Sandy Senior Center
Presents
Course 111
OS X Fundamentals
Mountain Lion

For Apple Desktops and laptops

March 2013

Foreword
Sandy Senior Center
OS X Fundamentals Manual

This manual is designed to assist the student while taking classes at the Sandy Senior Center. The material in this manual has been gathered from several sources and provides a review of what is presented in class. This course is a designed to be taken by users that have some basic skills like using the mouse and keyboard. The course is designed to be taught in four classes each class two hours long. The manual is generated in color.

The following suggestions are given to make the learning process easier. Read the objectives for that week's class and try to determine what your greatest weaknesses are in that week's material. Read the section and go back over the objectives again. Mark the areas where you still need more information and have the instructor answer any questions that the classroom presentation does not cover adequately.

Acknowledgments

This manual was developed by Sandy Senior Center volunteer Jerry Stewart. Use of this manual is granted to all Salt Lake County senior centers under the provision that the acknowledgments section remain with the manual. Centers may modify the covers to reflect their center. Students and instructors may print the manual; all other uses must be approved by the author.

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Class 1 – Objectives

Know the following terms:
      Desktop
      Menu Bar
      Dock Bar
      Trash Bin
      Spotlight
      Icons
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Be able to:
      Recognize the icons in the Menu Bar
      Recognize the icons in the Dock Bar
      Use Finder
      Add a folder to the desktop
      Arrange icons on the desktop
      Change the speaker volume level
      Open up a context menu
      Open up a program
      Minimize a window
      Close a program
      Resize a window

Apple introduced the Macintosh computer in 1984 to update the Apple I, II, and III line of personal computers. It has evolved over the years and been shortened to just Mac and includes laptops, desktops, all in ones and the compact Mac Mini used in our classroom. OS X is pronounced as Oh S Ten. It is the 10th Operating System (OS) created for what was originally called the Macintosh. The first OS was not Unix based, the last nine have been Unix based. Apple can trace its lineage to the Unix OS that was used on the main frame computers of the 60s and 70s. They could take up multi-rooms and even multi-floors depending on the storage capability.

The operating system is the software in the computer that handles the human to machine interface. It keeps track of the temporary and permanent storage (RAM and Hard Drive), other storage devices, displays data on your display, takes input from your keyboard, mouse, touchscreen and other input devices. It will run other software that you select to do functions like word processing and getting on the internet. This course will help guide you through the commands available through your OS.

There have been several updates to OS X, Mountain Lion being the update to the Lion version Prior to that, there was the Snow Leopard. Mountain Lion has added a bunch of iPad touch gestures and renamed some programs to make using both an iPad and a Mac a little easier.

Another operating system based upon the Unix structure is Linux. Linus Tolvard and his friends developed their operating system based upon POSIX which was the document that all Unix systems were to meet to insure compatibility. The underlying structure, low level commands, file structure etc. are common. However, the Graphical User Interface is not. Since Linux is open source and free, many companies have taken the Linux OS and added their own Graphical User Interface (most often written as GUI and pronounced Gooey). Apple has also done this and this is the ninth version of the apple GUI.   The GUI presents icons that you can click or touch that will generate the actual command line necessary to make the OS do what you want.

Menu Bar

When you boot up in OS X you should see at least the Menu Bar located at the top of the screen, a background picture which is you desktop and a Dock bar at the bottom of the screen. You may also have icons on the desktop. These icons are shortcuts to programs, files, or devices that someone has installed for you. Icons are small pictures that represent what function or file you will be taken to when you click on it. The Dock Bar at the bottom of the display is full of icons that OS X has provided for you. You may add or remove icons on the Dock bar.
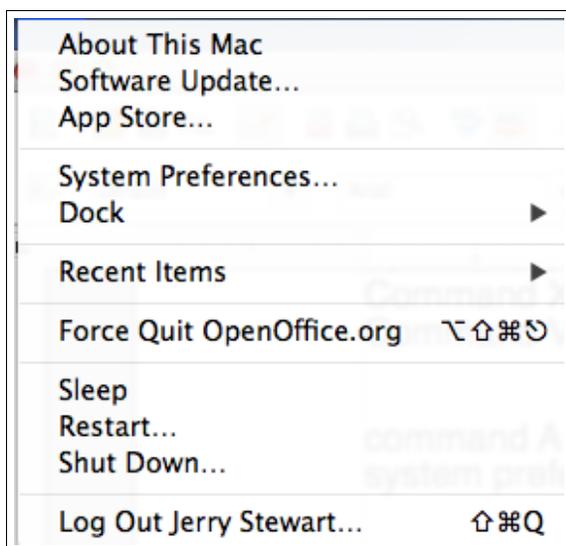
The first icon on the menu bar is the Apple logo and it will always appear. It provides you with several system functions. The "Recent Items" list may be the one you may use the most. Move your mouse over this line and it will open a list of recent files and applications that you have used. Clicking on that file will bring up the default application and the file. Any time you see a right facing arrow as seen on the Dock and Recent Items lines it means there are more items to be displayed in that category. The "Force" line will allow you to close the open program if clicking on the red circle does not work. If you have set up multiple users this menu will allow you to Log Out of the current user so you can sign-in under another users name.

The picture of the menu bar above was taken while writing this document in Open Office. It shows on the left hand side of the menu bar to the right of the apple logo. The rest of the menu bar is the same regardless of the open program and will be covered on the next page.

The picture below is the left side of the menu bar when no other programs have been invoked. In this case the program Finder will be shown. Notice that there are fewer commands on the bar. The complexity of the program will determine what is shown. Clicking on any world in the menu bar will cause a drop down menu to be displayed that you can click on. Clicking on View would provide a list of how you can change the view.

Below is the right side of the menu bar. The first icon on the right hand side of the menu bar looks like a wall clock. This is the shortcut to the backup program that comes with OS X. It is called time machine. To use this feature you must have a second storage device other than the operating system hard drive. This backup program does a system image and backs up your files. Depending on the number of files you create, you could use a flash drive or memory card for this function. If you have lots of pictures, movies or music you may need to use an external hard drive.

The next icon is for configuring your Bluetooth devices if you have any. Some keyboards and mice use this wireless protocol instead of USB.

The third icon shown above is the Wi-Fi icon, Clicking on this icon will provide you with the status of you Wi-Fi connections and allows you to manage them if necessary.

If you have a CD/DVD player, the pyramid icon will allow you to open or close the door.

The next symbol is the Volume icon and will allow you to control the audio volume. This is the master software volume control. Click on it and a slider bar will appear, click above are below the circle on the bar to raise or lower the sound. You can also drag the circle. Many programs will also have a secondary control which will allow you lower or mute your sound but will not override the maximum volume set by this control. If you have a manual control on the speaker it will override all others for maximum sound.

The day/clock function is pretty obvious. However clicking on the time will allow you to change your preferences.

The icon that looks like a magnifying glass is your search command. It is called Spotlight. Just type in the text box that opens when you click on this icon and search your computer. We will cover more features of this program in a later chapter.

The last icon will show any pending notifications. If you have the Apple Email program set up it will open the unread mail folder. This notification area is also used by other programs like FaceTime to keep you up to date if some one logs on while you have FaceTime running in the background.

Keyboards

Keyboard keys are the first, biggest stumbling block when switching to a Mac from Windows or Linux. Especially on a laptop keyboard where keys you expect to see, like backspace and dedicated home and end keys simpler aren't there. Since we are using the Mac computers in the lab in a dual boot mode we have both Apple and Windows keyboards. Even between Apple models the keyboard layout changes. If you were a Windows user before you can use most of the shortcuts you learned if you remember to use the Command key instead of the Control key. The Command key on a "Windows keyboard" looks like a flag and the symbol used on an Apple keyboard (shown below) are consistent between brands. Other special keys however, are not. We have added labels to assist in the transition if the computer you are sitting at has a Windows keyboard. However, when you look at a drop down menu from the title bar that has keyboard shortcuts listed, they will use the symbols below instead of words. In many cases even the Apple keyboard will not show the symbol but will use words.

| Symbol	Purpose
⌘	Command key. Sometimes the key has an Apple symbol on it as well. If you're coming from Windows or Linux, this acts like the control key does on those operating systems. Copy and paste use the command key. This is one of the biggest adjustments coming from another platform. It's also what trips you up when moving between operating systems.
⌥	Option key. Sometimes the key has the option symbol, sometimes it has the word 'option' and sometimes it has 'alt' on it. If you're coming from Windows or Linux, this acts like the alt key.
^	Control key. This acts like a normal control key, but, if you're coming from Windows or Linux, it loses its special meaning for copy and paste commands.
⇧	The shift key. Usually labeled shift.

	The return key. Works just like you expect. This is a larger key on full size Windows Keyboards.
	The enter key. Mac keyboards may have both a return key and an enter key. Confusingly, the return key is also often labeled as an enter key. The enter key is the small one. Some applications give the enter key special meanings that differ from return.
	Delete key. Another hard one to adjust to from other operating systems. The Mac delete key works like backspace in Windows and Linux. The forward delete is what most people expect from this key.
	The forward delete. What people on other operating systems think the delete key is.
	Escape key. Often labeled 'esc' on the keyboard. The most confusing part of this is the symbol.

Dock Bar

To make it easier to see, we have broken the Dock bar into two pieces.

The square face is the icon for the Finder program, it will display all of your folders and let you search those folder or the whole computer. Click on this icon or any icon on the Dock bar and it will open that program.
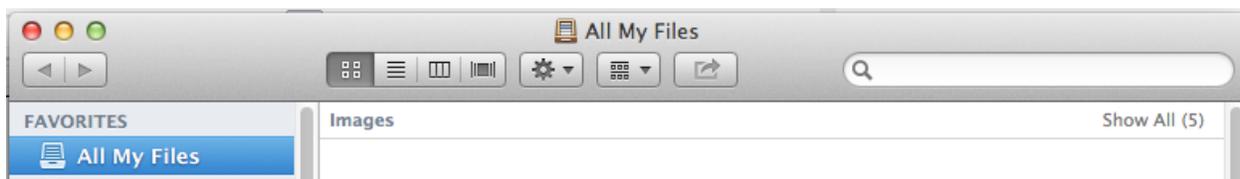
Before we start on Finder, notice in the upper left hand corner 3 colored circles. When you move your mouse over them, they will brighten. The red circle contains and x and clicking on this button will close the program. Clicking in the yellow circle will minimize the program and

FAVORITES
- 📄 All My Files
- 🪂 AirDrop
- 🅰 Applications
- 🖥 Desktop
- 📄 Documents
- ⬇ Downloads
- 🎬 Movies
- 🎵 Music
- 📷 Pictures

DEVICES
- ◎ Remote Disc
- 💾 SDmini ⏏
- 💾 Untitled
- ◎ ESD–ISO ⏏
- 💾 HP Software ⏏
- 💾 OpenOffice.org ⏏
- 💾 Jerry64a ⏏

put it down in the lower right hand side of the Dock bar. Unlike Windows and most versions of Linux, the green icon does not toggle between a full screen and a preset window size based upon the last windows size manually set. It toggles between the last manually set small screen and the last large screen size. If you want a full screen you must manually set by dragging the sides or corners. When the window is not full size you can move the window by clicking and holding the left mouse down some where in the empty space of the title bar and dragging the window.

Another difference you might notice if you have used other computers in the past, is that OS X has reversed the direction that the screen moves when using the mouse scroll button or the touch pad. This was done to match the touchscreen in the iPad.

Back to File Finders. Show to the left is the navigation window in File Finder. If you want to limit you search, click on one of the icons in this list before you type in your search word. For example you see at the bottom of the list "Jerry 64a". This a flash drive plugged into the computer. By clicking here first, the search would be limited to files located in the flash drive. If you were looking for an application then click on that icon first. To open an application/program not on the Dock bar requires a double left click.

One of the applications that most people need is a program that will allow them to write a letter, recipe or some other document. If you are just looking around you may miss it. However, there is such a program provided as part of the OS. It is called TextEdit. Click on Applications and start typing TextEdit. There is no space between the two words. The AppleScript editor is for programmers and is not a general purpose editor. If you have not installed another word processing program it would be a good idea to add this to you Dock Bar. You can do this by dragging the program from the finder window down to the bar. Instead of using the search function in Finder we could have clicked on **applications** and manually searched the list of application installed in your computer. You can also drag a application from the application screen down into the Dock bar.

There are many options that can be set in File Finder and you may want to examine them later. However, remember File Finder is looking for your files unless you click on one of the options on the drop down menu.
The Dock bar has a limited space to display icons and should be used to provide shortcuts to the most often used programs. The next icon is called Mission Control and

will allow you to navigate to other open applications. You can also activate this program by putting your cursor in the upper left corner of the screen.
In the Apple world, applications is just another name for programs.
Before we explore other Dock icons, lets cover have to modify the Dock bar.
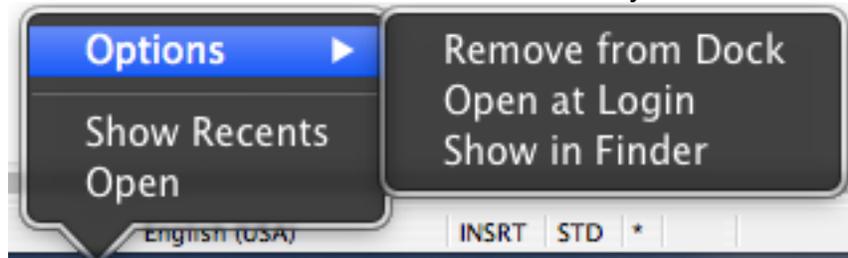
In the above example, I "right clicked" on the calendar icon on the Dock bar. Any time you right click on an item you should see a "Context Menu"   This menu will provide you with any actions that can be performed on the item which you clicked. In this case you can remove the icon from the the Dock. This does not uninstall it, it just removes the icon from the dock so you can add another icon. The next click will be a left click. The right click only brings up the Context menu and then you must left click to choose what you want to do. If there is nothing on the menu that you want to do, you must left click in an open area to cancel the menu. This is a common way to escape out of something you started by mistake.

This Context Menu feature is also helpful on the Desktop. Right click on any open space on the desktop and you will get the following menu.
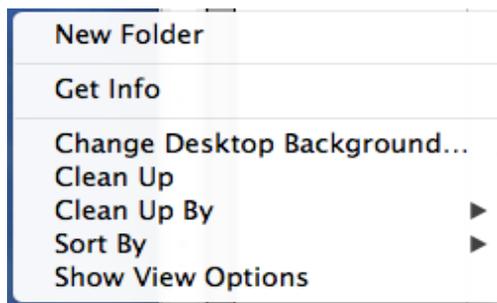
The top option allows you to add a folder to your desktop. The new folder will be called untitled until you type in a new name. If you forgot to rename it when you generated it you can do it later by a left click on the folder and then hitting the return key. You will see the icon shading change and you can now start typing the new name. The Clean up and Sort By options provide ways to arrange your desktop. The Show View Options will allow you to change the size and spacing of the icons and some other features. Icons on the desktop can be moved by dragging. That is, left click and hold the mouse key down until you move the icon where you want to go. Then release. If I say click, it means one quick click on the left mouse button. Drag is covered above and I will say right click if I want a context menu. A double click will always be the left mouse button. The wheel between the left and right button are to scroll the contents of a window up and down.

The Trash Bin on the Dock bar is where files are kept that you have deleted. If you have accidentally deleted a file, click on this icon to open and then right click on the file you want back. You will have an option to "Put back". This will put the file back to where it was before you deleted it. When a file is put in the Trash, it is compressed to save space and you must use the Put Back command to uncompress it and return it to the original location in an uncompressed fashion. When you want to empty the trash bin to recover disk space, just right click on the trash icon and left click on empty trash. There is also an empty trash option in the upper right corner of the Trash program once it is opened.

Class 2 Objectives

Terms: vcard, streaming, radio buttons, html

Be able to:

> Use Launch Pad
> Use Mission Control
> Use Safari
> Use the Mail app
> Cut, Copy and Paste

Launch Pad

Launch Pad provides an additional list of program/apps icons that you can click on to launch that are not contained on the Dock bar. When you download an application from the Apple store an icon will automatically be added to the Launch Pad. If you add programs from another source you may have to add them to the apps page manually and then they should show up on the LaunchPad. Once the LaunchPad page is filled with icons a new page will be generated. An area on the LaunchPad will indicated how many pages are available and let you navigate between pages.

Clicking on Mission control will open all active windows so that you can navigate between windows easily. You can also open the mission control by putting your mouse cursor in the upper left hand corner of the screen. Unless you have excellent mouse control you will find yourself activating this feature when you really just trying to click on the Apple logo. Later we will show how to turn this "hot corner" feature off. Once Mission Control is open you can click on a different open program. Mission Control is also handy to see if you left any programs open.

Safari
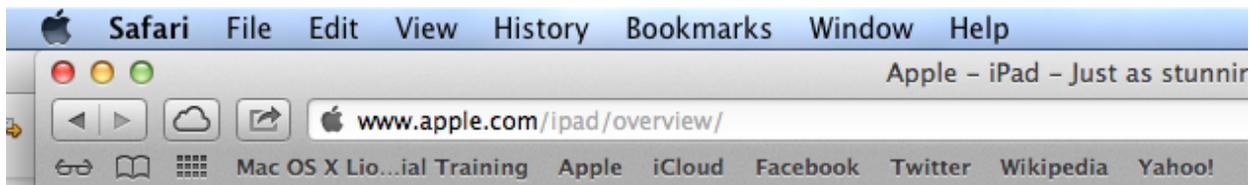
The icon next to Mission control that looks like a compass is for the Apple internet browser Safari. There are many internet browsers on the market and each operating system will come with their own companies version. You can download and install another browser as long as it matches your operating system. Many people have two browsers installed on their computer in case one gets corrupted. Then the second

browser can be used to download a fresh copy of the corrupted browser. The Internet browser allows you to connect to any computer that is also connected to the internet. This is done much like the telephone system except there are many more redundancy sites and servers set up to determine what is currently the fastest path.

Since there are billions of sites, we would be hard pressed to remember the number for the computer we wanted. The browser will accept a name and then connect to the nearest server (Domain Name Server) and look up the number and connect you to it. If the name you entered was not valid, Safari will send the name to a search engine on the internet. Safari comes setup with the options of using the Google, Bing or Yahoo search engines. The search engine will come back with it's best guesses on where you wanted to go and you can click on that site. You type in what is called the URL (Uniform Resource Locator) box. In the picture above, www.apple.com is in the URL box. If you look close you will see additional information after the site name. The additional information tells you the location of the page at the site which may be a very long string of characters. The reason they bold the site name, also known as the Domain Name, is so that you can double check if you are at the correct site. There are scammers who will buy the domain name of a site that is close to the spelling of popular sites hoping you will misspell the site and end at their site. They may even copy the home page of the target site to further mislead you. Make it a habit to double check the address in the url window.

The most important thing that the browser does is convert the code sent from a website to something that is useful for you. Since there are so many different types of computers, screen sizes and so many languages in the world, an internet programming language was developed. It is called Hyper Type Markup Language (html). The browser looks at the code at the site, and displays the language (English unless you set it up for some other language) and determines where to put text and pictures on your screen. It also provides a way for you to go somewhere else on the internet. Whenever you see a line of text in blue put your cursor over it. If the cursor turns into a gloved hand with one finger pointing it means that text is a hyperlink. Clicking on it will take you to the address imbedded in the code. Some browsers will show you the address in the status line. By default Safari comes with the status line turned off. Click on View and turn on the status line to change the default.

There is also a secure (encrypted) version of the http protocol and if you see https that means the data between you and the site is encrypted. Whenever a site asked you for information that is sensitive it should switch to this protocol. If it does not, do not use that site. There is also a file transfer protocol (FTP) you may see from sites that specialize in downloading. It is much more efficient in transferring files that the http protocol.

Although most site domain names start with www (World Wide Web) you do not have to type that in Safari and most other browsers. The browser will add the www saving you some typing. For example typing in sandyseniorcenter.org in the url window will take you to www.sandyseniorcenter.org web site. Also if you don't know the correct address, Safari will send you entry to the search engine Google and Google will provide you a list of addresses that comes close to what you type. You can also use this feature to search for topics of interest.

Using the internet is easy but how to be safe and efficient on the internet is beyond the scope of this course.
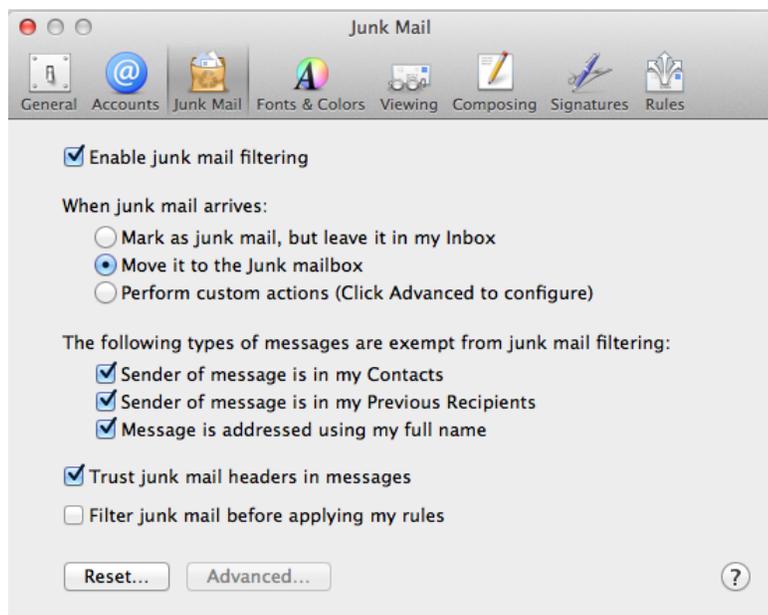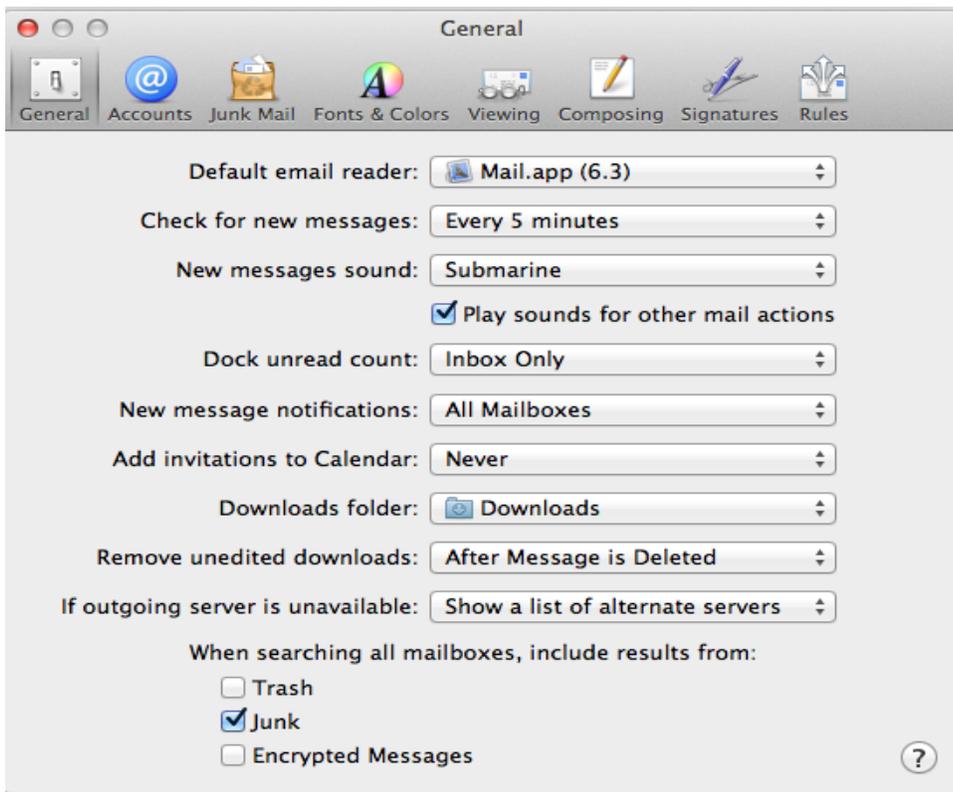
Mail

The Mail application looks like a stamp. In addition to the account that you set up on your computer, extra accounts can be added if you have more than one email address. If you have unread emails a number will show up in the right hand corner of the stamp.

At the top of the menu bar the envelop icon is used to check your emails again. By default, the mail program goes out and checks the mail when you first open it and then checks every 5 minutes that the program remains open. The next icon that looks like paper and a pencil is where you click to start a new email. The Trashcan icon is where you can click to delete a message. If you receive an email that is suspicious, you must click only once on the email to select it and then you can click on the trashcan, if it is an open email you can also click on the trashcan to delete it. The thumbs down icon allows you to mark an email as junk. This will accomplish two things, it will put the email in the junk folder and it adds the address of the sender to the spam filter. The spam filter learns from what you mark as junk to automatically move similar mail to the junk folder or mark it as junk depending on your settings. More on this later. The single arrow that points to the left is what you use to reply to the sender. If you click on the double arrow it will reply to all addresses on the original message. The right facing arrows allow you to forward the email to a new address. If you click on the flag it just adds a flag to the email to make it easier to find later. The down arrow next to the flag allows you to choose the color of the flag.

One of the things you should do is edit your preferences. Click on Mail and then on the preferences line. The menu shown below should appear.

There are eight tabs at the top of the window. The general tab is shown above and on the second line you can see that the mail is checked every 5 minutes and you can change the time by clicking here. The next line shows what sound will be heard when you receive new mail. There is a list of sounds provided here or you can get fancy and add you own sound

like "you've got mail". You should also make a decision on where the search mail looks. In the example above, I have changed the defaults to check the Junk mail but not check the mail in the trash.
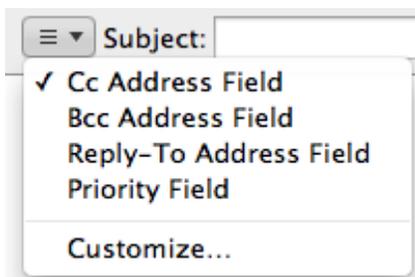
In addition to the General tab, I recommend that you look at the Junk Mail tab to understand what is happening to junk mail and tailor it to your preferences.

If you click on the Move it to the Junk mailbox, a folder will be added to you mail program where all the junk mail goes instead of showing

up in your inbox. You might also consider unchecking the "message is addressed using my full name. The "Trust junk mail headers in messages" uses the existing junk mail detection to more accurately identify junk mail and should be left checked.

If you want to customize other aspects of you email you can use the other tabs to modify the default settings. In my case, I used the "Composing" tab to change the default to not include the original message when I did a reply to a message. If someone sent me a message he should know what he sent.

To write an email, click on the pencil and paper icon and a new email will open. Just start typing the address in the "To" box and the program will search your contacts book (address book) and when you see the address you want you can quit typing and hit enter. It will then show the address you selected. To add another address just start typing again. You can do the same thing in the CC box. CC stands for Courtesy Copy or Carbon Copy. The search includes both names and email address so you can use either when you are typing. If you need to use the Blind courtesy copy (Bcc) address field you will need to click on the little down arrow shown on the left and click on the Bcc line. If you are sending to more than one person, it is recommended that you use this instead on putting everyone in the "To" block. This hides the addresses of everyone but the recipient. This way if someones computer gets hacked, only the senders name will be added to the spammers list of names that he harvests from that user. Be sure to add a subject to the email so the recipient will know what the email is about. Be suspicious when you receive an email without a subject, especially an email with attachments. This is how a lot of people get infected with a virus.

You can attach a file or picture to your email by clicking on the paper clip on the right of email you are writing. This will open the Finder program so that you can find your file and attach it to the email. Once you find the file, click on it and then click on open. The A icon puts a format bar on the display so you can change the font, color, size, etc. The picture icon shows or hides the Photo pane and the last icon allows you to select "Stationary" for email. Using stationary makes the email look nice but makes the email size much larger. Consider using this on special occasions only. All that is left to do is type in the message and then click on the send arrow below the three colored icons on the left top of the message.

The Contacts program icon is a book with an @ sign on it. When you send an email, with the Apple mail app this is where it checks. You can manually add names into this program or use the mail app to add the sender of the current email. To accomplish this

just right click on the address in the email program and then select "add to contacts". This will put the name and email address in the contacts program for future use. However, the Contacts program can have other uses and you may want to edit the entry at a later time. To do this open the contacts program on the Dock bar by clicking on it.

At the bottom of the window you will see the window above. The plus sign will open up a page that will allow you to make a new contact entry. The next icon will change the display look and give you two pages instead of one. This is handy when you are in the updating mood. The new left page will have a list of your current contacts that you may want to edit with telephone numbers, home address or social web site information. If you are already on the page you want to change then you will need to click on the "edit" button. The left and right arrows in the bottom right allow you to page through you list one name at a time. Don't forget the top menu bar where there are additional commands. They include importing and exporting contacts and the ability to create groups. This program uses the vcard format for importing and exporting. If you are The default is vcard version 3.0 but you can change the default to 2.0 if you have an old account that you want to bring in or export to. This format is not supported by address or contact lists in most of the popular email programs so you may be stuck in manually adding your contacts.

Cut, Copy and Paste

We are going to use the TextEdit program to teach the keyboard shortcut and drop down menu features of Cut, Copy and Paste. Full blown word processor programs may have icons to allow you to perform these functions. However, many programs will not provide these niceties and you will find it very helpful to know the keyboard and mouse shortcuts. A practice file will be provided so that you can see the rules while you practice. It will also cut down the amount of typing you have to do in the classroom. Cut removes the selected item from where it is and you can put it in a new location. Copy leaves it in the old position and also copies it to the new location

1. Select what you want to Cut or Copy.
2. Use the drop down menu, shortcut or icon to select Cut or Copy.
3. Move the cursor where you want to paste it.
4. Use the drop down menu, keyboard shortcut, mouse shortcut or icon to paste it.

NOTE: The most common mistake is to forget step 3.

Although we are using cut copy and paste in a word processing function it is VERY important to realize that function is also a key way of moving files from location to another.

If you have not added TextEdit to your Dock bar, you can open the program by using the Magnifying glass icon in the upper right corner. Type in TextEdit in the spotlight box that appears after you click on the icon. Once you have the Text Edit box open you can click on

new document to start practicing.   I find it easier to use if the TextEdit window is moved up next to the Menu bar at the top of the screen. This will remind you that in addition to the shortcuts located at the top of the window there are many more options available in the menu bar that we will be using in the editing program.
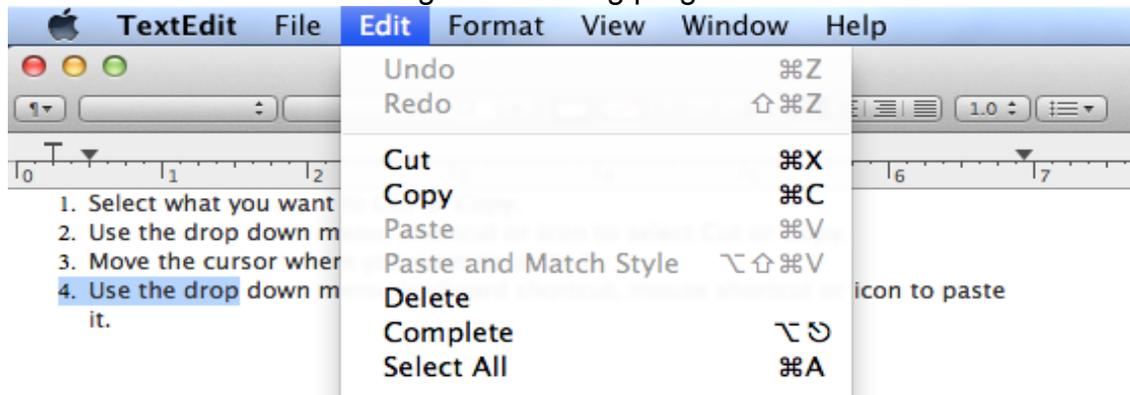
In the example above the Edit menu was clicked and you see that the drop down menu includes Cut, Copy and paste commands. You should also notice that the two Paste options are in a lighter gray color. This is because nothing has been copied yet. The blue area (line 4) has been selected and that is why the Cut and Copy items are black. This is a standard feature of drop down menus. If an item is gray then some other action must be performed before the grayed out item can be activated. Also notice to the right of the cut copy and paste lines are the keyboard shortcuts that will perform the same function. As shown in the first lesson, the symbol to the left of C is the command key on the keyboard. This means that you hold down the command key and press the C key at the same time to Copy the selected text. To paste somewhere else, move the cursor to the new location and then hold down the command key again and press the V key. If you hold the V key too long it will auto repeat and the selected text will be repeated as long as you hold the keys down. The Paste and Match Styles command requires that you hold down 3 keys simultaneously and then press the V key. (Command, Option and Shift). The Command, Option and Control keys all act like the shift key, that is, nothing happens until you press a typing key. Whenever you press a typing key on the keyboard a string of 8 ones and zeros are sent to the program which determines what is done. If you type the letter "a" the string is 01100001 and if you do a Shift "a" then you send 01000001 and you see a large A on your screen. Keys like **Enter** and **Tab** send a code to the screen which moves the cursor to a new location. On a small sized keyboard like seen on laptops you will also have a function key which allows the top row of keys do send two different commands. All of these ones and zeros are kept in a file so the document can be viewed later.

Command + a = select all
Command + c = copy
Command + x = cut
Command + v = paste
Command + z = undo

The above keyboard shortcuts work in many programs and are worth learning. For example if you were in a folder of files and wanted to move them to a new location you would hold down Command and hit "a" and then "x" and it would put all of the files on the clipboard. After you go to the new location do Command +V and they will pasted there.

If you are a touch typist you will find the keyboard method the fastest way. If not and you are better with a mouse then these methods might be faster. To select, you click the mouse in the front or back of what you want to select to move the cursor. Now click and drag to the other end. The area should be highlighted in blue. Now right click anywhere in the blue area. A context menu should pop up. Depending on where you are you may have many options on the context menu but three will be cut, copy and paste. Left click on the desired one and that action will be done.

Unless you are really good with a mouse you may find that selecting very small areas like 1 or 2 letters may be difficult. Especially if the program tries to help you by auto selecting a word or sentence. In these cases the cursor keys located on the bottom right of most keyboards can come to the rescue. Use the cursor keys to get you to the front or back of where you want to select, then hold down the Shift key and use the cursor keys to move you to the other end. This does the same thing as click and drag but with more fine control.

There will be times when you will need to use a combination of the keyboard and mouse methods when the program does not have a drop down menu or shortcut icons.

When you are practicing moving the lines in the cut and paste exercise you will find that you cannot place the cursor in a place where you have never been before. The cursor will move but when you click to place it there it will go to the nearest used location. When you hit the Enter key in a document program, two eight digit codes are added to that location in the document. The first tells the program to add a new line and the second tells the cursor to go to the left side of the screen on the new line. (line feed & carriage return). There are many of these codes that are hidden from view. At the front of the file is a list of default codes that tell the program how the typing will look like and where it will start on the page, etc. The ones that are most often changed are on the ribbon below the title bar. The first box allows you to choose several default styles which changes multiple selections at one time. The remaining boxes allows you to make individual choices. The first box is the font, the second box allows you to change the characteristics of the font, the third box changes the size of the font. The next boxes allow you change the color, Bold it, Italics and underline. You can set these options at the beginning of the document and use them throughout or you can change them a character, word or line at a time. For example, you highlight a **word** in the middle of the sentence and click on the B command a hidden code tells is placed in front of **word** telling the program to display and print the following letter is bold until the same code shows up later telling the program to stop using bold. It is just like we would use "quotes" around a word to emphasis the word, but in the computer programs case the quotes are hidden. This same method is use for other text attributes like color, size, italics, underline font.

TextEdit has four file formats that it can support. If you use the .txt file format you will only be able to use the program like an IBM electric typewriter. That means all of the special features

of color, bold, etc. will not be available. If you remember, the ball on the IBM could be changed giving you different sizes and fonts on your paper. However, this mode is normally used by programmers to write scripts and other programming files that cannot contain anything but typing codes.

The .rtf file format allows the addition of the codes we talked about before and is the default mode. This file mode is also compatible with most other operating systems.

If you drag a picture into your document, your .rtf file will be converted into a .rtfd file format. Don't send this kind of file to other computers. Without special programs they will not be able to view what you have done correctly.

The last file format is .html and is used in web pages and some email programs. You will normally not have a need to generate a .html document in TextEdit. If you plan to create web pages, you should be using a full featured program that does the majority of the formatting for you. However, if you receive a file formatted in html at least TextEdit will display it for you.

Sometimes you will receive a file with word wrap turned off. If you do you will see a single line that goes on until the file has a carriage return entry. Word wrap automatically resizes your displayed paragraph so that every line larger than the window will be wrapped around to the next line.

Class Three Objectives

Terms:

       Be able to:
       Use the Calendar program
       Use the Notes program
       Use iTunes
       Use capture screen commands

Calendar

The calendar program on the Dock bar provides you with basic calendar functions. The display can be switched from day, week, month to year as shown above. You can add notes to any day for future reference. You will also be able to print out your calendar from the top menu. The + sign is a shortcut to add an event to the calendar for the current day. Great in a work environment, but you may find that doubling clicking on the calendar where you want the event is more convenient. A blue box will appear where you can type in the note you want to remember. This is great for appointments.

Notes

The notes program is primarily for writing quick notes that you can search through within the program without searching the entire computer. The only trick is to notice the + sign at the bottom of the window. When you click on this a new note is started. A yellow note pad will open and you can just start typing on this pad. When you are finished with your note, click on the + again and it will save your current note and open a new note so you can start again. A list of notes will be provided on the left but you can always use the search block in Notes to search for titles or content.

Messages

Messages replaced iChat, the previous Instant Messaging client in older versions of Mac software. In addition to supporting Apple's new iMessage protocol, Messages on OS X retained its support for AIM, Yahoo Messenger, Google Talk and Jabber. Messages unitizes the newly added Notification Center located at the end of the menu bar to notify you of incoming messages. The introduction of a new Share button in applications like Safari, Finder and Preview gives users the ability to share links to web pages, photos or files. Messages also supported dragging and dropping files or photos for sharing. Messages also supports video calling through Apple's FaceTime and the third-party IM services it supports.

You must set up an account to use Messages. After you open the program click on Messages and then File Preferences. Your primary account will be your email address but you will have to enable it using your Apple ID. The Bonjour account is used for computers on your local network. It will be slightly faster because it does not go through the internet to move messages.

iTunes

The iTunes program is tightly integrated with the cloud and the iTunes store. You use your Apple ID to sign into the store to make purchases. Once you have purchased a song, movie, or TV show you can down load this song to any Apple device you own using the same Apple ID. A record of what you purchase is kept in the iCloud. You can also use iTunes to play music and videos. Clicking on the iTunes icon will open the program.   In the upper left hand corner below the title bar you will see which

mode the program is set. In this example the program is set to play music. See picture to your left. All of the music you have downloaded from the Apple store or installed from other sources will be displayed it the main box. If you want to change the mode of the program click in the box and a drop down box will be displayed from this box you can select Music, Movies, and TV shows. There is also a Books selection but it only works on iOS devices like the iPad. You can generate playlists and name them. The playlist will contain the songs that you add. To create the playlist, click on File, move down to New and then click on playlist. When the new window comes up start typing the name you want where the blue box say Playlist.

You can now drag your desired songs into this playlist. One of the reasons you may want to create a playlist is so that you can burn those songs to a disc. Once you have the songs you want in the playlist, right click on that playlist and a context menu will come up that will allow you to select "Burn to disc". In this case they are talking about a CD not the hard drive.
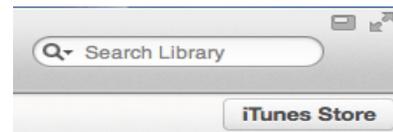
Notice that there are three <u>radio buttons</u> in the window. In the picture above Audio CD is selected. Radio buttons are called that because like the buttons on old car radios, only one can be selected at at time. If you want this CD to play in a standard CD player like in your car or a boom box this is the best choice. It formats the audio in the CDA format which was the original audio format. The MP3 format came later and only newer devices can play a CD made in this format. The same is even more true for the Data CD or DVD selection.

The CD or DVD is a good selection if you want to backup your music to a CD or DVD.

 When you double click on a song or run your playlist, the icons shown to the left will appear. The double arrows will allow you to move to the previous song or next song. The vertical bars will allow you to pause the playback. If you pause the icon will change to allow you to start play again. The slider to the right is for you to adjust the volume of the song.

 On the right had side of the program is an a icon that you can click on to go to the iTunes Store. Once there the icon will change to "Library" so you can return to the player.
Once you go to the store, you will need to sign in with your Apple ID and password. It is possible to use this store without inputting your Credit Card information if you only want to download the free songs that are available.

As you can see from the screen shot above the store also allows you to purchase or download free items in other categories other than music. There are many free apps in the App Store in addition to paid apps. In the example above, I have clicked on Podcasts. If you choose one of the podcasts it is streamed to your player, not downloaded. Streamed means that the file is download into a temporary file (called cache) and is played from their. If your

internet connection is fast this will be totally transparent to you. In case of video sometimes the video will stop for a few seconds and then start again. This is normal on a slow internet connection. Streaming is also used to listen to internet radio. The itunes program also allow you to listen to internet radio.
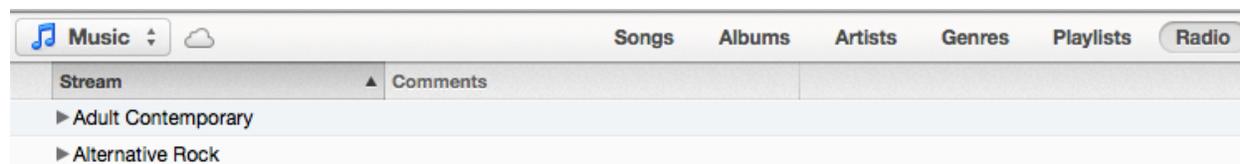
Just click on the Radio icon as shown above an a large list will drop down to allow you to select a station in a given category.

Also notice that the icons on this menu allow you to view your library in lists such as Songs, Albums, Artists, Genres and Playlists.

The Search Library block in iTunes will search by song title, artist names and album names.

According to Apple, iTunes supports any video format that works with QuickTime and files purchased or downloaded from iTunes store. That means if your videos files have a .mov, .m4v, or .mp4 file extension, generally you can play them in iTunes. However, there are also limitations on video codecs, sample rate, etc. So if your .mov, .m4v or .mp4 files are rejected by iTunes, that may be because of a codec problem.

iTunes supported audio formats include: MP3, AAC, AIFF, WAV, Audible .aa files and iTunes purchased M4A and M4P music files. iTunes can convert between MP3, WAV, AAC, AIFF, Apple Lossless. Notice this list does not contain the Windows WMA format so you will need to convert songs you have collected in this format to one of the above formats.

Screen Captures

Sometime you will want to use the Screen capture commands available in Mountain Lion. For example, some web sites will block you from using copy and paste and sometimes a popup will occur that you want to save so you can have the exact words to use to describe what you saw.

To capture the entire desktop, press **Command-Shift-3**. The screen shot will be automatically saved as a PNG file on your desktop. PNG (Portable Network Graphics) is a relatively new graphic format that supports lossless data compression. Most people are more familiar with the jpeg and jpg formats which are lossy. They were developed by the government by a Joint Photographers Experts Group for the space program. Many of the other formats in use are patented and require fees for there use. PNG has become the no-patented replacement for the graphics that were used on the web.

To copy the entire desktop, press **Command-Control-Shift-3**. The screen shot will be placed on your clipboard for you to paste into another program.

To capture a portion of the desktop, press **Command-Shift-4**. A cross-hair cursor will appear and you can click and drag to select the area you wish to capture. When you release the mouse button, the screen shot will be automatically saved as a PNG file on your desktop. (The file is saved as PDF in Mac OS 10.3 and earlier.)

To capture a specific application window, press **Command-Shift-4**, then press the **Spacebar**. The cursor will change to a camera, and you can move it around the screen. As you move the cursor over an application window, the window will be highlighted. The entire window does not need to be visible for you to capture it. When you have the cursor over a window you want to capture, just click the mouse button and the screen shot will be saved as a PNG file on your desktop. (The file is saved as PDF in Mac OS 10.3 and earlier.)

Add **Control** to the two shortcuts above to place the screen shot on the clipboard instead of saving it to the desktop.

Another method for capturing screen shots in Mac OS X is by using the bundled Apple utility, **Grab**, located in the Applications > Utilities folder. Grab is useful if you need to include a cursor or a menu in your screen shot, or if you want to save your screen shot to TIFF format. To include a cursor, first go to Grab Preferences and select the cursor icon you wish to have in your screen shot. To capture the screen with Grab, run Grab, then choose of the capture modes from the "Capture" menu: Selection, Window, Screen, Timed Screen.

When you choose the **Selection** mode in Grab, you can capture a specific region of the screen by dragging around it. Grab will display a tooltip showing the size of the region you have selected and the screen shot will open in a window when you release the mouse button. The cursor will not be included.

When you choose the **Screen** mode in Grab, an instruction window will appear asking you to click the screen when you are ready to capture. The mouse cursor will be included in your screen shot at the position where you click (if a cursor was selected in Preferences).

Week 4 Objectives

Be able to:

      Use search options
      Set system preferences
      Change hot corners
      Time machine

Search Options
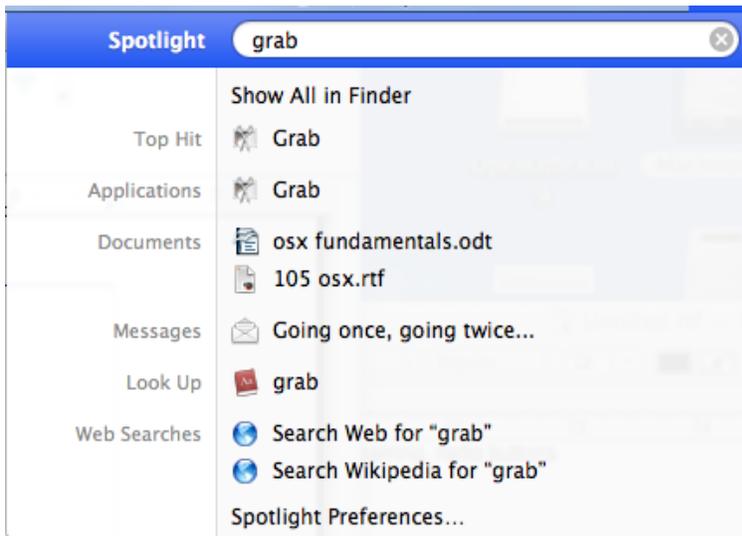
Clicking on the magnifying glass or using the keyboard shortcut "command + space" and typing in a subject will get you an answer most of time, but to more efficiently use the search feature there are tips that are good to learn. The search is based upon "starts with" and does not search inside of words. If you searched for "take" you would not see mistake, put if you typed "mist" you would find mistake.

Now let's examine how the search results are displayed. There are several categories. The "Top Hit" category will show the first hit. Preferences set in Spotlight will determine where the program looks and will effect what shows up in Top Hit and the search. If a category does not get a hit, then it does not show up in the list, For example in the list above there is no Pictures or Music categories. The next category in this example is applications. If I had just typed in gra I would have also seen the grapher application in the list. In the Documents category the search term does not have to be in the table but can be in the document itself.

The Look Up category uses the built in dictionary. It provides the same kind of information if you looked in the old fashion type of dictionary. If the search term is misspelled you will not get a Look Up category. Wikipedia is an online site that will also give you definitions of the term you looked up and more general information including links to related subjects. However, much of the information on Wikipedia is donated by users and not verified.

The messages category is the results of the search term that was found in your email messages or in the title of the email.

Once your computer has a lot of files or if you search for a common term you will get more answers than can be displayed in the drop down menu. In this case click on Show All in Finder option at the top of pop up. Finder will provide you with options to limit your search to specific types of files. Other options that can be used in spotlight to limit the search is to use quotes. Only locations that contain the phrase located in the quotes will be displayed. You can also limit searching by using delimiters like name: and kind:. Search for name:help kind:email and you will get a list of all emails that have the term help in them.

System Preferences

On the dock is an icon that looks like gears in a clock. Click on this icon to open system preferences. On the general tab, you may want to change the scrolling features if you work in large documents. Click the radio button, Jump to the location that is clicked. It is preset to scroll one page at a time. Click on the show all tab and you will be back to the main menu.

The next tab is Desktop and Screen Savers. With LCD or LED monitors there is no longer a need for screen savers unless you just want one. However, this tab has the Hot Corners setting in the bottom right corner. Clicking here will bring up a screen that will allow you to set what happens when you place your cursor in one of the corners. I have found it an advantage to turn off the upper right hand corner and use the upper right hand corner for "Mission Control". The "– " is what you choose if you want to turn off a corner.
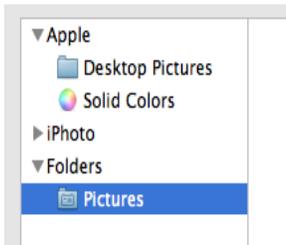
If you want to put a personal picture instead of the supplied desktop pictures, click on the Desktop tab if you are not already there and then click on Folders and then Pictures to open that folder so you can choose one of your pictures.

One of the security options you may want to change concerns installing programs other than from the Mac App Store. By default it is set for the store only. Open Office is a free office suite that was originally developed for Linux machines but is also available for the OS X and Windows machines. To change this option, you must click on the Security and Privacy tab of System Preferences. The bottom half of this window is shown to the right. To make changes, click on the lock and enter your account password. This is not the Apple store password but the one you set when you established your user account. Once the tab is unlocked you can click on the "Anywhere" radio button and then re-lock the account.
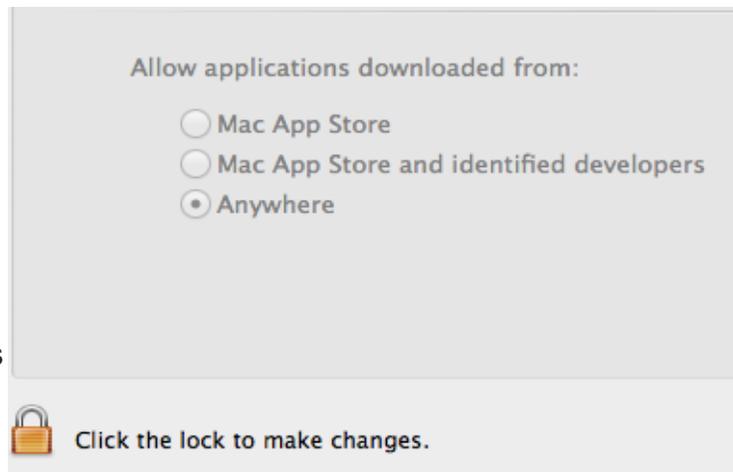
Air Drop

"AirDrop" is a technology introduced by OS X Lion (10.7) that "finds nearby Macs and automatically sets up a peer-to-peer wireless connection to make transferring files quick and easy." The subsequently introduced OS X Mountain Lion (10.8) also supports AirDrop. Most importantly, AirDrop uses Wi-Fi -- which Apple used to refer to as "AirPort" or "AirPort Extreme" -- *directly* between two or more Macs, which means a file does not travel on the "open" Internet, but rather only between the computers. Apple likewise importantly notes that AirDrop uses "TLS encryption" and "creates a firewall between you and the person you are sharing a file with, preventing anyone from accessing your computer over that connection."
This should mean that AirDrop file transfers are secure. Although there are no security guarantees in the digital space, it is a reasonably safe bet that AirDrop is more secure than online file transfer methods and certainly *vastly* more secure than sending a file via e-mail, which is *not encrypted at all unless you manually do it*.

AirDrop does not show up in a spotlight search or on the Launchpad. To use it you must first open Finder and click on AirDrop (right below all files) on BOTH machines. The icon for your machine will not have a name under it, the name for the remote Mac will have the User name under it. The icons should like a baseball and tennis ball. To move a file to the remote machine you must drag the file on top of the remote Mac icon. Unless the file is on your desktop, the easiest way is to open up another copy of Finder and navigate to the file. Once the file is dragged to the remote icon, a pop up will ask you if you want to send it to the other Mac. Once you click on Send, the remote Mac will get a popup asking if it wants to receive a file from "usersname Mac". The user on the receiving machine will have the choices of decline, save, and save plus open. Copy an paste does not work in AirDrop.

Time Machine

Apple provides a backup program called Time Machine. It can provide hourly file backups and complete system backups. Backups are done on a memory storage device other than your primary partition on your hard drive. You could set up a secondary partition on your main hard drive but one of the primary purposes of backup is how to restore your computer if you have a hard drive failure. As soon as you have your external hard drive or secondary internal hard drive you should set up your time machine preferences and accomplish the first run. Click on the Time Machine icon and select "Open Time Machine preferences". Slide the switch to on as shown in the next picture. Now click on Add or remove backup disk. Make sure you have the external hard drive plugged in before you do this.
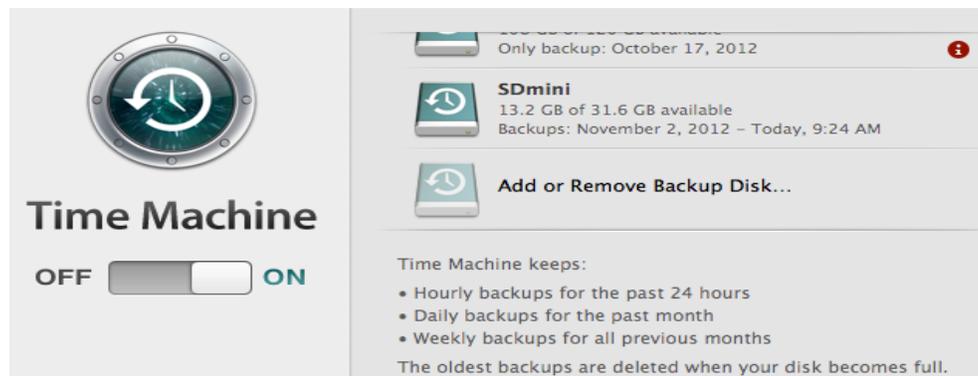
In the example above you will see that I have actually used two different backup drives on this machine. The first was an external USB hard drive and the second was a SDHC memory card. These are now available in the 128gb range. Handy in a laptop where you do not want to be carrying around an external hard drive but still want backup. Once you select the device you are going to be using for backup you are ready to do your first backup. Right click on the Time Machine icon and select do backup now. The first backup will take some time, the hourly backups only save what has changed and are very quick. The oldest backs are deleted when your disk becomes full without user intervention.

Some of Time Machine's magic is in how it manages the space it has for backups. Time Machine saves hourly backups for the last 24 hours. It then saves only daily backups for the past month. For any data that's older than a month, it saves weekly backups. This approach helps Time Machine make the best use of available storage space, and keeps you from needing terabytes of data just to keep a year's worth of backups on hand.
Once the backup drive is full, Time Machine will delete the oldest backup, to make room for the newest. This is important to realize; Time Machine does not archive data. All data will eventually be purged in favor of more recent backups.

User Interface

The user interface is composed of two parts: a preference pane for setting up the backups, and the Time Machine interface for browsing through backups and restoring data. The Time Machine interface is actually fun to use. It displays a Finder-type view of your backup data, and then presents the hourly, daily, and weekly backups as stacks of windows behind the most recent backup. You can scroll though the stack to retrieve data from any backup point in time by using the two arrows in the bottom right hand side of the screen.

If you every have a disaster and the hard drive fails or is wiped out by a virus this is how you recover. Just hold down the Command and R keys during startup. This takes a few seconds so don't get anxious. OS X Recovery lets you choose from common utilities: You can run Disk Utility to check or repair your hard drive, erase your hard drive and reinstall a fresh copy of OS X, or restore your Mac from a Time Machine backup. You can even use Safari to get help from Apple Support online. And if OS X Recovery encounters problems, it will automatically connect to Apple over the Internet.

If you don't want to use the internet you can download the OS X Recovery Disk Assistant which lets you create OS X Recovery on an external drive that has all of the same capabilities as the built-in OS X Recovery described above.