Overview of Lecture

- Concepts
- The Digiterati
- Learning Technology
People do not have any innate technological abilities or understanding

- We are born with some innate skills like ……
- Skills do not involve driving a car, using a dishwasher, using a computer …

- We look for similarities, we look for consistency – and that is how we learn new things

- Experience comes from “deriving from what we already know”, “trying it out”, “getting our feet wet”, “figuring it out”, “climbing the learning curve”

- Good designers who create software, know about this experience and design products to work with what we already know

- Good designers try to work with how our brain works. Why?
The “Desk top”

- In the olden days – before personal computing, a desk top was just that – a desk top.
- Inbox
- Outbox
- Calculator
- Trash can
- Paper
- Documents
- Files
- Pictures of family
- Calendar
- Contacts
- Letters
- Radio/ music
- Executive – window office
- Etc.

- Try googling desktop
  Technology changes perceptions and concepts …
The “Desktop”

- The screen image displayed when a PC starts up
  - Shows us important and immediate folders and programs that we would need at our finger tips … using the knowledge that humans already have in the “reality” to help them in the computing environment

- A metaphor
  - Appearance and means of interaction suggest something familiar to us: physical desk and papers
    - Desktop, folders, files, document
    - Even a window with a view
    - MS Office Suite

- Likewise, music or video player on the computer will use GUI icons that look like symbols on a physical player – even though we may be using different O/S, or software
Consistent Familiar Interfaces

- Designers reuse metaphors similarly for new products.

- New software today usually has a GUI:
  - Elements of the new GUI are familiar to us from earlier software GUIs.
  - Designers “reuse” concepts familiar to us so we can use the new systems more easily.
  - They are highly structured.
  - Extremely consistent.
  - “Familiarity” is key because it is …..

- When we see an icon or metaphor we have seen before, we know how it works – we are not intimidated.

- A new web browser (like Google Chrome) will look largely similar in form and function to older, existing browsers.

Adapted from Fluency with Information Technology, Lawrence Snyder, 4/5 th ed (Chap 2)
Designers' Intent: “Form Follows Function”

- Software designers try to pick easy-to-understand user interfaces
  - E.g. PowerPoint (interface is similar to Word)

- We can expect good software to be well crafted so we can "brain out" how it works
  - E.g. paste, cut copy, fonts, color
  - It is not intimidating because it is familiar to Word

- We use this idea every time we use new software

- Experienced users (digiterati) look for familiar metaphors and learn new ones when they are encountered

Adapted from Fluency with Information Technology, Lawrence Snyder, 4/5th ed (Chap 2)
Common GUI Elements

- Even with all the different browsers out there, we are still comfortable using any of them.


**Menus - Shortcuts**

`Control' and ‘Clover’

- ^B
- ^T
- ^I
- ^U

<table>
<thead>
<tr>
<th>File Functions</th>
<th>Edit Functions</th>
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<tr>
<td>New</td>
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Important General Concept: Expecting Feedback

- The “patience” factor

- Feedback is any indication that the computer is still working, or has completed a task
  - User should not be left wondering what is going on

- For editing change, proof of completion is that the revision is visible
  - Also “review” view on Word

- For button click, GUI shows highlighting, shading, color change or graying, and audible click

- For link click, change from blue to purple: can be customized

- Hourglass or progress bar shows a long task is still underway
Technology: Take It Personally and Do Not be Intimidated

- We have learned we can expect intuitive interfaces: the software developers want us to use their programs

- To learn to use (or create) new software, we should ask ourselves:
  - What is the purpose of this software?
  - How will it help me/ my project/ my goals?
  - Am I more or less productive using this technological solution for my task?
  - If it does not suit your purpose/ project – do not use it
Use Technology to Your Advantage

- If the technology will enhance your goal, and you need to learn it, then
  - ask yourself:

- What metaphors is the software showing me?

- Have I seen these operations in other software?

- Can I customize the technology I'm using to make myself more productive?
Group Project: Let’s Start!

- Meet your group members
- Decide, with group consensus, which project you will work on (you may talk to me for guidance)

Major objectives of the group project are to:

- start to apply the various CS concepts we are learning in class
- work effectively with people
- learn about your own interest and learning strengths
- think about your own motivations and career passions

Choose the project based on the one that:

- is ultimately programmable and can be best translated in a logical algorithm (review properties of algorithms)
- can be broken down best in terms of an effective SDLC (review lecture on SDLC)
- people can relate to (HCI and metaphor lectures)
- can be best presented in class (HTML lecture)
- you think you can invest in (effective searching lecture for further research)
- is based on sound networking
- has usefulness which do not outweigh security concerns
- people (or a large enough subset of people) will want to use i.e. it will be worth the cost of implementation