



# Hardware vs. Software

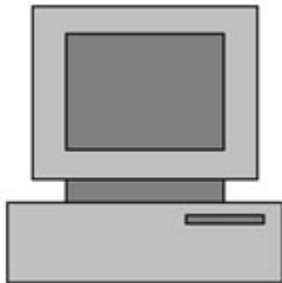
**Hardware includes the parts of the computer system that you can actually touch (like the keyboard, mouse, monitor, or CPU).**

Software refers to the programs that you use on your computer (like a word-processing program) or the programs that make your computer work (you physically **cannot touch these**) (**Programs are also called applications**)

**Computers come in different shapes and sizes. However, there are several parts on a computer that are universal to all computers.**



CPU (Central Processing Unit): This is the part of the computer system that is the most important. This box is the brain of the computer system. It processes, stores, and communicates information. It will have many wires coming out of the back.



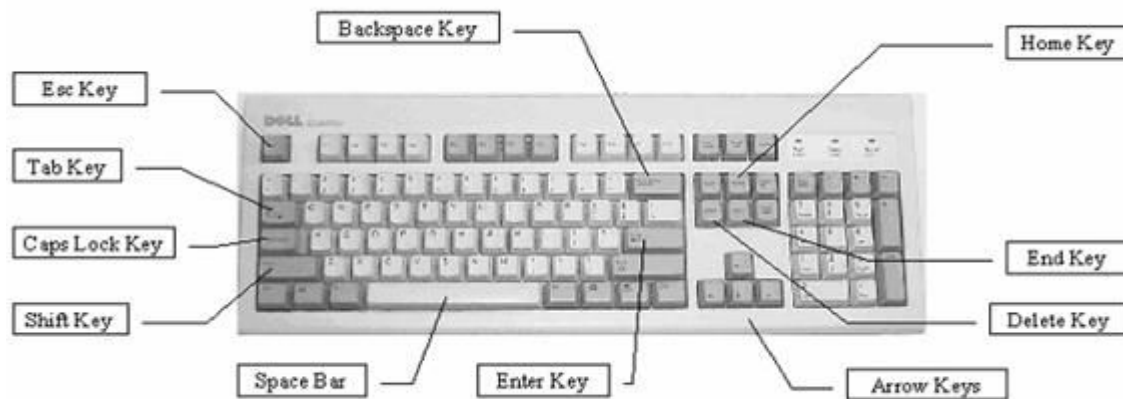
Monitor: This is the portion of the computer system that visually communicates with the user. It is like a TV. Almost all information communicated from the computer to the user is through the monitor. (The monitor is also referred to as "the screen")



On most computer systems, both the CPU and the monitor have a power switch that turns them on and off.

## The Keyboard

The keyboard is an important tool that allows one to communicate with the computer. It is composed of "keys" that sends a signal to the computer that the computer recognizes and uses to carry out processes and programs. Keyboards come in various shapes and sizes, but serve generally the same purpose.



**Shift Key** The shift key is used in combination with two keys. The shift key is used primarily to capitalize letters. Shift differs from caps lock because you have to hold the shift key down while simultaneously pressing the other key to capitalize a letter, where you only press the caps lock key once. Holding down the shift key also is used to type the characters and symbols above any letter.

**Tab Key** The tab key is used to move from one position on the screen to another. It also creates a "tab stop" (right 1/2 inch) indentation for your paragraphs.

**Enter Key** When working with text (words), pressing the enter key moves the cursor down to the next line. Otherwise, pressing the enter key in any other situation will activate anything that you have selected.

**Space Bar** Pressing the space bar while the cursor is positioned within text will cause a space (one character wide) to be placed at the position of the cursor (like on a typewriter). (It doesn't matter where you press down on the spacebar).

**Caps lock** The caps lock key activates a feature that affects only the letter keys. Turning on caps lock causes all letter keys to type in uppercase. All other keys will act the same as if caps lock is off. To deactivate Caps Lock, press the Caps Lock Key again.

**Escape** The escape key is used to cancel the current operation or exit the program.

**Backspace** Pressing the backspace key while the cursor is **positioned within text will delete the character (or space) immediately to the left of the cursor.**

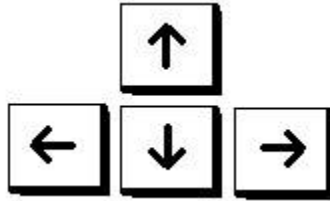
**Delete** Pressing the delete key while the cursor is **positioned within text will delete the character (or space) immediately to the right of the cursor.**

**Control (ctrl)** The control key (Ctrl) is usually used with another key. Holding the control key in addition to another key or keys will start a function. Later on, we will teach you some control key functions that deal with word processing.

**Alt** The alternate key (Alt), similar to the control key, is used in combination with other keys.

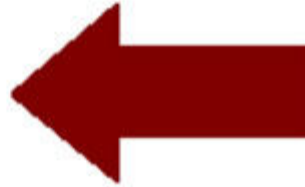
**Arrow Keys** The four arrow keys are located several keys to the right of the Spacebar at the bottom of the keyboard. Pressing one of these keys will cause some type of screen movement in the direction of the arrow on the key. These keys are used frequently

in correcting mistakes in letters and document where one can “go back” and fix a mistake, instead of clearing your entire work since the mistake.



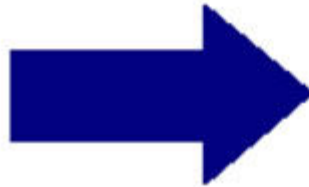
## Backspace

To the Left



## Delete

To the Right



## The Mouse

Similar to the keyboard, the Mouse is also used to communicate with the computer. The mouse is like a remote control to a TV—It is a tool that drives the computer that can be used “away from the computer;” though, the mouse is considered your direct connection into the computer world. The arrow/cursor/pointer is the visual cue that points, moves, and selects things on monitor. You can remember this as your electronic finger that points to items on the screen (monitor).

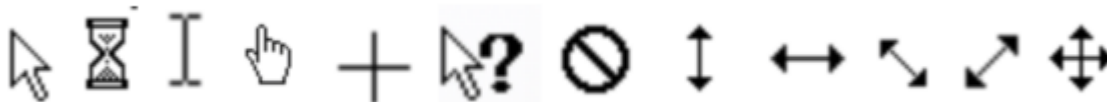


The mouse pointer is like your hand that can do many different things in the computer. It may change shapes as you move it around the screen. The function of the pointer changes as it changes shape.

The mouse pointer is an arrow shape as you point to icons, menu choices, toolbar buttons, etc.

The mouse pointer will change to an I-beam shape (cursor) when it is over text. You can continue to use the mouse to move the I-beam until it is positioned at the point where you would like to work with the text (e.g. where you would like to insert a word or letter). Then click the left mouse button to actually position the cursor at that point.

## Mouse Pointer Examples:



## Peripherals and Media

**The following are more parts of computers that increase functionality of computers, but do not need to be present to work the computer.**

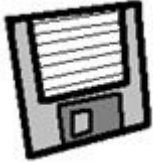


**Printer:** This device takes information (usually text and pictures) from the computer and puts it on paper.

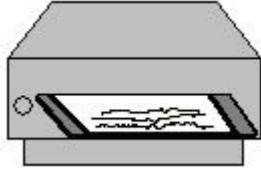
### How the computer thinks and remembers

Computers are very similar to people. They have memories just like us. The memory on a computer is stored in data on disks. Disks look like small heavy records. Disks function similarly like records. As the disk spins inside the computer, the data on the disk is accessed. The programs that you use (like a word-processor) and the program that runs your computer (the operating system) are stored on the **hard disk**. The hard disk is usually inside the computer unit (the CPU). The computer can also read data that is stored on a **floppy disk** if the floppy disk is inserted into an opening on the

outside of your computer. You can save information to both types of disks (hard disks or floppy disks). Saving data on a floppy disk is most helpful if you will need to use the information on a different computer.

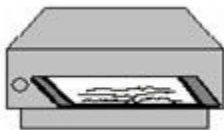


**Floppy Disk:** A removable storage device that holds about 1.44 MB (megabytes) and is in the shape of a flat card.



**Floppy Drive:** This is where you insert the floppy disk into the Computer.

### Inserting/Removing a Floppy Disc



Remember—The device that reads the data on a disk is the **disk drive**. The drive that spins the floppy disk is the **floppy drive** and is usually labeled the “A: drive.”

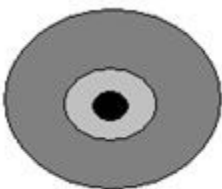
To properly insert a floppy disk into the drive: Insert the disk with the metal edge first and the label (or the place where the label should be) facing up toward the sky. It should click to tell you it’s in.

### To remove a floppy disk from the drive:

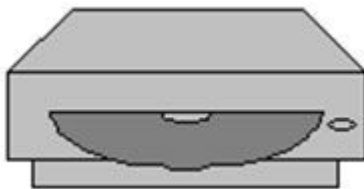
Make sure that the drive is not in the process of accessing the floppy disk. There is a small light next to the drive. If the light is on, the drive is accessing the disk. Do not insert or remove a floppy if the floppy drive light is on.

To eject the floppy disk, push the small button that is next to the floppy drive opening.

Similar to floppy disks, **CDs or compact discs** are another type of storage device that can easily be transported.

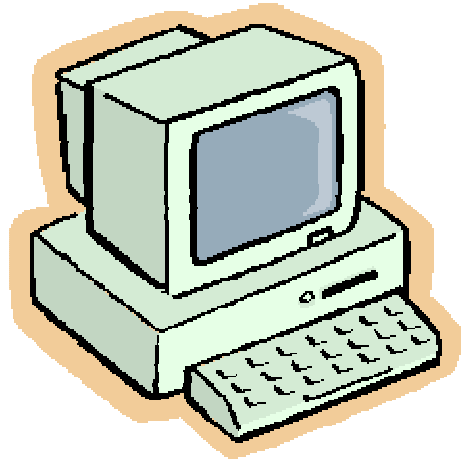


**CD (Compact Disc):** This is like a big, round, shiny floppy disc. This can hold more than 550 floppy discs equivalent of data.



**CD Drive:** To use a CD you will need a CD Drive. To use a CD push the button on the CD Drive. A tray will come out. Place the CD with the label on the top then push the button again to insert the disc.

Pressing the button again will eject the disc out.



## Welcome to the Computer

**The first thing to understand is that no matter what you do to the computer, you won't break the computer. The computer can probably be fixed with just a few clicks.**

If you ever come to a problem you can't fix, you can:

- Ignore the problem
  
- Just turn off the computer until you can get help from someone else

But again, THE COMPUTER **CANNOT** BE BROKEN.

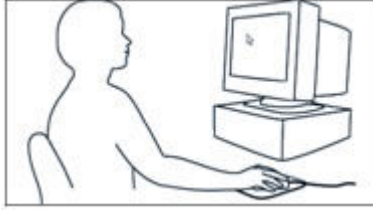
Another aspect about computers, in general, is that they come in many different shapes, sizes, colors, and speeds but all perform, essentially, the same tasks. Most computer components are very similar; but sometimes a computer might have an extra button or two. The mouse might have another switch or button also. Although working with computers requires some flexibility and adaptation to different computer designs, you will find it easy to learn.

Also, within a computer, there are many ways to do the same task. Lastly, the number one thing to keep in mind is to be patient with the computer. Sometimes the computer has to think too!

## Operating the Mouse

The mouse, at first, is difficult to get used to; however, in time you will find it very useful. To use the mouse, comfortably and correctly use the mouse:

1. Let your hand rest comfortably on top of the Mouse. Most people are right-handed and therefore, the Mouse is *usually* on the right



side of the computer. For all those left-handed folks out there, don't let that stop you – You can easily get around that. Sometimes, left-handed persons move the Mouse over to their left hand area, and then use it there. Others try using their right hand and soon become very ambidextrous! The most important thing to remember is "Do what is comfortable for you!" (For teaching purposes, we shall now continue using the right hand terminology.)

2. Fit the palm of your hand around the Mouse, with your index finger resting on the left (primary) Mouse button and your middle finger resting on the right (secondary) Mouse button. Let the heel of your hand rest on the desk or table.
3. As you move the Mouse, the Mouse pointer (the cursor on the screen) will move in the same direction as your hand.

### Positions of hands for mice



## Mouse Techniques

**Because the mouse is a critical component of the computer, We'll examine some techniques that will be used, using the mouse.**

There are many different ways the mouse is used. There are primarily the two mouse buttons, known as the left and right button. The left button is primarily used. Some mouse techniques include:

**Click:** This is the easiest of the techniques, however it is very important that you do it properly. To click, you press down one of the mouse buttons. As you click it, it makes a "clicking" noise. The most important skill with clicking is that it only takes a very light, short tap to click the mouse. Do not click too hard as this might damage the mouse. Once you have mastered clicking, you will be ready to move on to the next most essential practice, pointing.

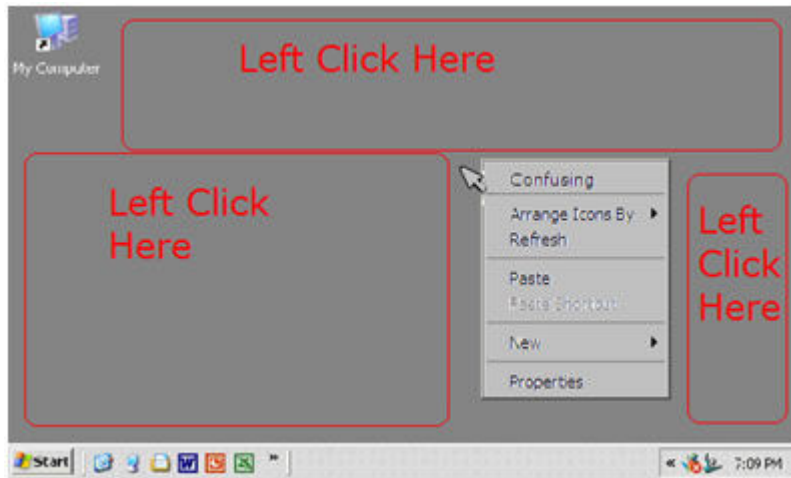
**Left Clicking:** This is the primary "click" that you will use. This is clicking the button on the left. When someone says, "Click here," that usually means to left click here.

**Right Clicking:** This is used very seldom and is used to change options or perform specific features that usually are not common or necessary.

**Point:** Use the mouse to move the mouse pointer so that the pointer is hovering over the top of an icon or word on the screen. This is sometimes all you need to do in order to prompt a response from the computer.



**Point and click:** Move the mouse pointer over the top of an item on your screen and then (while holding your hand still) gently press and release the left button on the mouse. This technique is often used to make a selection.



**Double-click:** While hovering the mouse pointer over an item on the screen, *quickly* press the left mouse button two times. This may take some practice but it is a very useful skill. If you are having problems double clicking, you probably are moving the mouse slightly while double clicking. Try to steady your hand when double clicking. By double clicking, you are usually prompting the computer to take some sort of action on the item you are selecting.

**Click and drag:** Press and hold down a mouse button (usually the left button). As you are holding down the button, move the mouse in any direction. Click and drag is a method used when “highlighting” or “selecting” text. To do this to text, first click before the beginning of the text and then click again at the beginning but hold down and move your mouse to the end of where **you want to highlight**.

### Uh Oh—The Right Mouse Button

What happens if you accidentally press the right mouse button? A menu pops up—its not dangerous, but it can make the computer a little dizzy if you accidentally click on something that could confuse the computer. If you accidentally right click, left click in an open space (see picture).

## Windows Basics

### The Windows Operating System

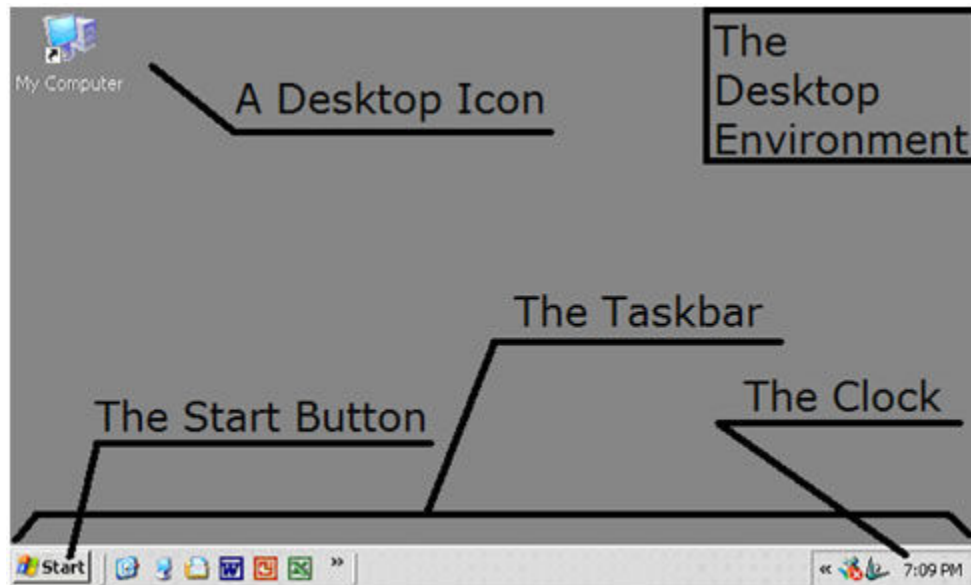
Microsoft Windows is the **operating system** that is installed on most computers. The operating system is the software that runs your computer makes it think. If you want to use **application software (a.k.a. programs)** (such as a word-processor, spreadsheet, games, etc) this software must be installed separately on your computer

The first screen you see on the monitor when the computer starts up is called the desktop. It is sometimes referred to as The Desktop Environment (as a whole). This is where you will do everything—write letters, send e-mails, browse the internet, etc.



The desktop environment is made up of several parts. Including:

- Desktop Icons
- The Task Bar
- The Clock
- The Start Button



- El Boton Start

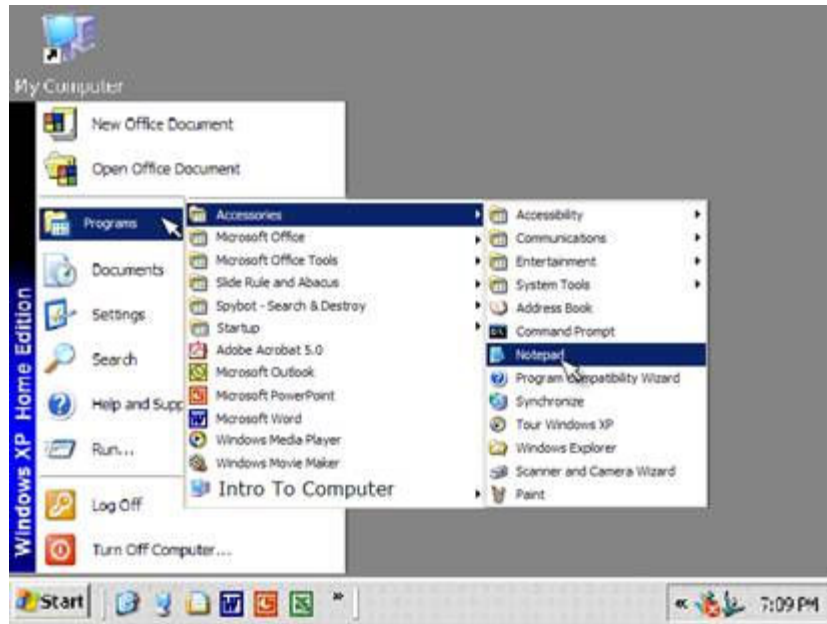
Desktop icons, sometimes called shortcuts are quick ways to access different programs. To use shortcut icons on the desktop environment to open programs, use the mouse to point to the icon on the desktop that represents the program that you want to open. Double click on the icon.

The task bar is the area at the very bottom of the computer screen. You will soon be able to multitask and do several things at once. The task bar is there to help you keep things organized.

There is a clock that conveniently tells you the time.

## The Start Button

The **start** button is located on the lower left hand corner of your screen, on the taskbar. It is used to start application and programs. To use the start menu to open programs



1. Point and click the mouse pointer at the button at the lower left corner of the Windows desktop (the screen that appears when you first start up your computer). This activates a pop-up menu.
2. Slide the mouse pointer up the menu to Programs. The menu selection will be highlighted in blue and a sub-menu will be activated.
3. Slide the mouse pointer straight to the right onto the sub-menu.
4. Slide the pointer straight up or down to highlight the program that you would like to use and then click on the selected program. (In some cases, you may have to activate other sub-menus to see the program that you want).

## Turning on and off the computer

Computers, when not in use, are usually turned off. There will be a switch or button to turn on both the computer and the monitor. The computer switch is most often on the front of the computer; but the monitor switch may be almost anywhere on the monitor. The computer goes through a number of tasks when starting up. It may take a few minutes for it to complete this. Patience, as you will learn, is used a lot with the computer. After the computer stops making grinding noise, and the picture on the screen does not change, it is probably ready for your use!



Turning a computer off takes more practice. Before you turn off the power to your computer, you should follow the procedure that allows the computer to properly store files before it shuts down.

1. Click on the start button at the bottom left of the screen.

2. From the start menu choose Shut Down.

3. In the dialog box that opens, select Shut Down (if it isn't already selected).

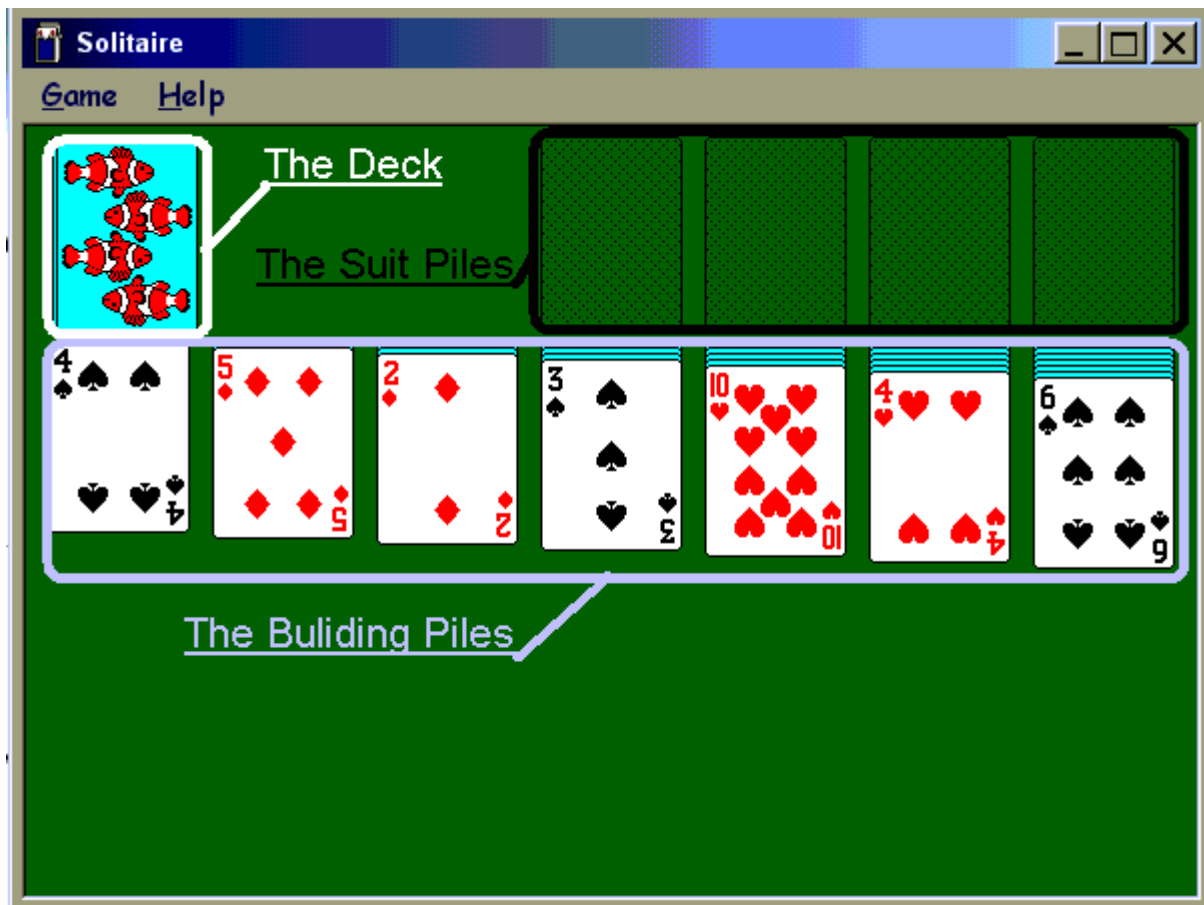
4. Click on the OK button.

5. If you see a message on your computer screen that says "IT IS NOW SAFE TO TURN OFF YOUR COMPUTER," press the switch on your computer to turn off the power. (At this point you will also want to turn off the computer monitor).



## The Solitaire Card Game

Getting comfortable and familiar with the mouse is important. To do this, we'll use a computer game called Solitaire. Solitaire is similar to card-solitaire, but it is played in the computer, and you use your mouse to move cards around. The object of solitaire is to stack all the cards in 4 piles in their correct suits, of ascending rank. Piles of cards can be laid out in the bottom half of the screen as an intermediate step



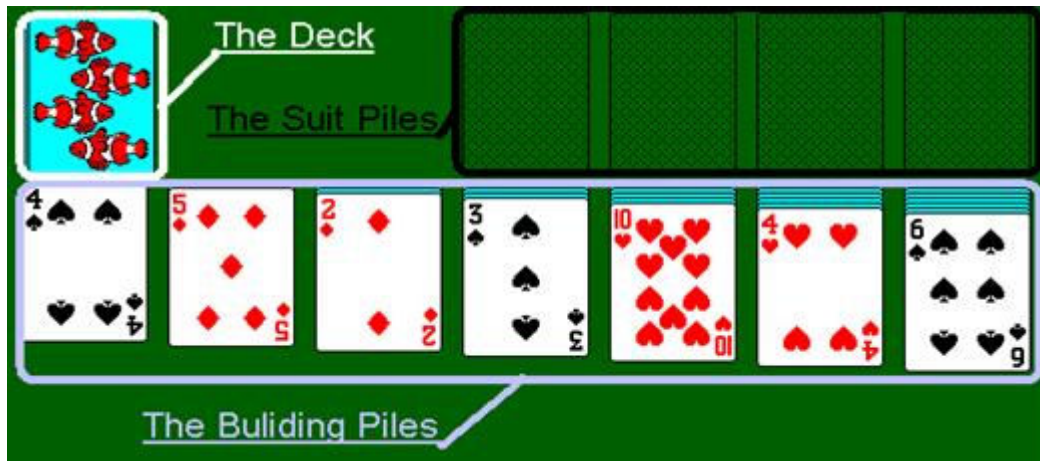
## Setup

Three Regions make up the solitaire screen. These include Building Piles, The Deck, and Suit Piles.

- **Building Piles** – Located in the bottom portion of the solitaire window, the building pile is where you will organize the cards before placing them in the suit piles. The top card in each pile is face up. The rest are hidden. Once you remove the top card from the pile, you may turn over the card that was under the previously face-up card.

- **The Deck** – Located in the top-left, it consist of cards you will use in your piles. Click on the top card. It will draw a card and put it into an adjacent pile face-up. Clicking on the deck will draw another card. Once you have gone through the entire deck once, a large "O" will appear where the deck used to be. This lets you know that you have gone through the deck once and if you click on the "O", the deck will be replaced again. You may go through the deck as many times as you wish.

- **Suit Piles** – Located at the top-right of the screen, these stacks are empty at the beginning of the game. This is where you will stack your cards in ascending order (From Ace, 2, 3 etc...) and in the same suit to win the game.



### How To Move Cards

To move a card from one pile to another pile, (left) click and hold (click and drag) and move your mouse so the card is on top of the pile that you want to move it to. After the card is "over" where you want to place it, release the left mouse button and it should stay in place. Sometimes, if you moved the card improperly, the card may fly back to its original position and you have to move it again.

### Legal Moves in solitaire

1. An ace can be placed in the Suit Pile.
2. A card at the top of a stack can be moved to its corresponding suit pile if the rank of the card at the top of the stack is less than the card.



NOTE: Card Ranks are as follows:

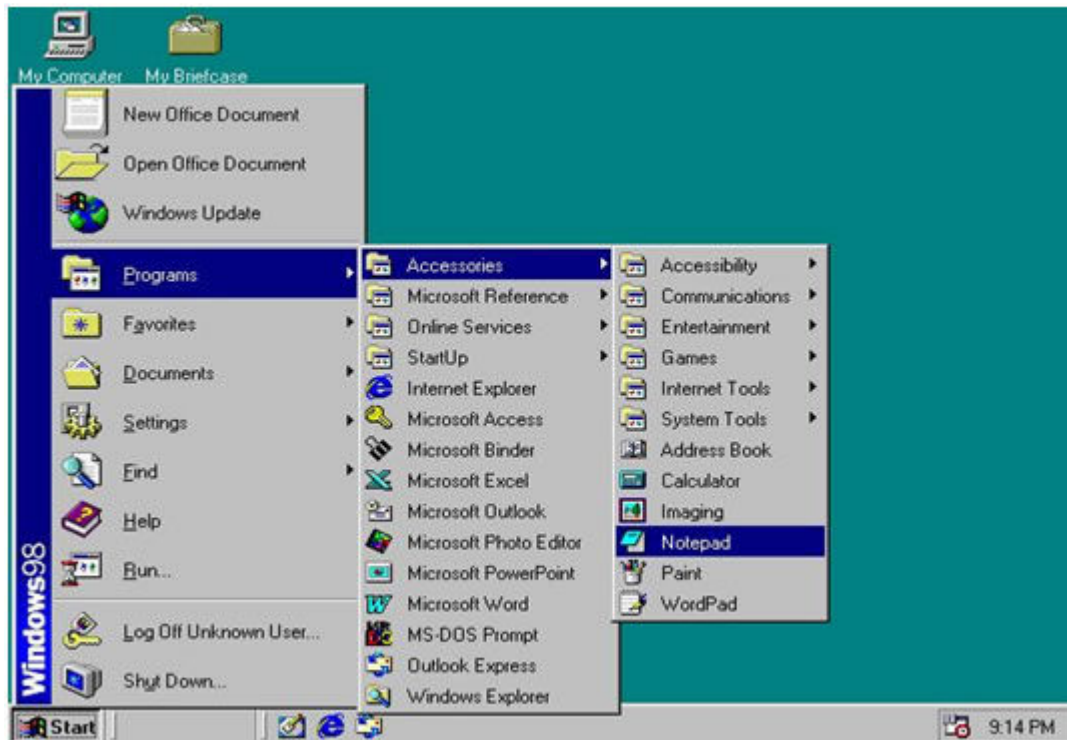
Kings have a rank of 13  
 Queens have a rank of 12  
 Jacks have a rank of 11  
 Aces have a rank of 1

3. Only a king can be placed in a space not occupied by any other card in the building piles. (the empty space with no cards)
4. Ordered cards at the bottom of a building pile, in the deck, or in the suit pile can be moved to another building pile if there is a card in the ordered sequence that has an opposite color and a rank one less than the card at the top of the destination stack.

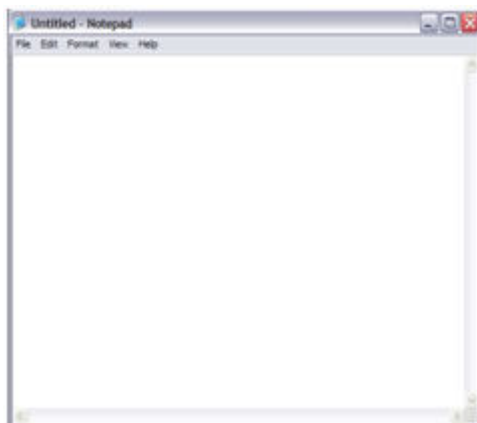
### Example Steps

1. Move available cards on building piles
2. Check and cycle through deck
3. Move to suit piles

# Windows Multitasking




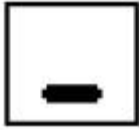
We will now move onto more advanced features on the computer. We suggest that you open a program called Notepad.





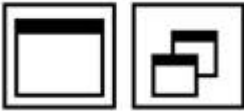
## To Open Notepad


1. First click start
2. Move over to *Programs*
3. Go to *Accessories*
4. Click Notepad

The **minimize** button  is on the left. Click on this button to cause the window to become a button on the task bar.



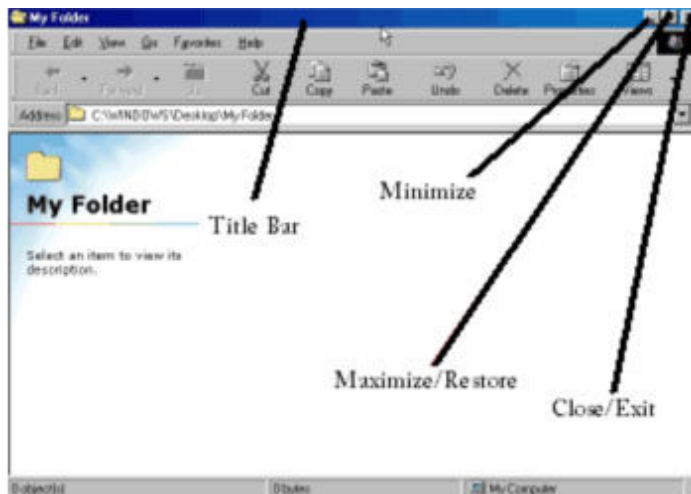
The **maximize/restore** button is the middle button. This button actually toggles between two different buttons. Click on the **maximize button**  to make the window its largest size. Click on the **restore button**  to return the window to its original (medium) size.



The **close** button  is on the right. Click on this button to close the window. **This closes whatever program or document was in the window!**



## Working with Windows



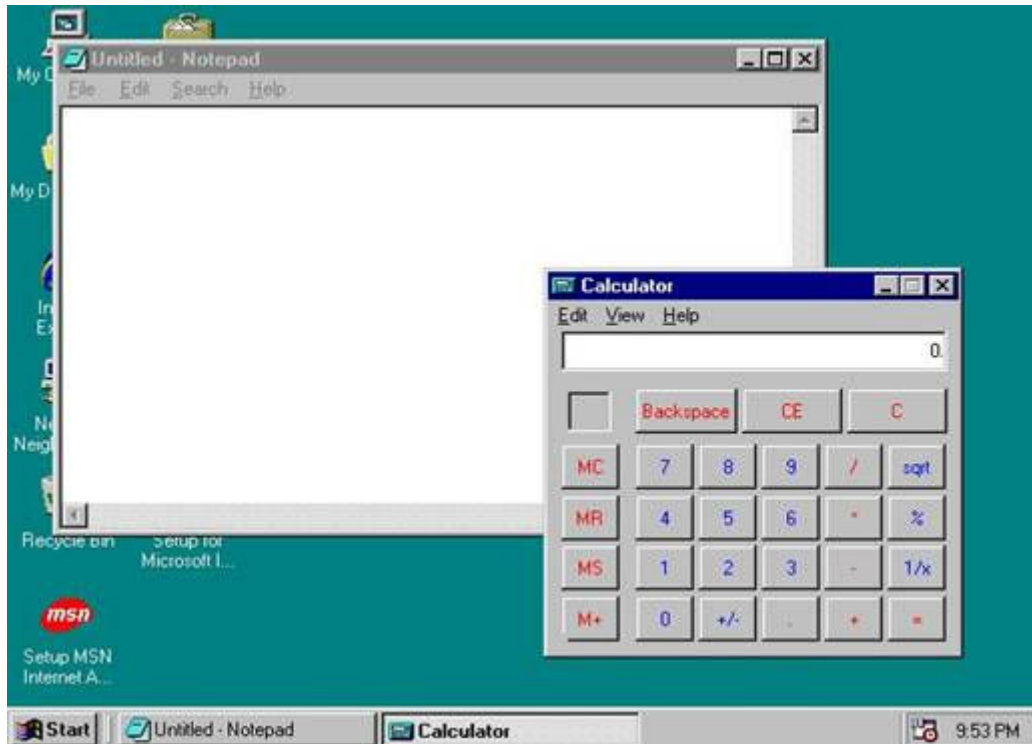
Each program or object that you open appears in its own window (a rectangular area on the screen). These windows open on top of each other, so you may need to make some adjustments to be able to see the window in which you want to work. At the top right of each window you will see three buttons.

### How to switch between applications using the minimize feature and the Taskbar.

You may open more than one program at a time on your computer. This is called multi tasking. There is a simple and easy way to organize all the tasks (or programs running). Windows makes it easy to organize these tasks. There are basically 4 different buttons that you'll use to organize tasks. The first button is the programs' buttons on the taskbar. The Taskbar, again, is all



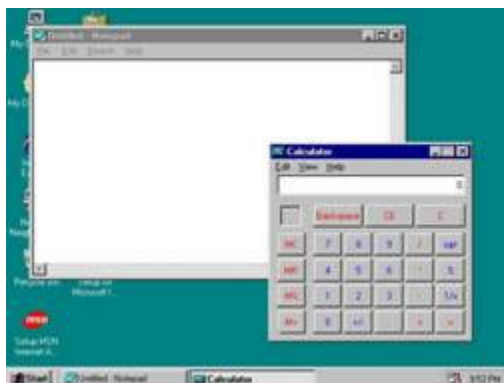
the way at the bottom of your screen. It usually is grey, but it can also be blue, green, red, and almost any other color you want it.



Notice how the "Calculator" program is in focus. You can tell because it has a blue title bar while the "Notepad" program is unfocused because it is grayish. Also, in the taskbar, the program in focus always has its button pressed inward.

### Exercise

1. First open a program (try notepad). Notice how the name of the program is displayed in a button on the taskbar. (This is true for most programs, however certain programs (commonly intense full screen games) will take up the entire screen and hide the taskbar).



2. Next press the minimize button at the top. See how it disappears on your screen, but its button with its name is still in the taskbar.

3. Now open another program (try calculator). Minimize that program also. See how it also is still in the Taskbar. The Taskbar always shows you what you have opened, even if you have minimized it and it is no longer on the screen. You can open as many programs as you want. There is no limit. To make the program reappear, left click its name and it will pop up.

4. Try the other program again. See how that program comes up too (probably over the other one). Now click on the other program's window. It will come to the front. When you are done with a task/program, just simply click on the "X" button and it will close.

## Using Scroll Bars

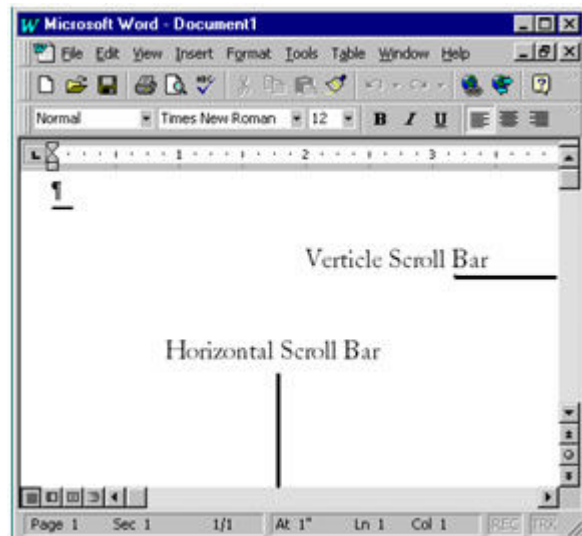
The screen may have as many as two scroll bars available. The scroll bars allow you to bring new information into view on the screen. The scroll bars have a black arrow at each end and a square or rectangle in the area between the two arrows. The **vertical scroll bar** is located on the right edge of the screen. The **horizontal scroll bar** is located toward the bottom of the screen.

### To use the **vertical** scrollbar to:

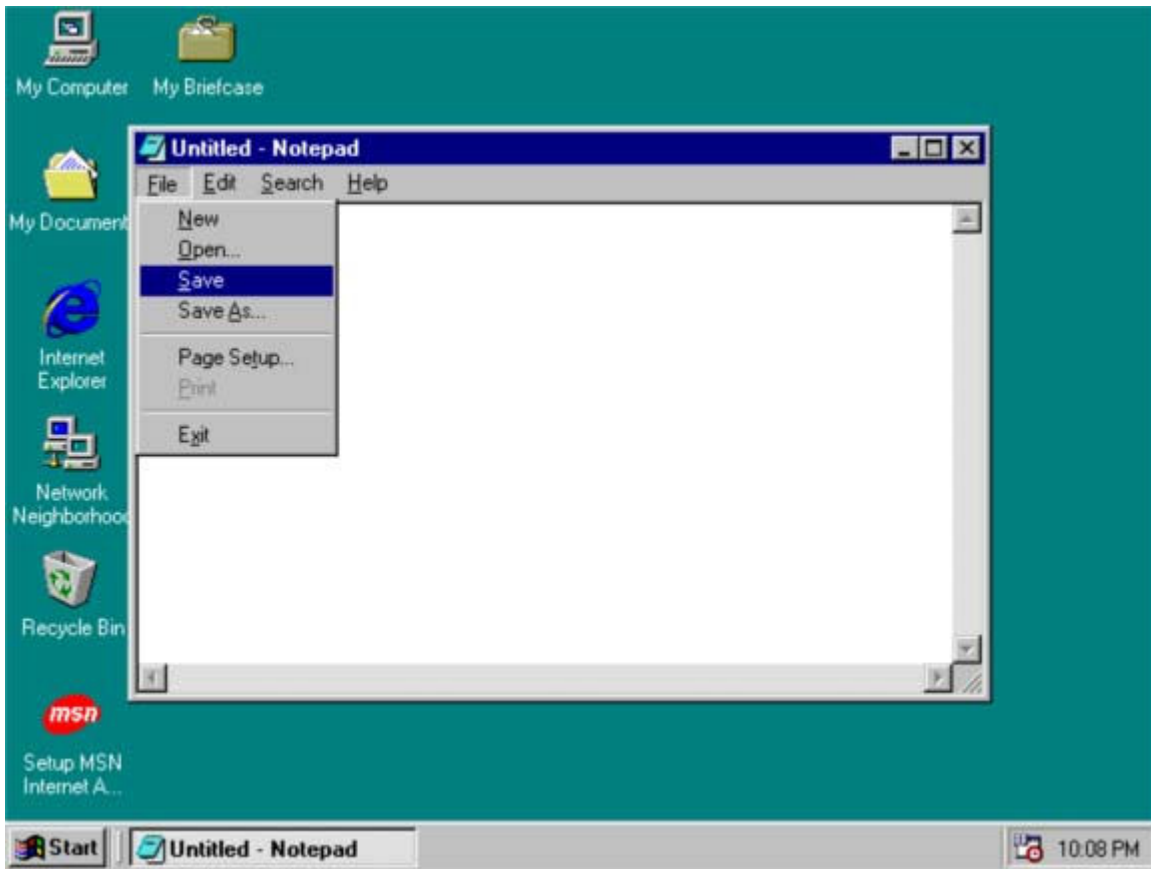
- Move up or down a line at a time (or a small distance), click once on the up or down arrow.
- Move up or down several lines at a time, click and hold the up or down arrow.
- Move up or down a portion of the screen, click and drag the scroll box up or down.
- Move up or down a screen at a time, click in the light gray area above or below the scroll box.

### To use the **horizontal** scrollbar to:

- Move left or right a small distance, click once on the left or right arrow.
- Scroll left or right a large distance, click and hold the left or right arrow. Move left or right a portion of the screen, click and drag the scroll box left or right. Move left or right a screen at a time, click to the left or right of the scroll box.



## "Pull Down" Menus

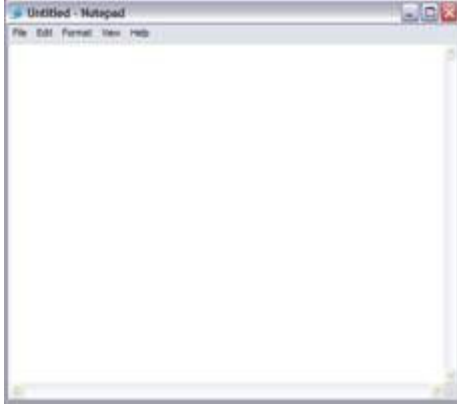


## **"Pull Down" Menus**

"Pull Down" Menus are in many different applications. They offer a neat, organized way to perform functions. Inside the "Pull Down" Menu, there are different features and functions that can be accessed, depending on the type of program that you are using. "Pull Down" Menus are grouped by categories, depending on their function. Most programs have certain categories such as "File," "Edit," and "Help." The File "Pull Down" Menu provides features that deal with the program and how it operates. You can sometimes save a document, open a file, print a document or exit the program. Selections in this "Pull Down" Menu tends to vary depending upon the program you are using. The Edit "Pull Down" Menu has increased functionality and allows one to modify text, find objects and words, and so on. The Help "Pull Down" Menu always offers some form of help, whether it's a manual, strategy guide, troubleshooting tips, or a wizard.

To operate a "Pull Down" Menu, you left click the name of the menu, for instance, File, and then you click on an entry in the list and the operation is executed, or carried out.

## **Working with Text**



Working with text is also known as word processing. Word processors include Microsoft Word, WordPerfect, Microsoft Works, Word Pad, or Notepad. Word processors work nearly the same as a typewriter. The flexibility of a word processor is its true value. With a typewriter, if you make an error on a document, you would probably need to retype the entire paper or use the special white tape. In a word processor, you can add, remove, and replace text anywhere without needing to retype anything. The word processor will automatically space and format your paper the way it is meant to be. The other advantage of a word processor is that you can make multiple copies of a paper without needing to go to a copier.

In a word-processor, when the mouse pointer is within text, the pointer will be in the shape of an I-beam. When you click the Mouse to position the cursor in the text, the cursor will change to a blinking vertical bar that indicates the insertion point.

## Inserting Text

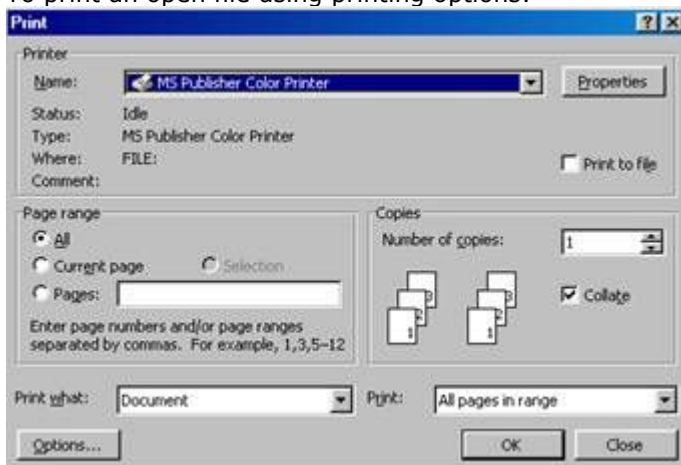
Use the mouse or arrow keys to place the insertion point within the text at the point where the text is to be inserted. Type the desired text.

## Printing

### Printing

Often, you might want a printed version (a hard copy) of your letter to take with you. Most programs make it easy to print.

To print an open file using printing options:



1. From the FILE menu, choose PRINT.

2. In the dialog box that opens (similar to the one below), select the printing options that you want to apply.

3. Click on the OK button (or Cancel button if you are not ready to print).

To print an open file using DEFAULT printing options, most programs include a Print button on the toolbar. It may look

something like this: . (In most programs, using the toolbar Print button will automatically print all of the pages of the file).



# CONGRATULATIONS!

You have just completed the Computer Basics Class! Please keep this packet handy for any quick-reference questions you might have in the future. It is also a good idea to sometimes practice the different exercises occasionally. Congratulations and have fun with the computer!



Online at <http://www.CommunityConnects.org>

For questions, comments, or concerns, e-mail us at [Support@CommunityConnects.org](mailto:Support@CommunityConnects.org).

