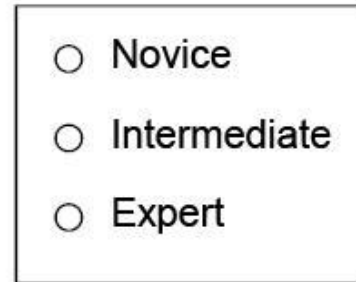


**UNIT-III**

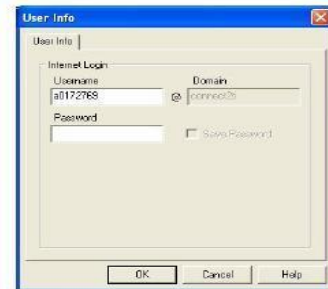
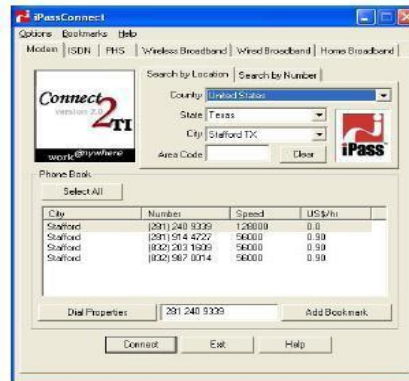
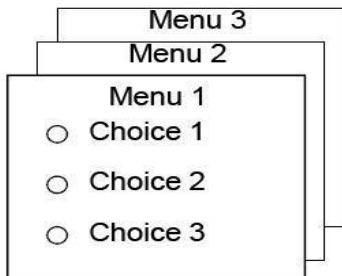
**STRUCTURES OF MENUS**

**• Single Menus**

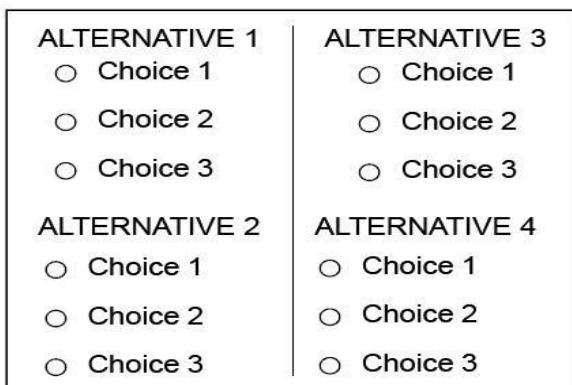
– No other menus will follow necessitating additional user choices



**• Sequential Linear Menus**

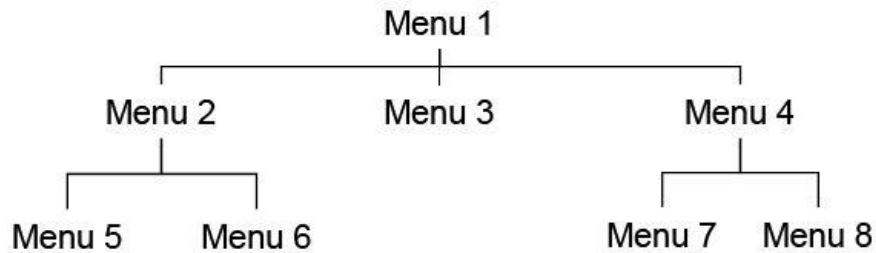


**• Simultaneous Menus**



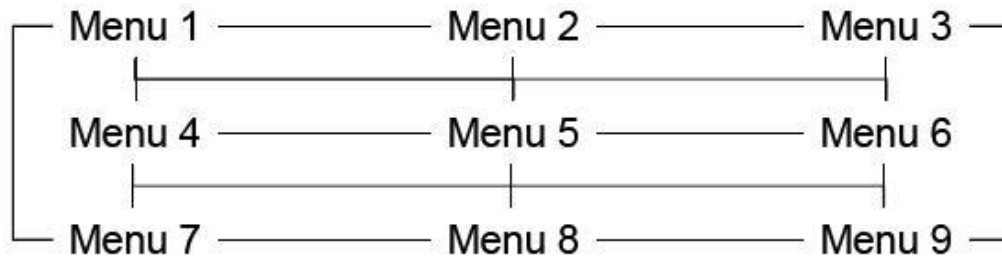
- **Hierarchical Menus**

– When many relationships exist between menu alternatives, and some menu options are only appropriate depending upon a previous menu selection, a hierarchical structure is the best solution.



- **Connected Menus**

– This menu gives you a full control over the navigation flow



- **Event-Trapping Menus**

- Provide ever-present background of control over the system's state and parameters while the user is working on a foreground task
  - Serve three functions
    - Immediately change some parameter in the current environment (bold text)
    - Take user out of current environment to perform function (spell check)
    - Exit and allow user to go to new environment (exit)

## **FUNCTIONS OF MENUS**

- Navigation to a New Menu
- Execute an Action or Procedure
- Displaying Information
- Data or Parameter Input

## **CONTENT OF MENUS**

- Menu Context
  - Provides information to keep the user oriented
- Menu Title
  - Provides the context for the current set of choices
- Choice Descriptions:
  - Descriptions can range from a mnemonic, numeric or alphabetized listing
- Completion Instructions
  - Tell users how to indicate their choices

## **FORMATTING OF MENUS**

- Consistency
  - Provide consistency in menu
- Organization, presentation, and choice ordering
- Display
  - Frequent references
- Permanently display the menu in an area of the screen that will not obscure other screen data
  - Occasional references
- Presentation
  - Should be obvious with a unique and consistent structure
- Organization
  - Provide a main menu
  - Display
- All relevant alternatives (gray-out inactive choices)

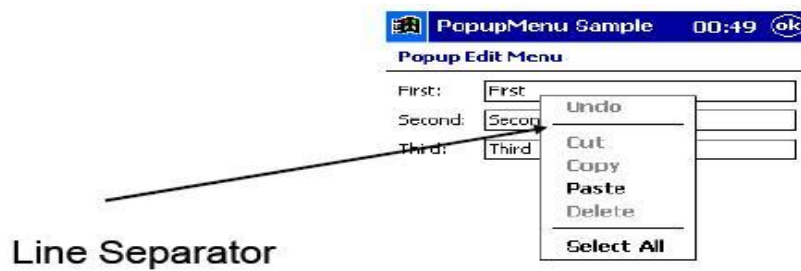
- Minimize number of menu levels
- Number of menu choices presented on a screen
- 4-8 choices without logical grouping of elements
- 18-24 choices with logical groupings of elements with no more than 10 items within a group
  - Never require menus to be scrolled
- Complexity
  - Provide both simple and complex menus
- Item Arrangement
  - Orient for top-to-bottom reading
  - Left justify descriptions
  - Organize for left to right reading
- Ordering
  - Numeric order
  - Sequence/Frequency of occurrence
  - Importance
  - Semantic similarity

## **GROUPINGS**

- Create grouping of items that are logical, unique, meaningful and mutually exclusive
- Present no more than six or seven groupings on screen
- Separate grouping created through either
  - Wider spacing, or a thin ruled line
- Provide immediate access to critical or frequently chosen items

## **LINE SEPARATOR**

- Separate vertically arrayed grouping with subtle solid lines
- Separate vertically arrayed subgroupings with subtle dotted or dashed lines
- For independent groupings
  - Extend the line to the left and right menu borders



Line Separator

### PHRASING THE MENU

- Menu Titles: Should be Short, Simple, Distinctive title
- Menu Choice Description:
  - Can be single, compound or multiple words
  - Use task-oriented not data-oriented wording
  - Must never use the same wording as its menu title
  - Identical choices on different menus should be worded identically
- Keyboard Accelerators
  - Ctrl +B or (Ctrl +B)
- Keyboard Equivalentents
  - Normal, Bold, Italic
- Intent Indicators
  - To a cascade indicator: place a triangle or right pointing solid arrow following the choice
  - To a window indicator: place ellipsis (...) immediately follow the choice



## SELECTING MENU CHOICES

- Initial Cursor Positioning
- Choice Selection
  - Pointers
  - Keyboards
  - Selection/Execution
  - Combining techniques
- Defaults
  - Provide a default whenever possible (as Bold Text)
- Unavailable Choices
  - Should be dimmed or “grayed out”

## MARK TOGGLES OR SETTING

- Purpose
  - Use to designate that an item or feature is active over a relatively long period of time
  - Use to provide a reminder that an item or feature is active or inactive
  - Position the indicator to the left of the option
  - For situations where several nonexclusive choices may be selected, consider including one alternative that deselects all items and reverts the state to the normal condition

**Bold old Ctrl+B**

**Italic Ctrl+I**

## TOGGLED MENU ITEMS

- Purpose
  - Use to designate two opposite commands that are accessed frequently
  - Use when the menu item displayed will clearly indicate that the opposite condition currently exists
  - Provide a meaningful, fully spelled-out description of action
  - Begin with a clear verb

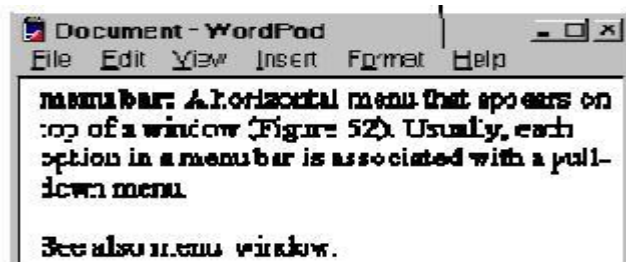
– Use mixed-case letter

View	view
Hide Grid	Show grid

## KINDS OF GRAPHICAL MENUS

- Menu Bar
- Pull-Down Bar
- Cascading Menu Bar
- Pop-Up Menu
- Iconic Menu

### Menu Bar



- Advantage
  - Always visible
  - Easy to browse
  - Do not obscure the screen working area
  - Allow for use of keyboard equivalents
- Disadvantage
  - Consume a full row of screen space
  - Require looking away from the main working area to find
  - Require moving pointer from the main working area to select
  - Horizontal orientation is less efficient for scanning
- All primary windows must have a menu bar
- All menu bars must have an associated pull-down menu containing at least two choices
- Do not allow the user to turn off the display of the menu bar
- Locate at the top of the screen, just below the screen title
- Use single-word choices whenever possible
- Order choice left-to-right with
  - Most frequent choices to left/ related information grouped together
- Help, when included should be located at the right side
- Layout: x File xxx Edit xxx Options Help x

- Separate the bar from the remainder of the screen by
  - A different background or Solid lines above and below
- Use reverse color selection cursor to surround the choice

### **Pull-Down Menu**

- Proper Usage
  - A small number of items
  - Items best represented textually
  - Items whose content rarely changes
- Advantages
  - No window space is consumed when they r not used
  - Allow for display of both keyboard equivalents and accelerators
  - Vertical orientation permits more choices to be displayed
- Disadvantage
  - Require searching and selecting
  - Require moving the pointer out of working area to select
  - May obscure the screen working area
- Gray-out or dim items that can not be chosen
- Position the pull-down directly below the selected menu bar choice
- Restrict to no more than 5-10 choices
- Place frequent or critical items at the top
- Multicolumn menus are not desirable
- Alight the first character of the pull-down descriptions under the second character of the applicable menu bar choice
- If a menu item establishes or changes the attributes of data or properties of the interface, mark the pull down choice or choices whose state is current or active “On”
- Grouping:
  - Mark Toggles or Setting
  - Cascade and Leading to other windows indicator



- Keyboard Equivalents and Accelerators

### Cascading Menus



- **Advantage:**
  - Top-level menus are simplified because some choices are hidden
  - More first-letter mnemonics are available because menus possess fewer alternatives
  - High-level command browsing is easier because subtopics are hidden
- **Disadvantage**
  - Access to submenu items requires more steps
  - Access to submenu items require a change in pointer movement
- Place an arrow or right-pointing triangle to the right of each menu
- Leave the choice leading to the cascading menu highlighted
- Do not exceed three menu levels (two cascades)

### Pop Up Menu



- Choices may be also presents alternatives or choices within the context of the task
- Pop-up menus may be requested when the mouse pointer is positioned over a designated or hot area of screen (a window border) or over a designed icon
- **Advantage**
  - They do not use window space when not displayed
  - They appear in the working area
- **Disadvantage**
  - They existence must be learned and remembered

- May obscure the screen working area
- Require a special action to see the menu (Mouse click)

### **Iconic Menu**



- Use to remind user of the functions, commands, application choices
- Create icons that
  - Help enhance recognition and hasten option selection
  - Meaningful and clearly represent choices

### **SELECT THE PROPER KINDS OF WINDOWS**

A window is an area of the screen that contains a particular view of some area of the computer or some portion of a person's dialog with the computer.

### **Content**

- A window's characteristics
- A window's components
- A window's presentation styles
- The types of windows available
- Organizing window system functions
- A window's operations
- Web system frames and pop-up windows

### **Window Characteristics**

- A name or title, allowing it to be identified
- A size in height and width (which can vary)
- Only active windows can have their contents altered
- A window may be partially or fully hidden behind another window
- Information within a window may extend beyond window's display area
- Presentation is arranged in relation to other windows (tiled, overlapping, or cascading)
- Methods for manipulation of the window on the screen
- Its highlight, that is, the part that is selected

### **Windows are useful in the following**

- Presentation of Different Levels of Information
- Presentation of Multiple Kinds of Information
- Sequential Presentation of Levels or Kinds of Information
- Access to Different Sources of Information
- Combining Multiple Sources of Information
- Perform More Than One Task
- Reminding
- Monitoring
- Multiple Representations of the Same Task

### **Components of a Window**

- Frame (Border)
- Title Bar
- Title Bar Icon
- Window Sizing Buttons
- What's This Button
- Menu Bar
- Status Bar
- Scroll Bars
- Split Box( Split Bar)
- Toolbar
- Command Area
- Size Grip
- Work Area

### **Window Presentation Styles**

- Tiled Windows
  - They are easier, according to studies, for novice or inexperienced people to learn

- Yield better user performance for tasks where the data requires little window manipulation to complete the task
- Only a limited number can be displayed in the screen area available
- As windows are opened or closed, existing windows change in size. This can be annoying
- As the number of displayed windows increases, each window can get very tiny
- Overlapped Windows
  - Visually, their look is 3-D, resembling the desktop that is familiar to the user
  - Windows can maintain larger sizes
  - Windows can maintain consistent sizes, position
  - They are operationally much more complex than tiled windows.

### **More control functions require greater user attention and manipulation**

- Windows themselves can be lost behind other windows and be resumed not to exist
- Cascading Windows (Special type of overlapping window)
  - No window is ever completely hidden
  - Bringing any window to the front is easier
  - It provides simplicity in visual presentation and cleanness

### **Picking a Presentation Style**

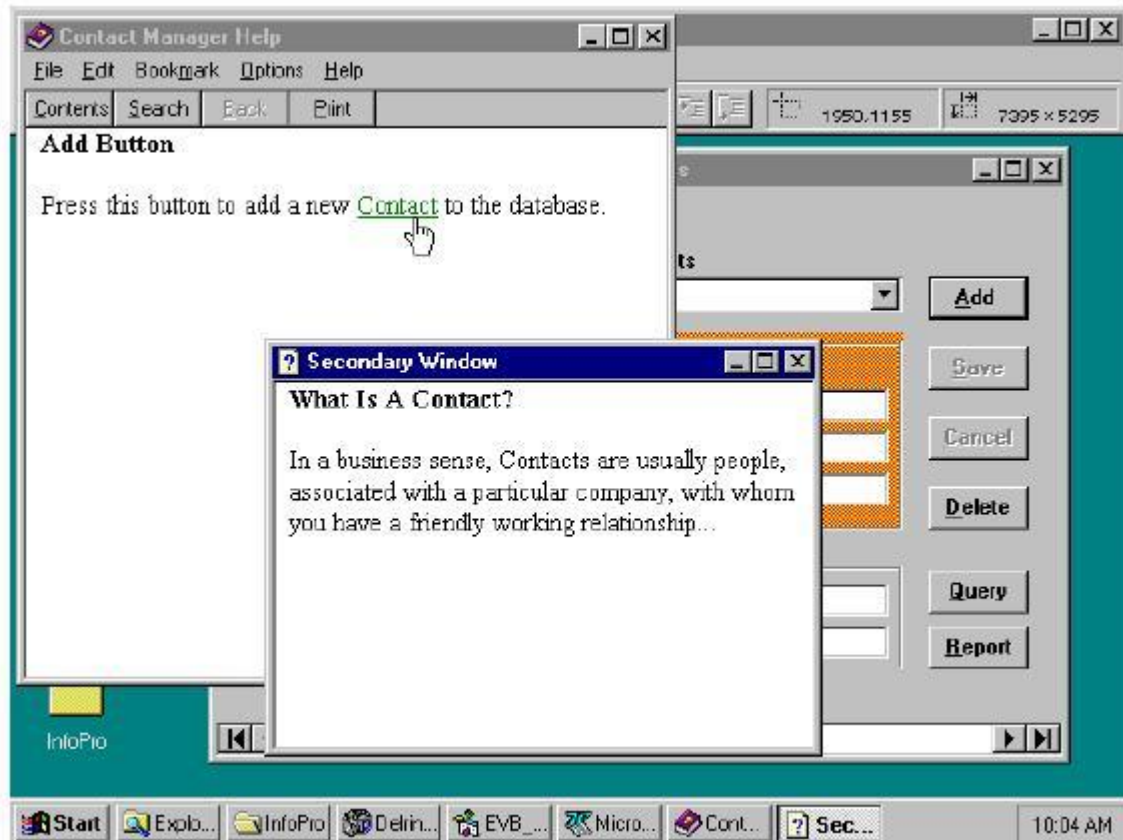
- Use tiled window for:
  - Single task activities
  - Data that needs to be seen simultaneously
  - Tasks requiring little window manipulation
  - Novice or inexperienced users
- Use overlapping windows for:
  - Switching between tasks
  - Tasks necessitating a greater amount of window manipulation
  - Expert or experienced users
  - Unpredictable display contents

### **Type of Windows**

- Primary Window
  - Should represent an independent function or application
  - Use to present constantly used window components and controls
  - Use for presenting information that is continually updated (Date and time)
  - Often called main window or application window
  - Do not divide independent function into two or more primary windows.

- Secondary Windows
  - A dependent secondary
- It can only be displayed from a command on the interface of its primary window
  - A independent secondary
- Can be opened independently of a primary window (property sheet)
- Microsoft Windows possesses several types of secondary type of secondary windows called
  - Dialog boxes
  - Property sheet
  - Property inspectors
  - Message boxes
  - Palette windows
  - Pop-up windows

### • Secondary Windows



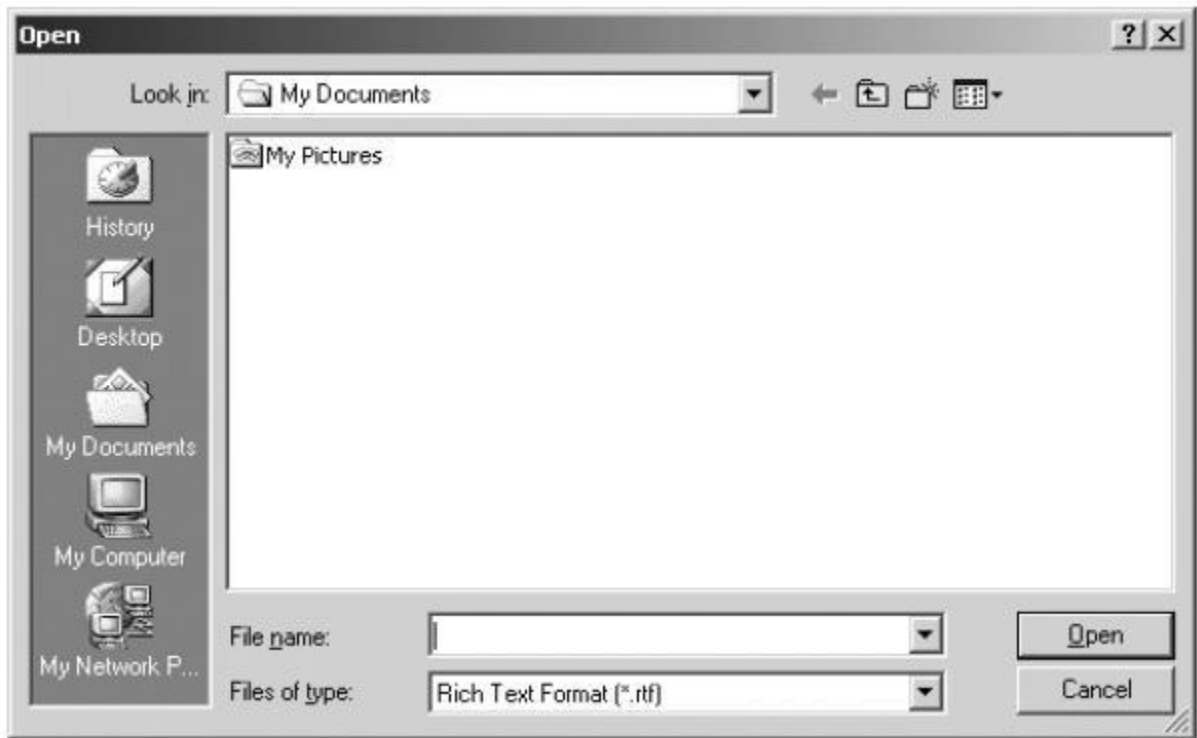
### Modal and Modeless

- Modal window
  - Will not permit interaction with another window until the current dialog is completed

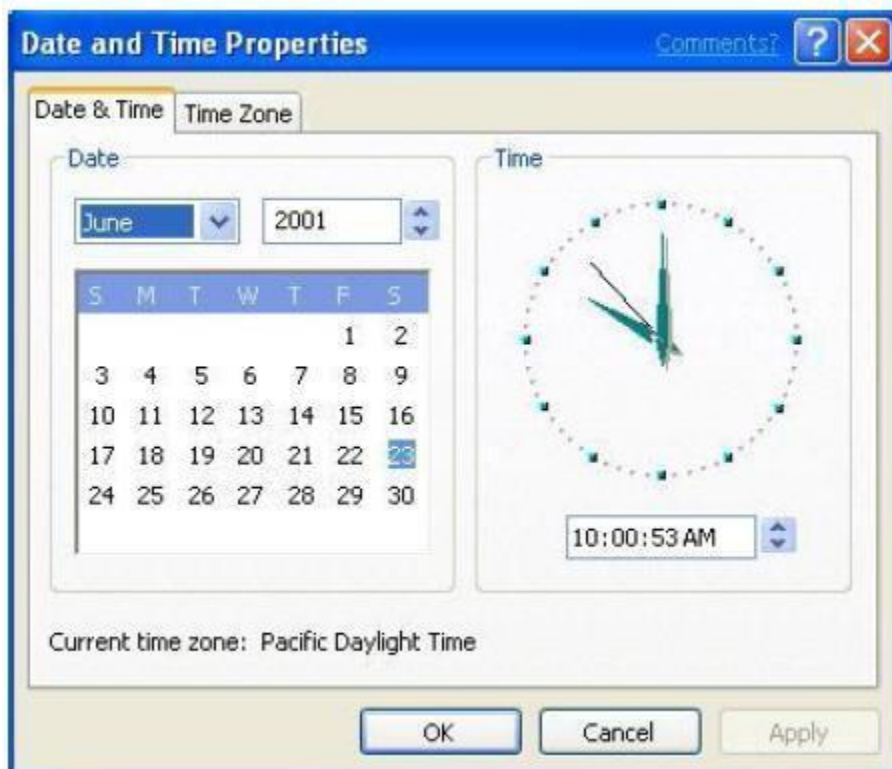
- Remain displayed until the appropriate action is taken after which it is removed
  - Modal dialog boxes typically request critical information or actions
- Modeless window
  - Switching between the box and its associated is permitted
- Cascading
  - To provide advanced options at a lower level in a complex dialog
  - Provide a command button leading to the next dialog box with ...
  - Provide no more than two cascades in a given path
  - Don not cover previous critical information
- Relevant information
- Title Bar
- Unfolding
  - To provide advanced options at the same level in a complex dialog
  - Provide a command button with an expanding dialog symbol >>
  - Expand to right or downward



- Dialog Boxes
  - Use for presenting brief messages
  - Use for requesting specific, temporary actions
  - Use for performing actions that
    - Take a short time to complete
    - Are not frequently changed
  - Usually be those that do not occur frequently
  - Command button to include
    - OK
    - Cancel
    - Others as necessary



### Property Sheets and Property Inspectors



- Property sheets
  - Use for presenting the complete set of properties for an object
  - Categorize and group within property pages, as necessary
  - Command buttons to include
- Ok
- Cancel
- Apply
- Reset
- Others as necessary
  - For single property sheets, place the command on the sheet
  - For tabbed property pages, place the commands outside the tabbed pages

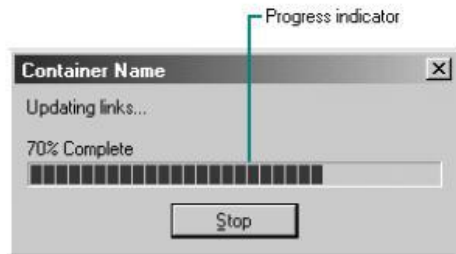
### Property Inspectors



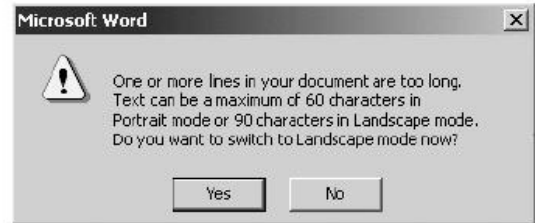
- **Property Inspectors**
  - Use for displaying only the most common or frequently accessed object properties
  - Properties of an object are displayed by using a dynamic viewer or browser that reflects the properties of the current selection
  - Property value in the selected object should be changed as soon as the user makes the change in the related property control
- Message Boxes
  - If a message requires no choices to be made but only acknowledgement, include an ok button and optionally a help menu
  - If the message requires the user to make a choice, include a command button for each option
  - Include OK and Cancel buttons only when the user has the option of continuing or stopping the action
  - Use Yes and No buttons when the user must decide how to continue
  - If the choices are too ambiguous, label the command buttons with the names of specific actions, for example,



## Save and Delete



Progress message box



Yes No message box



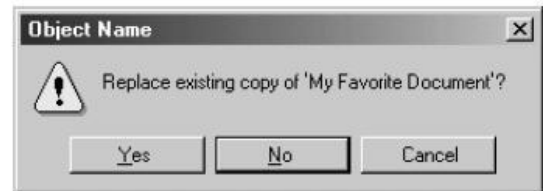
Information



Warning



Critical



Message box choices

## Palette and Pop-Up Windows

- Palette windows are modeless secondary windows that present a set of controls.
- Palette windows are distinguished by their visual appearance, a collection of images, colors or patterns
- The title bar for a palette window is shorter and includes only a close button
- Use pop-up windows to display
  - Additional information when an abbreviated form of the information is the main presentation
  - Textual labels for graphical controls
  - Context-sensitive Help information
  - Pop-up windows do not contain standard secondary window components such as a title bar and close button

