

Learning About Technology

Chapter 2

Learning New Tools

- How do you learn to use new tools?
 - Read the instruction manual
 - Programming a VCR
 - Cooling my refrigerator
 - Be taught
 - Riding a bicycle
 - Driving a car
 - Just figure it out
 - Using an iPod
 - Microwaving food

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Learning About Technology

- People do not have any innate technological abilities
 - Over time, we gain experience using different kinds of devices (e.g., setting the clock on a microwave)
 - Designers try to design products to match what we may already know

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Same symbols as on real stereo

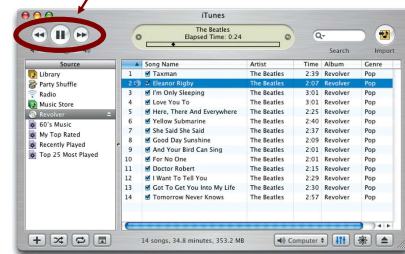


Figure 2.1. Graphical user interface for the iTunes audio CD player on an Apple Macintosh.

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User Interface

- **user interface:** the aggregate of means (e.g., buttons, lights, blinking cursors, text boxes) by which people (the **users**) interact with a system
- **GUI:** graphical user interface (pronounced GOO-ey)



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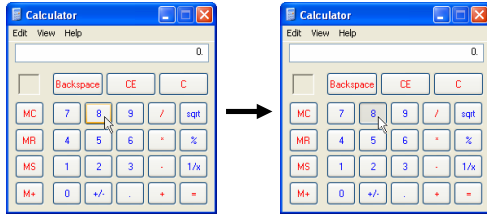
Metaphor

- **metaphor:** an object or idea used as an analogy for some other object or idea
 - Designed to be similar to physical entities but can also have their own properties

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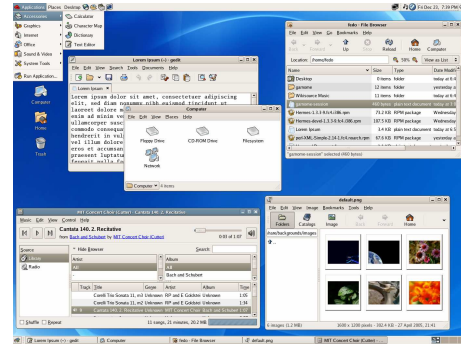
Button Metaphor

- "Pressing" a button

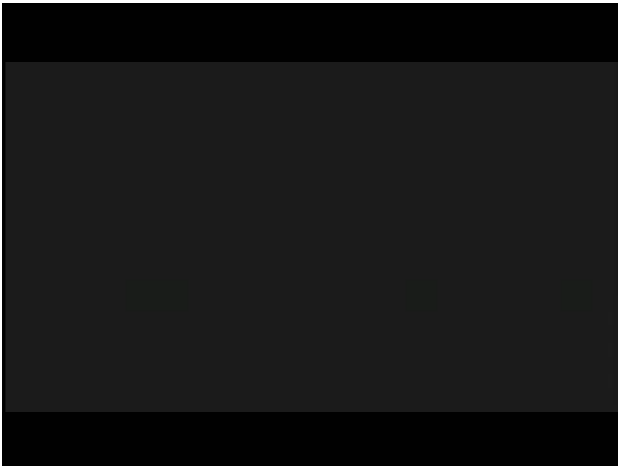


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Desktop Metaphor



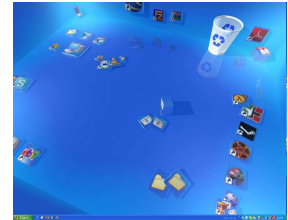
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The Future?

- ... or taking the desktop metaphor too far?
 - <http://www.youtube.com/watch?v=Ouy6su5t9JA>

- BumpTop:
 - <http://bumptop.com>
 - Not yet publicly available
- Real Desktop:
 - <http://www.real-desktop.de>



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Why Know Metaphors?

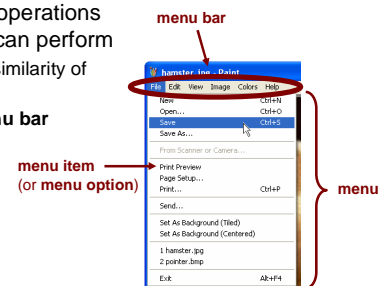
- Designers use similar metaphors so as to minimize the time it takes to learn a new piece of new software.
- But what if you have never interacted with a certain type of interface before?
 - There's a first time for everything!



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Menu

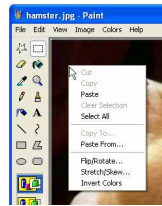
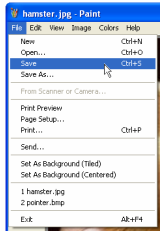
- **menu**: list of operations the software can perform
 - Grouped by similarity of operations
 - Listed in **menu bar**



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Types of Menu

- pull-down menu (or drop-down menu)
- pop-up menu

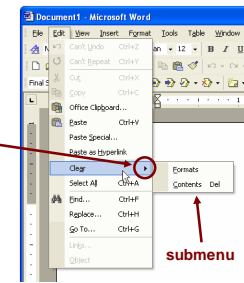


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Submenu

- Moving mouse pointer over menu option with right arrow reveals another menu

metaphor indicating presence of submenu



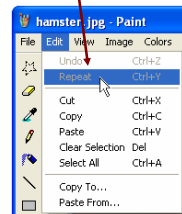
submenu

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Which Operations Are Available?

- Not all operations are available in every situation
 - For example, *Copy* does not make sense if nothing has been selected to be copied.
- Unavailable operations are "grayed out" and cannot be selected

Selecting (clicking) the menu option will not do anything.



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Is More Input Needed?

- Menu items that require more specification are followed by ellipses

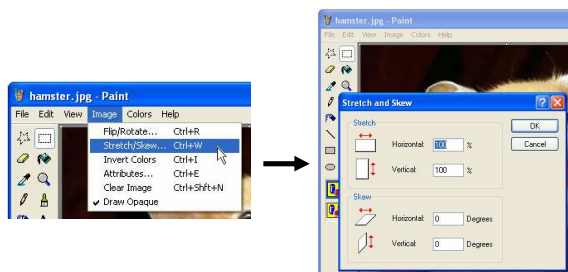


A dialog box will pop up if any of these menu items are selected.

- dialog box:** special window to display information to the user, or get a response if needed

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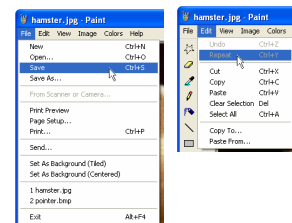
Is More Input Needed?



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Standard Menu

- Some operations are common to most applications.
 - These operations are usually grouped (possibly with other operations specific to the application) into two menus named *File* and *Edit*.
 - Be familiar with these operations.*



*No, you will not be tested on them—learn them for your own personal benefit.

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Keyboard Shortcut

- **keyboard shortcut:** combination of keyboard characters that performs a predefined function
 - Shown next to menu items
- **mnemonic:** underlined character indicating to the user which key to press (possibly in conjunction with the *Alt* key) to activate a command



Menu with shortcuts highlighted with green and mnemonics highlighted with yellow.

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Using Keyboard Shortcuts

- To use a shortcut, you do **NOT** hit all keys simultaneously.
 - For example, **Ctrl+S** means "Press and hold the *Ctrl* key down and then hit the S key on the keyboard. Release all keys."
- The capitalization of the letter does not matter (i.e., *Caps Lock* can be on).
 - However, do not hit the *Shift* key unless it's part of the shortcut, like **Ctrl+Shift+S**.

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Standard Keyboard Shortcuts

Table 2.1 Standard Shortcuts. These common shortcut letters for standard software operations combine with "Control" (**Ctrl**) for Windows or "Command" (**Cmd**) for Mac OS X.

File Functions		Edit Functions	
New	N	Cut	X
Open	O	Copy	C
Save	S	Paste	V
Print	P	Select All	A
Quit	Q	Undo	Z
		Redo	Y
		Find	F

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Useful Keyboard Shortcuts

- **F1** opens a window with help information about the program you are using.
- **Alt+Tab** switches between running programs.
- In web browsers, **Tab** moves the cursor focus to the next link or form field (e.g., text box, check box) on a web page.
 - **Shift+Tab** moves the focus backwards.

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List Of Keyboard Shortcuts

- Keyboard shortcuts for Windows
 - <http://support.microsoft.com/kb/126449>
- Mac OS X keyboard shortcuts
 - <http://support.apple.com/kb/HT1343>

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Make Your Own Keyboard Shortcuts!

- Windows:
 - <http://www.microsoft.com/windowsxp/using/setup/ips/kbshortcuts.mspx>
- Mac:
 - <http://www.apple.com/pro/tips/keyboard.html>

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Learning To Use a New Application

- Familiarize yourself with the application by "clicking around."
- Check menus to see what operations are available.

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What Does That Button Do?



Figure 2.9 Hovering the cursor over unknown buttons shows the help description: (a) equalizer window, (b) visual effects.

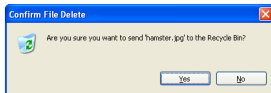
- Still not sure what the button does?
 - Click it!*

*Are you sure about that?

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Clicking Around Willy Nilly

- Some operations (e.g., deleting data) should not be executed haphazardly.
- However, such operations will *usually* ask again to see if you are really sure. Think twice if asked again.



- So click away!

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"Hidden" Operations

- Some operations are not obvious and cannot be discovered by clicking around.
 - Examples:
 - Shift-Select: Allows you to select adjacent objects
 - Ctrl-Select: Allows you to select non-adjacent objects
- Many obscure features, tricks, and shortcuts can be learned by watching others.

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Getting More Help: Online Forums

- **forum** (or **message board**): discussion site where users can read and post messages
- Some forums are dedicated to users of a single application.
- Forums always have a search box. Search before you post.
 - Someone might have already posted your same question. Hopefully, someone has also already posted an answer!

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Additional Resources

- Computer Hope.com
 - <http://www.computerhope.com/>
 - Check out the Computer Hope forum

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