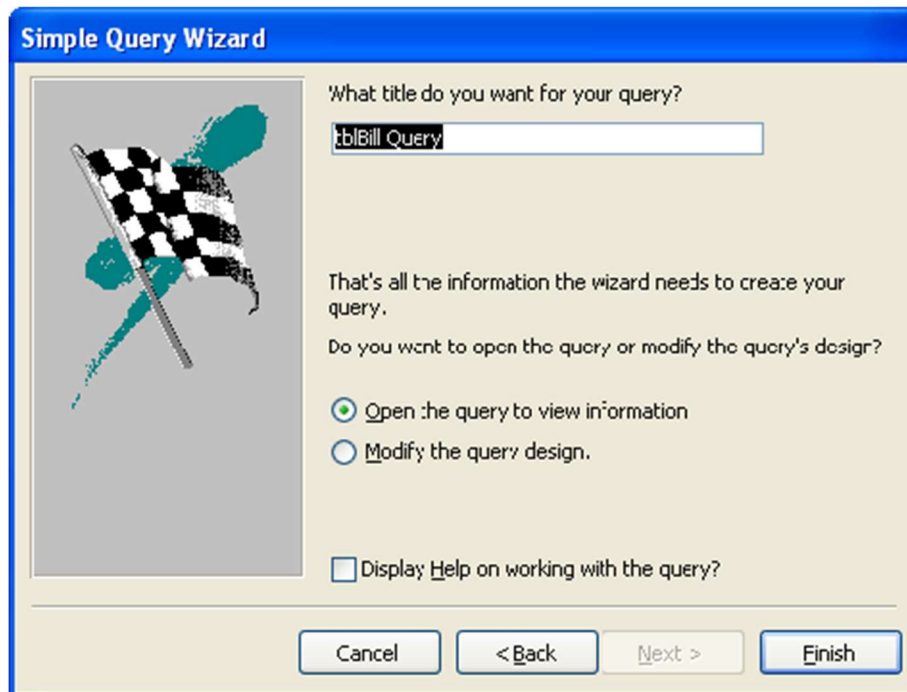
14. As we need to calculate query on Total, select single field Total and click on Next button.



15. Click Next.

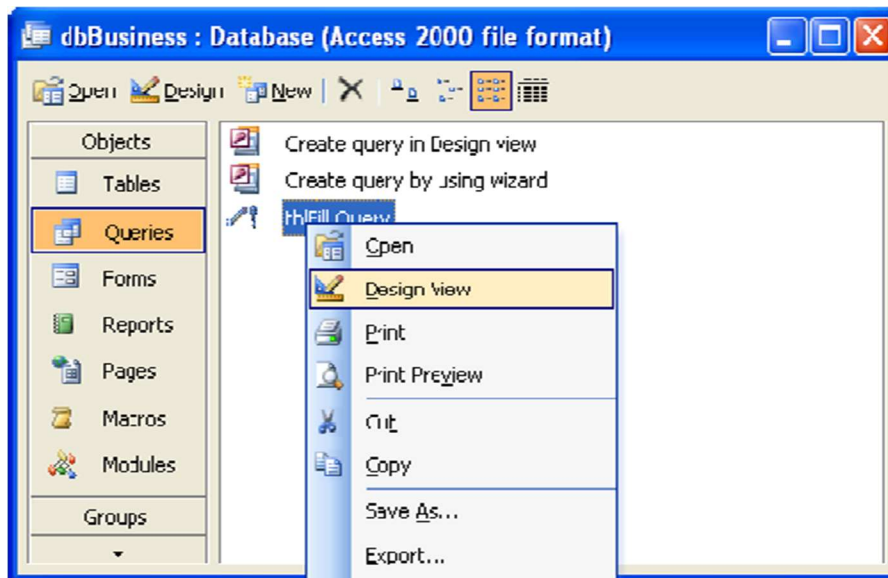


16. Click Next.

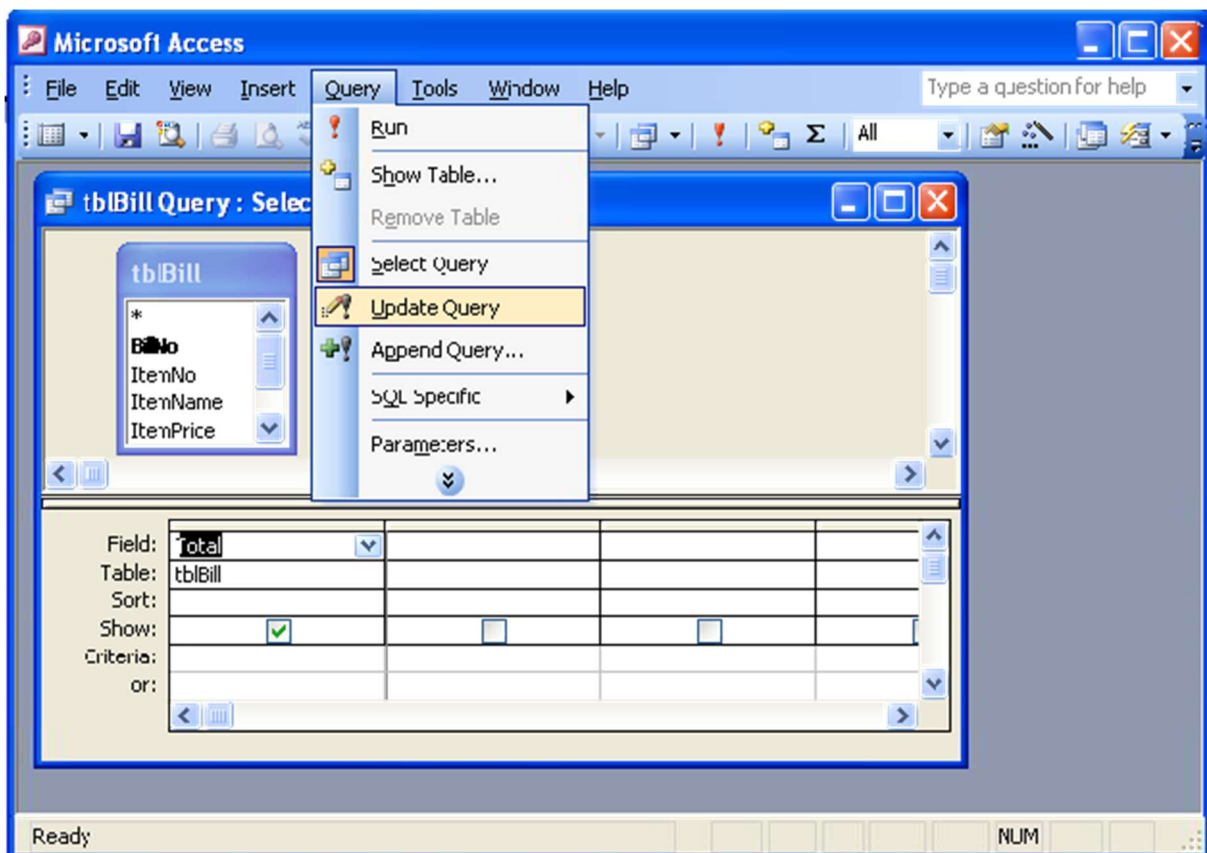


17. Click on Finish button. Close the select query window that appears.

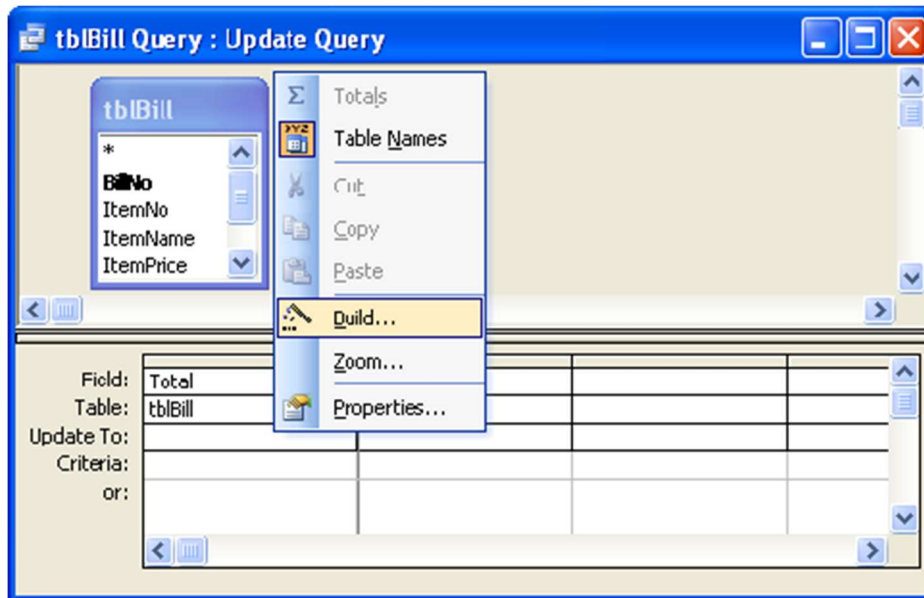
18. Observe that the **dbBusiness** database contains **tblBill Query** in the database window.



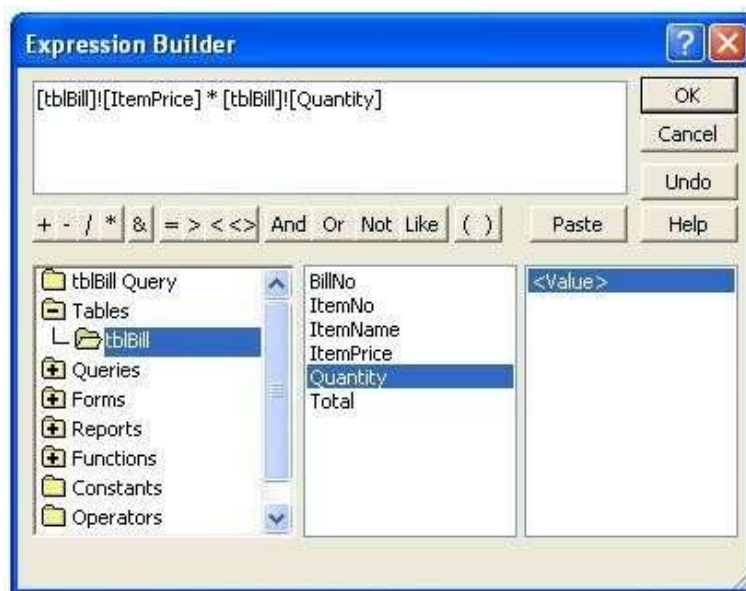
19. Right-click on the **tblBill Query** and select **Design View**
20. Go to Query menu and select Update Query.



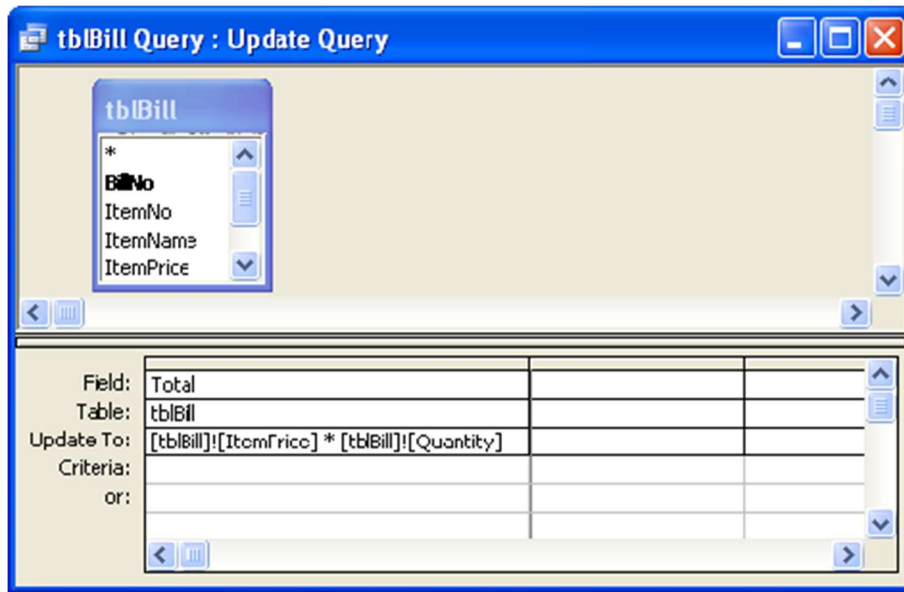
You can observe Sort and Show options are replaced with Update to option.



21. Right-click on the first cell next to Update to: and select Build.
Expression Builder window appears.
22. Double click on tables and select tblBill from first list box.
In the second list box all the fields of tblBill are displayed.
23. Double click on ItemPrice, entry will be added on the above box as **[tblBill]![ItemPrice]**
24. Click on * from the buttons given below the box.
25. Double click on Quantity, entry will be added on the above box as **[tblBill]![Quantity]** next to **[tblBill]![ItemPrice]** *



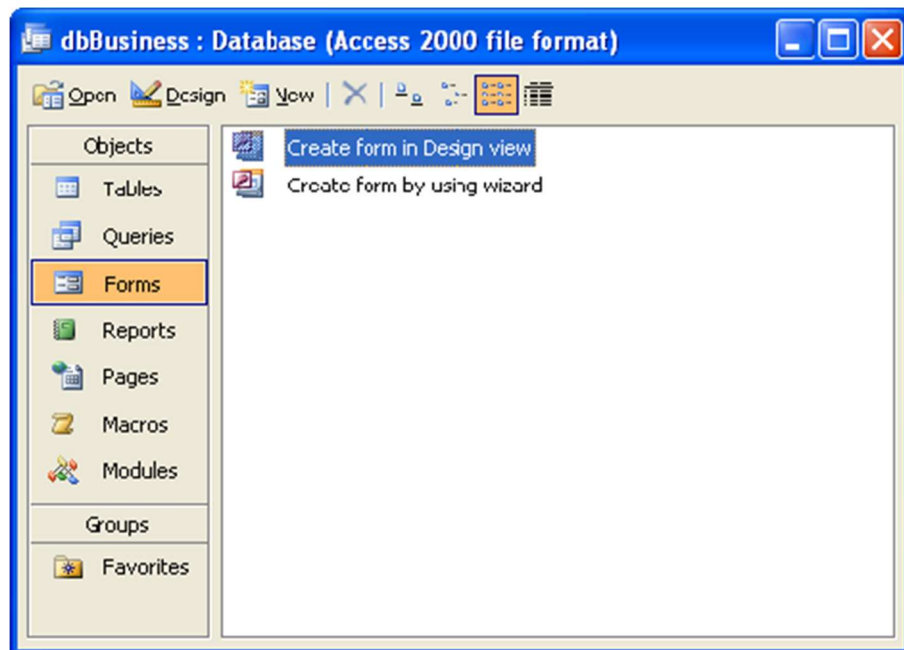
26. Click OK and Save it.



Form

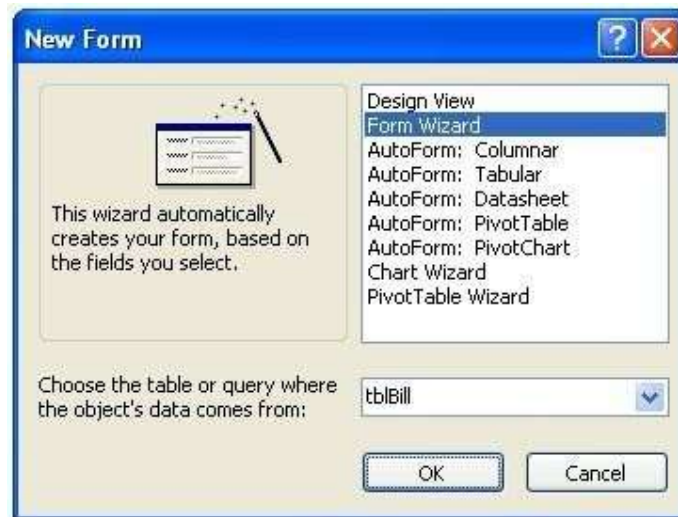
27. After creating Table and Query, Create a Form in the simple way as follows:

28. Select Forms from Database window under Objects.

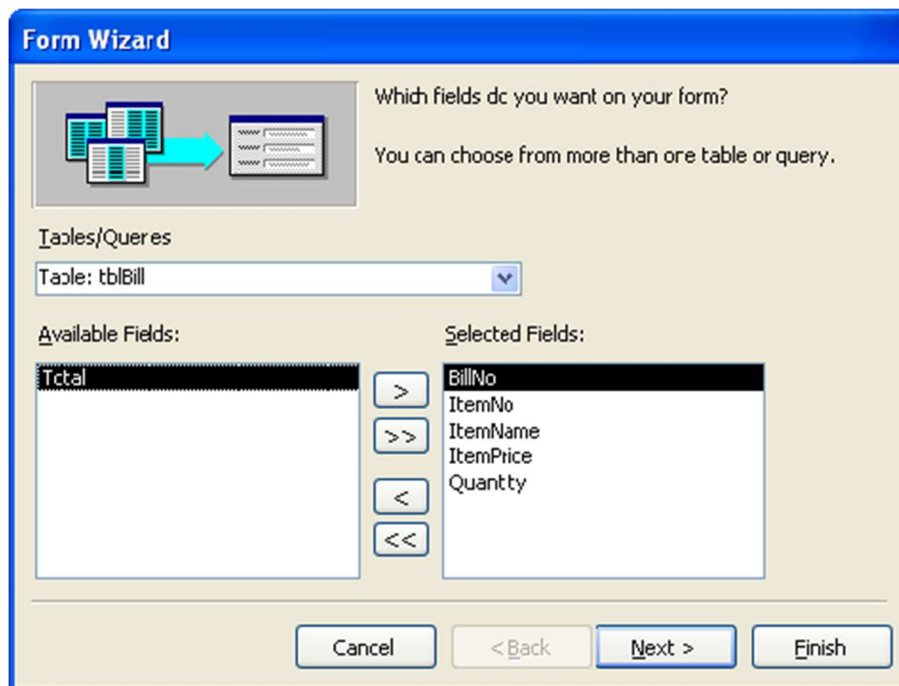


29. Click on New button.

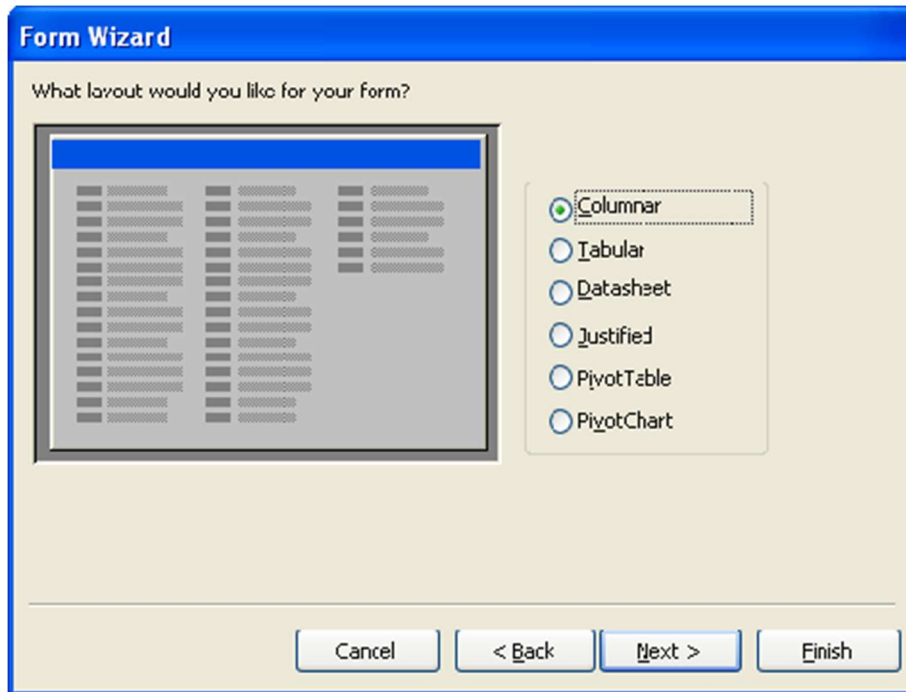
30. Select Form Wizard and select tblBill in the box below and click OK.



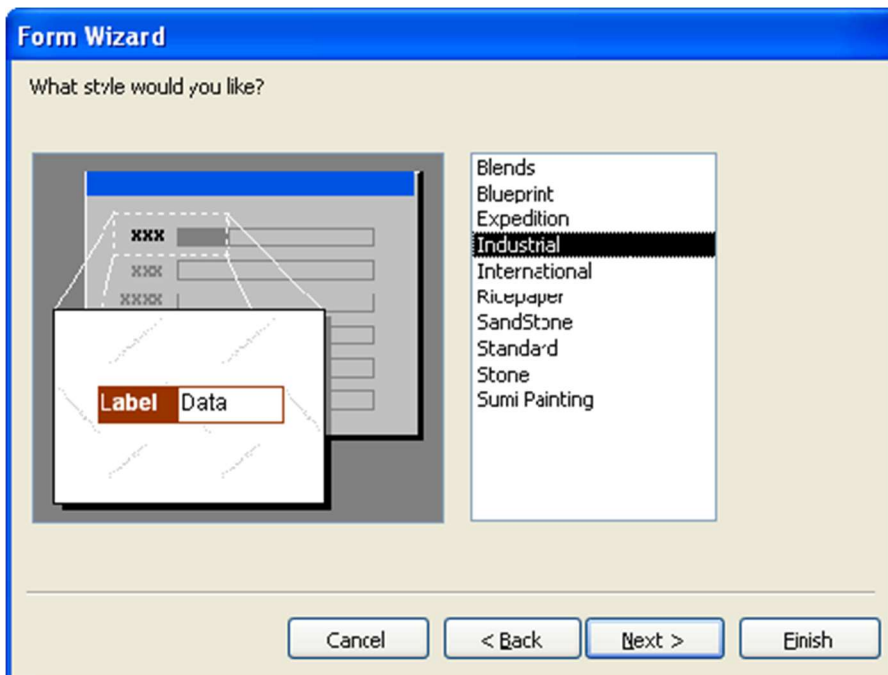
31. Form wizard opens up, select all fields but the Total field.



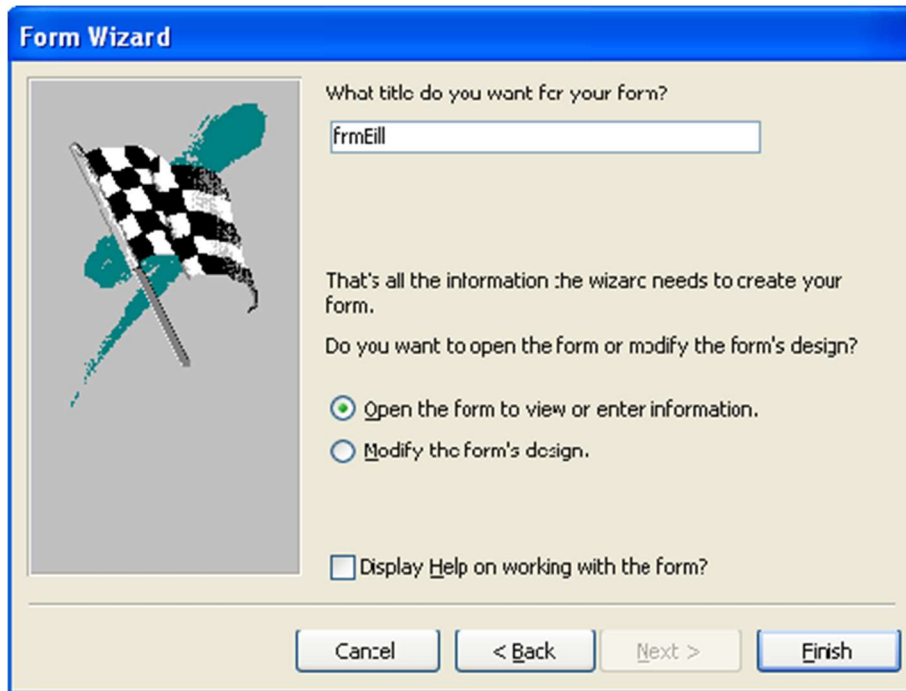
32. Click Next



33. Click Next



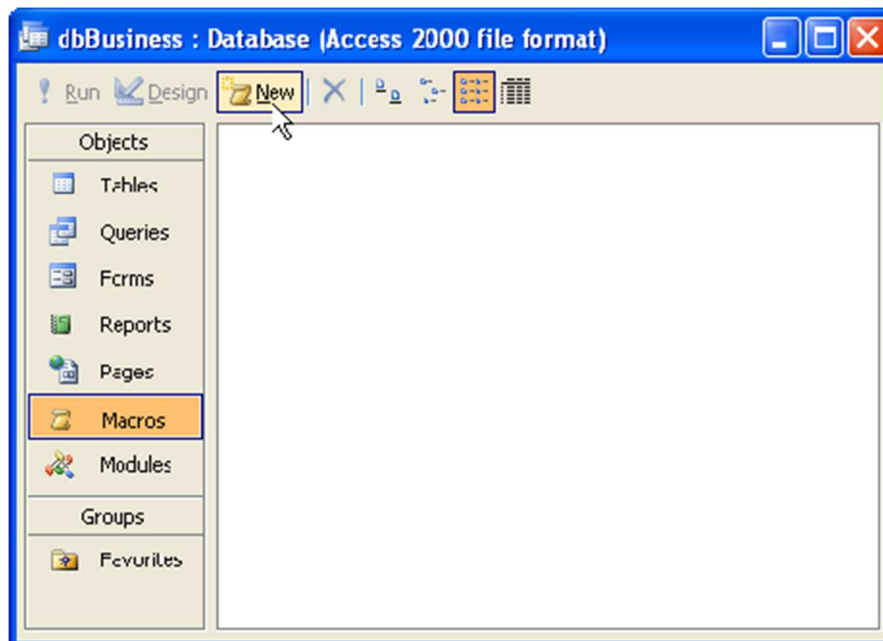
34. Name the form as frmBill.



35. Click Finish.

Macro

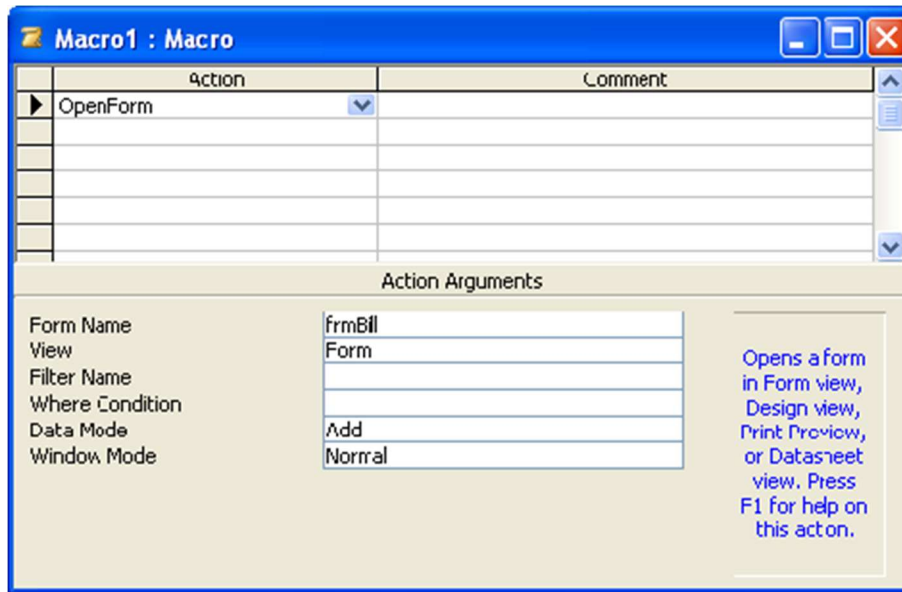
36. Select Macros from **Database** window under **Objects**.



37. Use the dropdown menu to select your first action - choose "OpenForm".

38. In the bottom pane, select the form name you wish to open - choose "frmBill"

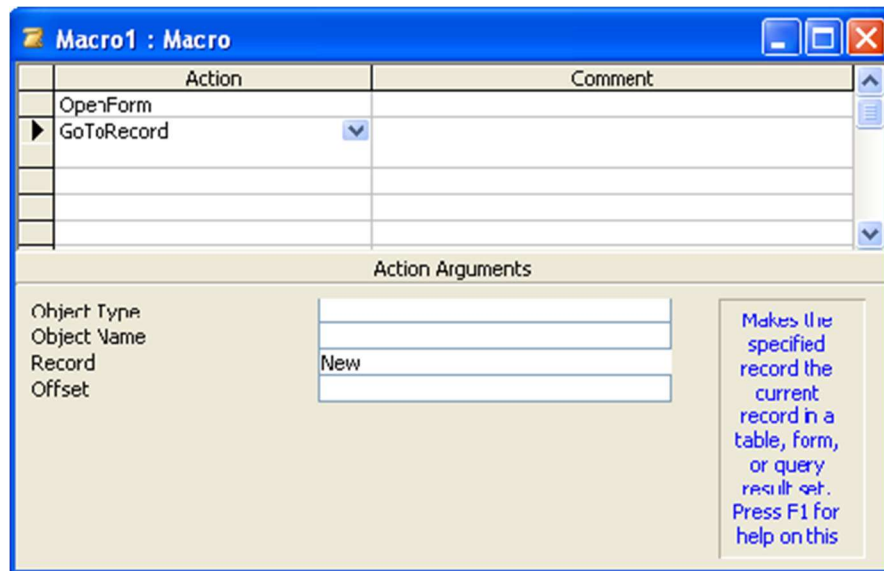
39. Select Data Mode as Add



40. Use the dropdown menu to select your second action - choose "GoToRecord".

41. In the bottom pane, choose the record you want to go to - choose "New".

What we're doing here is ensuring that the form doesn't open up a previous record - it goes straight to the end and has a blank record ready for you to enter a new record (this saves time and unnecessary clicks).



42. Run macro, access will open frmBill for you with New Record. You can fill the records.

Record: 1 of 1

43. Click on Next arrow and fill the details.

Record: 2 of 2

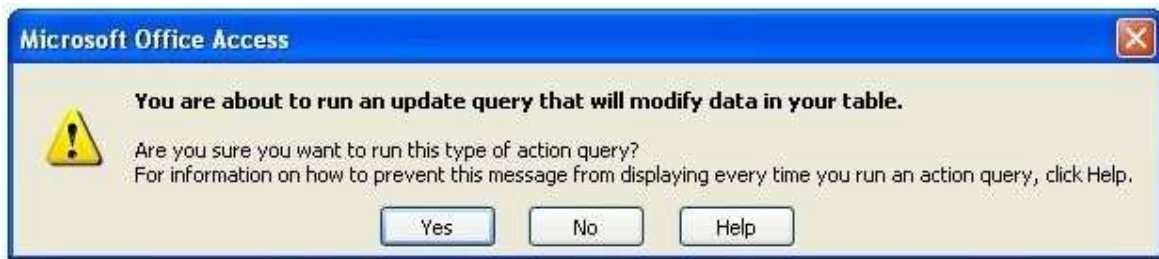
44. After entering details in the similar manner, open table tblBill, you can see the records are filled with the data but the Total field is not calculated.

BillNo	ItemNo	ItemName	ItemPrice	Quantity	Total
1	101	CD	15	50	0
2	304	Motherboard	1400	1	0
3	710	Headphores	740	2	0
4	565	Printer	6050	1	0
5	357	DVD	55	12	0
6	660	RAM	2000	1	0
* (AutoNumber)	0		0	0	0

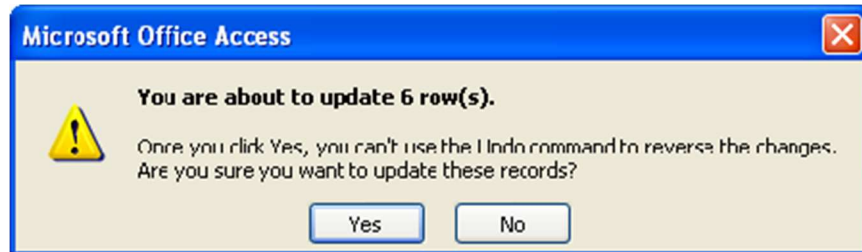
Record: 1 of 6

45. To calculate Total quickly run your query **tblBill Query1**

46. Access prompts before proceeding, click Yes.



47. Again it prompts say Yes.



48. Now open tblBill, you'll see Total field is filled with data calculated.

A screenshot of a Microsoft Access table named "tblBill : Table". The table has six columns: "BillNo", "ItemNo", "ItemName", "ItemPrice", "Quantity", and "Total". The data is as follows:

BillNo	ItemNo	ItemName	ItemPrice	Quantity	Total
1	101	CD	15	50	750
2	304	Motherboard	1400	1	1400
3	710	Headphones	740	2	1480
4	565	Printer	6050	1	6050
5	357	DVD	55	12	660
6	660	RAM	2000	1	2000
* (AutoNumber)	0		0	0	0

At the bottom of the table view, there are navigation controls and the text "Record: 1 of 6".