

Lab 08

Introduction to Spreadsheets MS Excel

Objectives

- The students should understand and have hands on experience in
 - Working with Excel worksheets
 - Formatting Excel sheets

Outline

- Introduction to spreadsheets
- Basics of MS Excel
- Starting a new workbook
- Working with Excel worksheets
 - Entering text and numbers
 - Editing a worksheet
 - Formatting a worksheet

Introduction to Spreadsheets

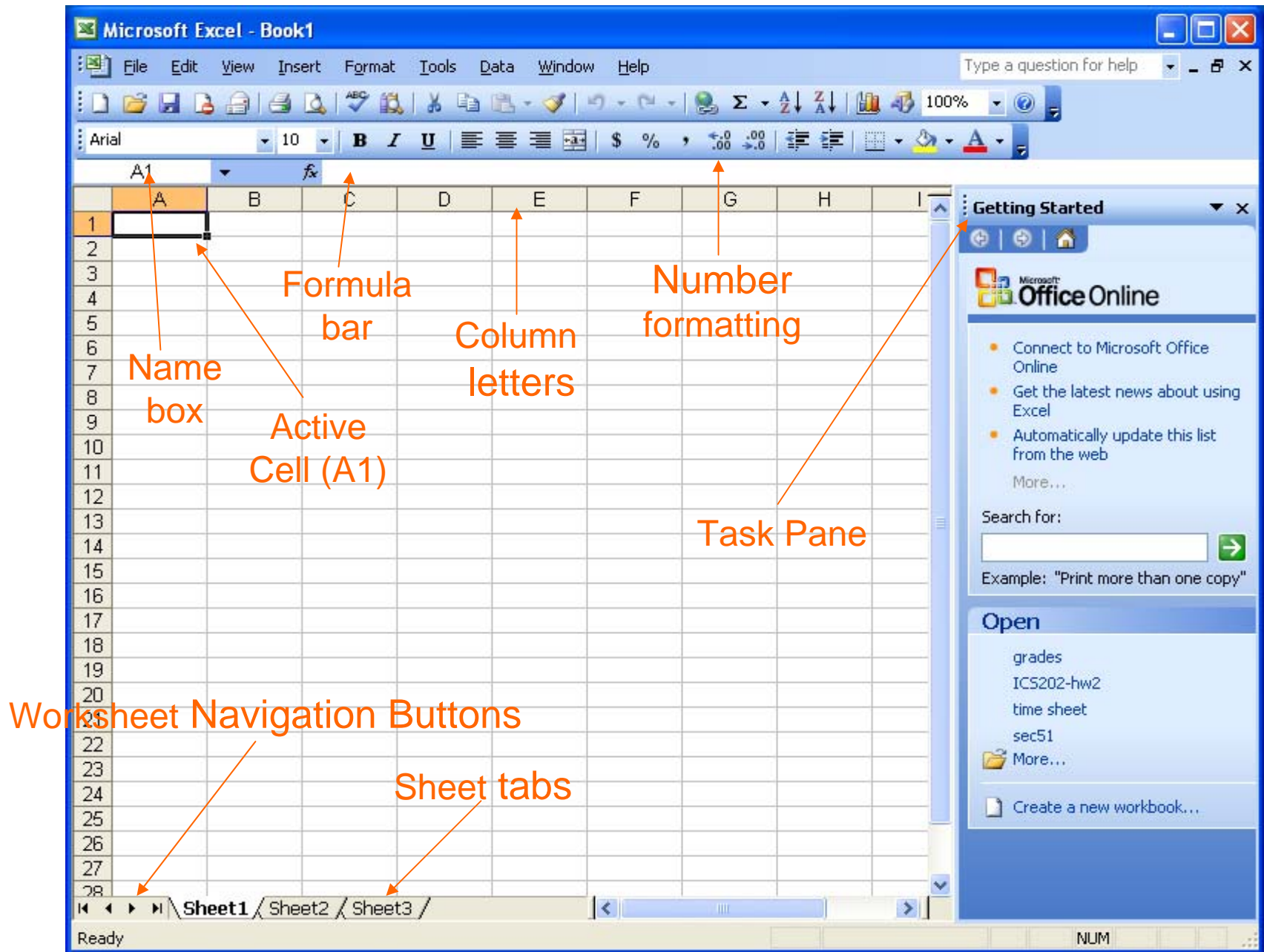
- A **spreadsheet** uses rows and columns of numbers to create a model or representation of a real situation. For example, students grades in a course: rows represent students, columns represent quizzes and exams, and each entry represents the score of a student in a quiz or exam
- Spreadsheet software, such as MS Excel, provides tools to create electronic spreadsheets called **worksheets**.
- Spreadsheet software is useful for what-if analysis



Basics of MS Excel

Starting a New Workbook

- **Start | Microsoft Excel** or **Start | All Programs | Microsoft Excel** will open a new blank **workbook**
- In MS Excel, a workbook consists of three worksheets by default
- The Excel workbook window offers a grid and tools for storing and manipulating numbers and text (next slide)



Starting a New Workbook

- ❑ An Excel **workbook** can contain many **worksheets**.
- ❑ When you start a new workbook, three worksheets namely Sheet1, Sheet2 and Sheet3 are already in place for work.
- ❑ Each worksheet contains 256 columns and more than 65,000 rows.
- ❑ One worksheet is active at any time. A simple click on another worksheet will make that sheet active. You can switch from one sheet to another by just clicking on the desired worksheet
- ❑ Each cell in a worksheet has an address. It is column letter followed by row number like A1, D15, C10

Starting a New Workbook

- Adding a worksheet to workbook
 - In order to add a new worksheet to the current workbook choose **Insert | Worksheet**
- deleting a worksheet to workbook
 - In order to delete the current active worksheet from the current workbook choose **Edit | Delete Sheet**
- Naming a worksheet
 - Double click the sheet tab, when the existing name turns black, simply type the new name.
- Grouping and Ungrouping
 - Pres CTRL and select the worksheet tabs you want to group
 - By clicking any single sheet tab the grouped sheets can be ungrouped

Navigating a Worksheet

- CTRL-HOME
- CTRL-END
- PAGE UP
- PAGE DOWN
- ALT-PAGE UP
- ALT-PAGE DOWN
- CTRL-PAGE UP
- CTRL-PAGE DOWN
- CTRL-UP ARROW
- CTRL-DOWN ARROW
- CTRL-LEFT ARROW
- CTRL-RIGHT ARROW
- CTRL-G
- Choose Edit → Go To



Working With Excel Worksheets

Entering labels into a Worksheet

1. Click a cell to make it the active cell.

2. To enter a label in the active cell, just type the text directly into the cell.

3. To edit a label after you've pressed the Enter key, click the cell, then click in the Formula bar. Type your correction, then press the Enter key to complete your entry.

	A	B	C	D	E	F	G	H	I
1									
2		Income							
3		Expense							
4		Net Income							
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

Entering values into a worksheet

The screenshot shows the Microsoft Excel interface with a worksheet containing the following data:

	A	B	C	D	H	I
1						
2		Income	5428.06			
3		Expense	1806			
4		Net Income				
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

Four numbered instructions are overlaid on the screenshot:

1. Click a cell to make it the active cell.
2. Type a value into the cell.
3. Type a minus sign or a decimal point, if needed, but don't enter any other characters.
4. To edit a value after you've pressed the Enter key, click the cell, then click the Formula bar. Type your correction, then press the Enter key to complete your entry.

Editing a Worksheet

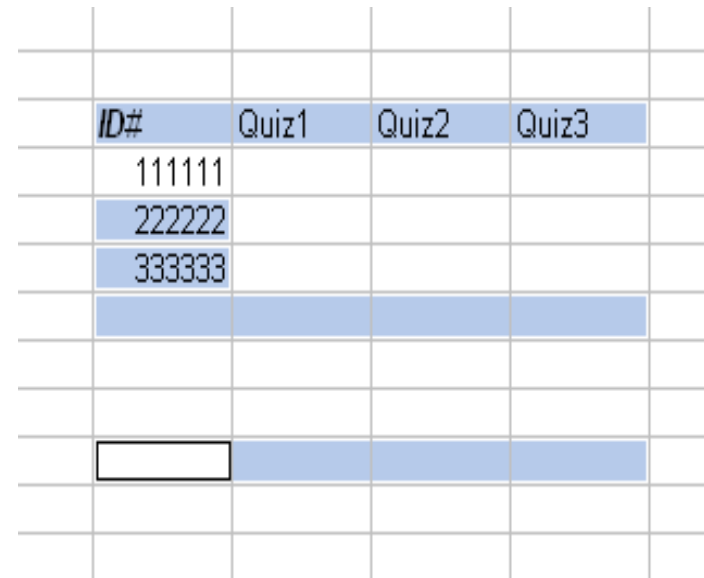
- Editing cell contents
 - To replace the data in any cell, click the cell and type new data
 - To edit the contents of a cell, click the cell and press F2 or double click to activate the cursor in the cell.
 - You can also edit the selected cell in the formula bar.

Editing a Worksheet

- Selecting a continuous block of cells
 1. To select a block of cells click in the first cell you want to select.
 2. Press down the mouse button and drag up or down and left or right until all the required cells are selected.
 3. Selected cells will be highlighted

Editing a Worksheet

- Selecting a block of cells that are not continuous
 1. Select the first cell or block of cells
 2. Move the cursor to the cell that you also want to select.
 3. Keep the CTRL key pressed and select the cell or cells
 4. Selected cells will be highlighted.
 5. The process can be repeated as needed



The image shows a portion of an Excel spreadsheet with a grid. The first row contains the headers 'ID#', 'Quiz1', 'Quiz2', and 'Quiz3'. The second row contains the value '111111' under 'ID#'. The third row contains '222222' under 'ID#'. The fourth row contains '333333' under 'ID#'. A blue selection bar highlights the first three rows (rows 2, 3, and 4) across all four columns. A second blue selection bar highlights a single cell in the first column of the sixth row, and another blue selection bar highlights the remaining three columns (Quiz1, Quiz2, Quiz3) of the sixth row. This illustrates the process of selecting non-contiguous cells.

ID#	Quiz1	Quiz2	Quiz3
111111			
222222			
333333			

Editing a Worksheet

- Selecting entire column or rows.
 - To select the entire column, click the column letter once
 - To select the entire row Click the row number once.

3						
4	ID#	Quiz1	Quiz2	Quiz3		
5	111111					
6	222222					
7	333333					
8						

A vertical screenshot of an Excel worksheet showing column B selected. The column header 'B' is highlighted in blue at the top. Below it, the cells in column B are also highlighted in blue. The data in column B is as follows:

ID#
111111
222222
333333

Editing a Worksheet

□ Inserting a column

- To insert a new column, select the column and choose Insert → Columns
- The inserted column will be to the left of the selected column.

□ Inserting a row

- To insert a new row, select the row and choose Insert → Rows
- The inserted row will be above the selected row.

Saving a Workbook

- To save a workbook

1. From the File menu, choose Save As
2. Save As window will appear. Choose an appropriate folder and type the file name
3. Click save

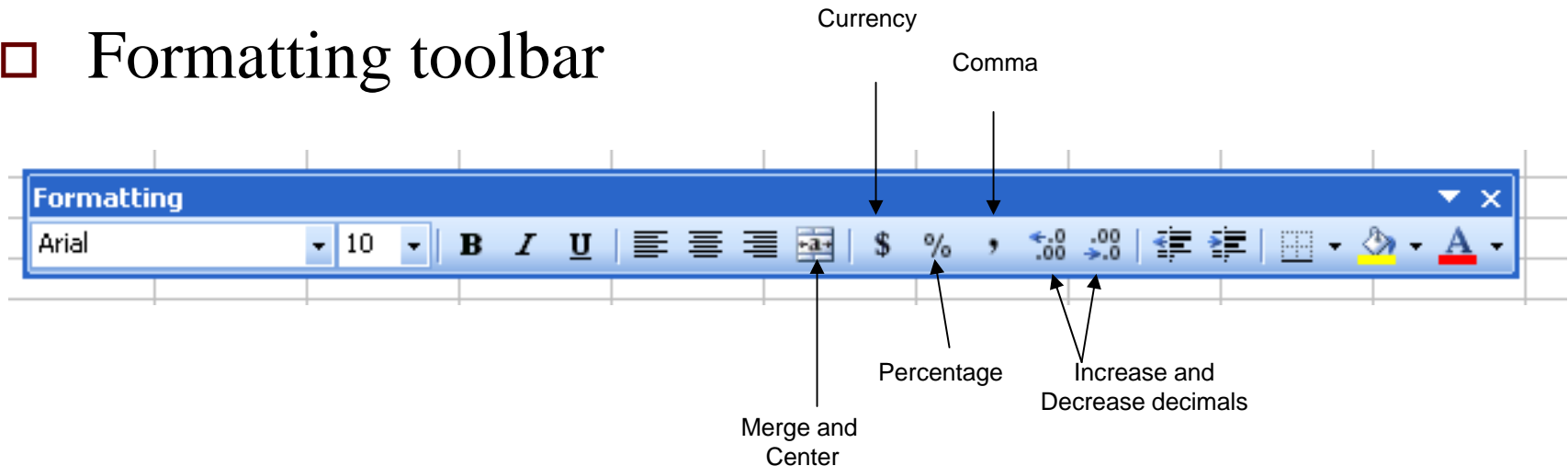
NOTE: Saving a workbook is same as saving any other MS Office document

- You can also save a workbook as a template.

NOTE: The advantages of a template were discussed in Microsoft Word 2003.

Formatting Contents of a Worksheet

□ Formatting toolbar



- To get information about an icon in the formatting tool bar, position the cursor on the icon and wait for few seconds. The icon information will pop up

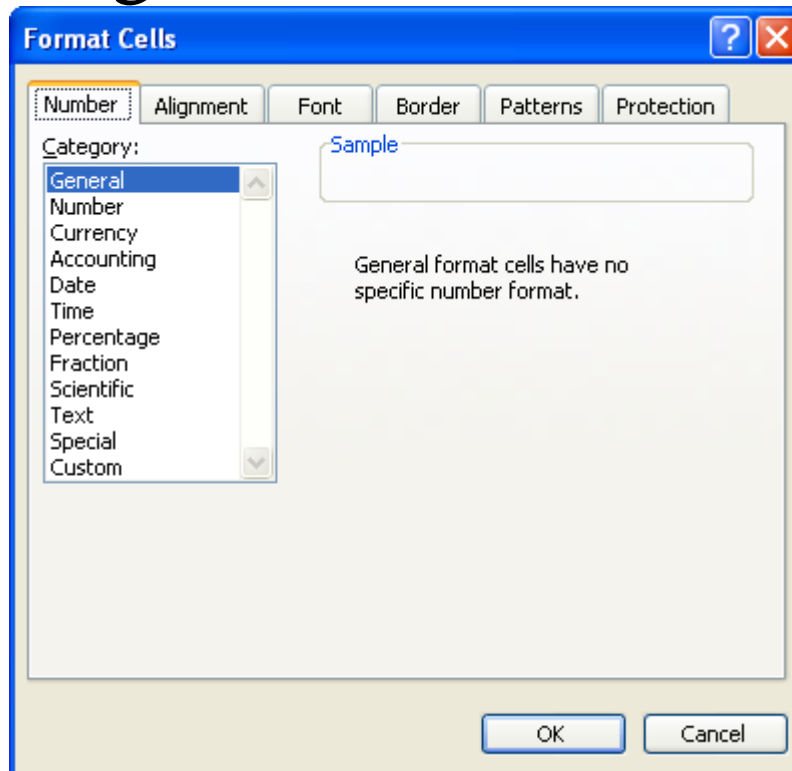


Formatting Contents of a Worksheet

- Formatting
 1. Cells
 2. Rows
 3. Columns
 4. Sheet

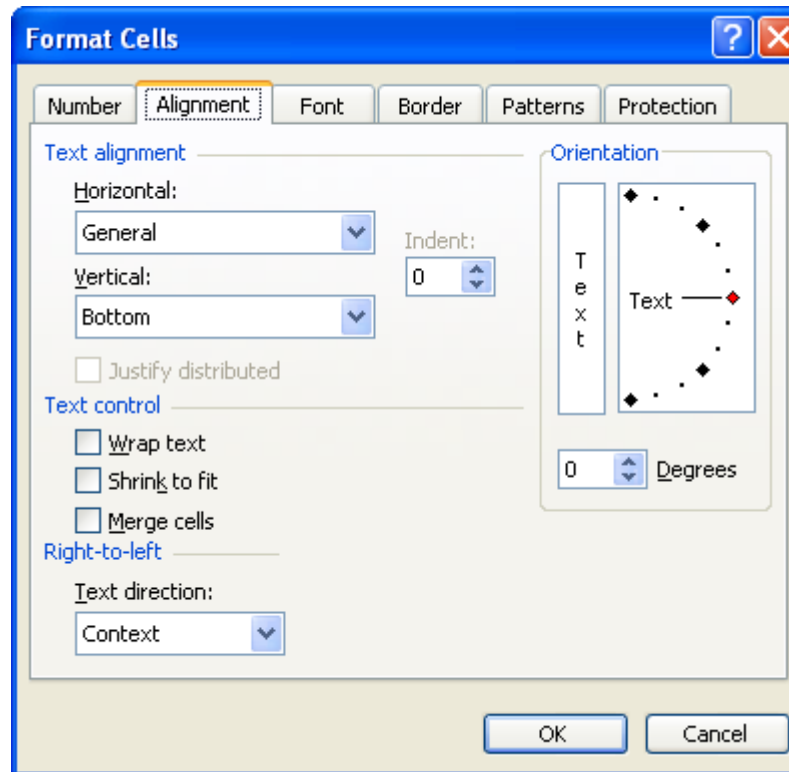
Formatting Contents of a Worksheet

□ Formatting numbers in cells



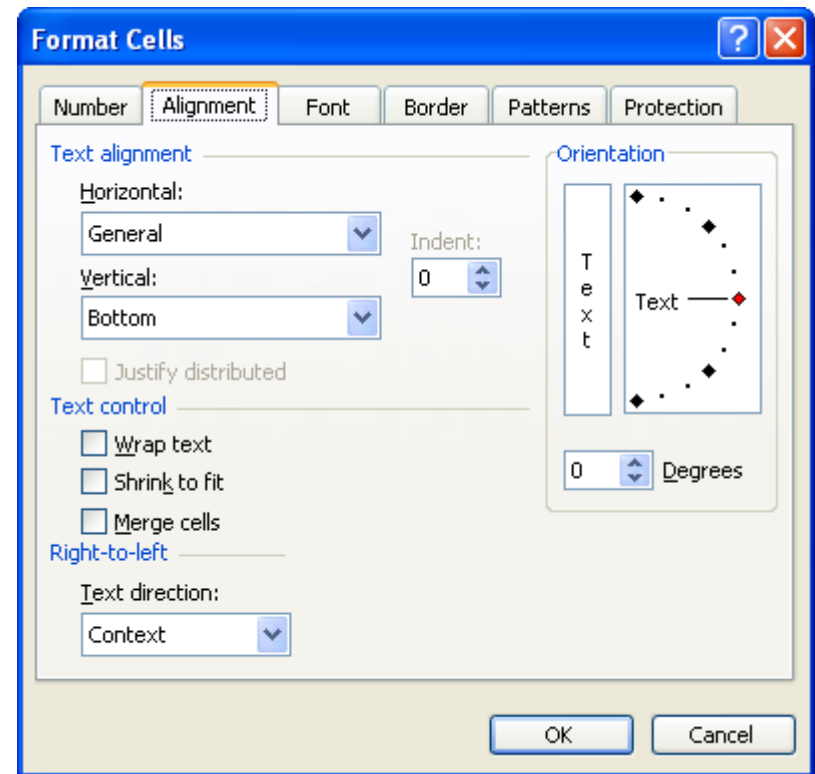
Formatting Contents of a Worksheet

- Formatting alignment of cell contents



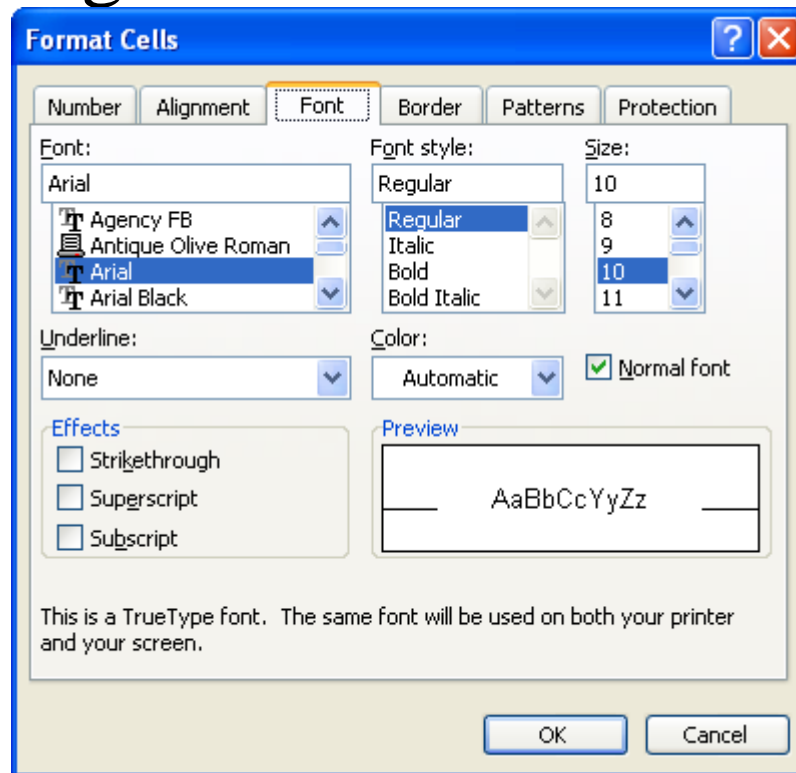
Formatting Contents of a Worksheet

- Changing the angle of text
 - Select the cell for which you want to change the orientation.
 - Choose Format → Cells and set the desired orientation for the text in degrees



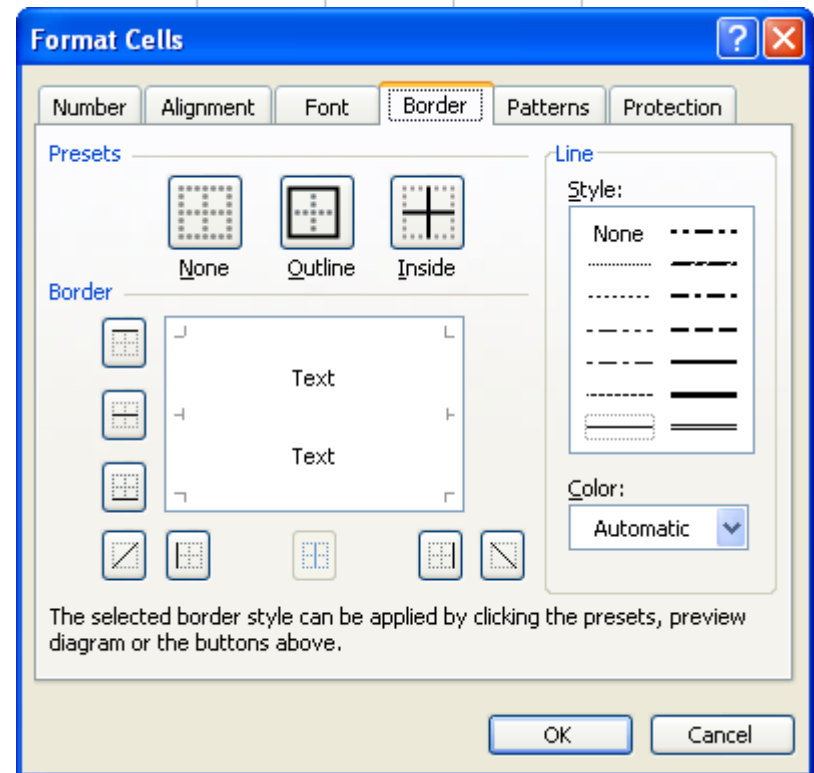
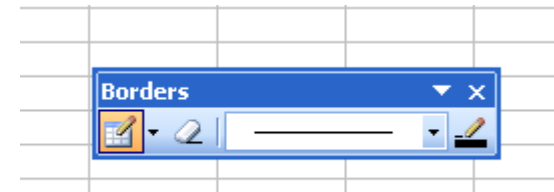
Formatting Contents of a Worksheet

□ Formatting font of cell contents



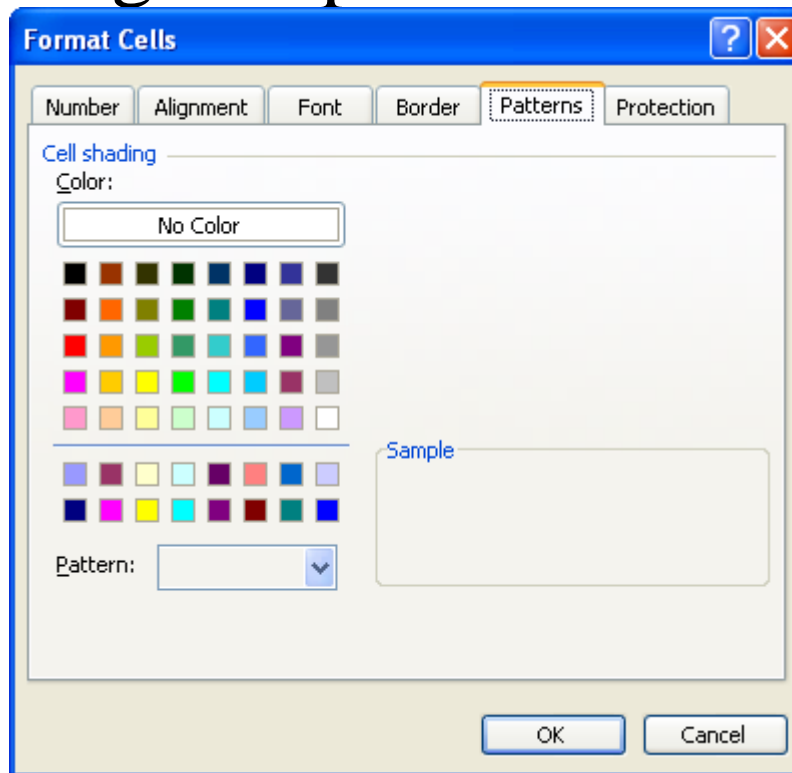
Formatting Contents of a Worksheet

- Formatting borders of cells
- Two ways to format cell borders are
 1. From the Formatting toolbar, use the Border tool
 2. Choose Format → Cells and choose the Border tab.



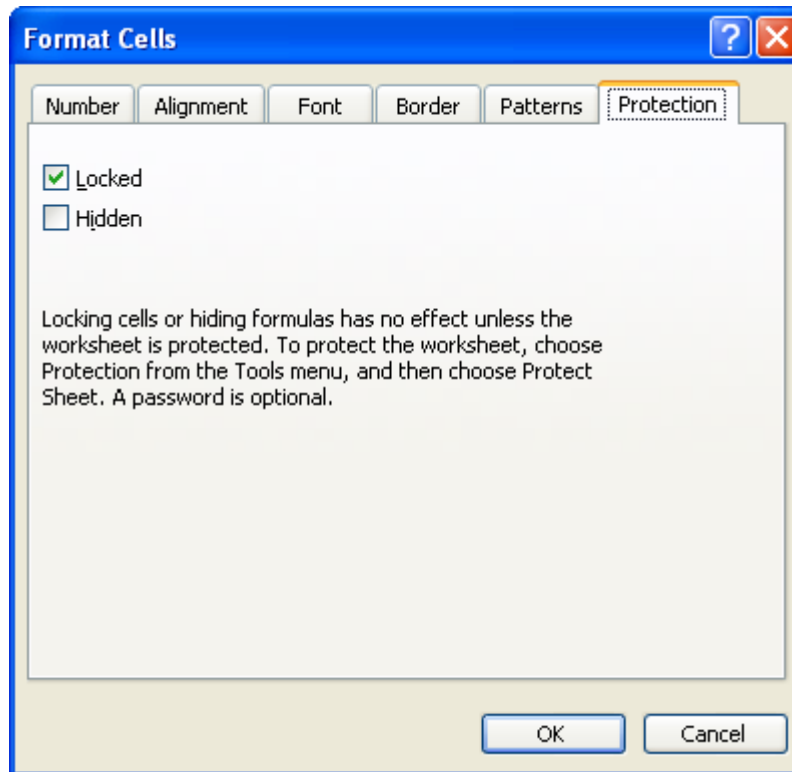
Formatting Contents of a Worksheet

□ Formatting cell patterns



Formatting Contents of a Worksheet

□ Formatting cell Protection





Formatting Contents of a Worksheet

- Copying cell formats
 - The cell formats can be copied to another cell by using the format painter

Formatting Contents of a Worksheet

□ Formatting rows

1. Height...
2. AutoFit
3. Hide
4. Unhide

□ Formatting columns

1. Width..
2. AutoFit Selection
3. Hide
4. Unhide
5. Standard Width...

Formatting a Worksheet

□ Formatting a worksheet

Format | Sheet

1. Rename
2. Hide
3. Unhide
4. Background...
5. Tab Color...