

# CS 315 – Intro to Human Computer Interaction (HCI)

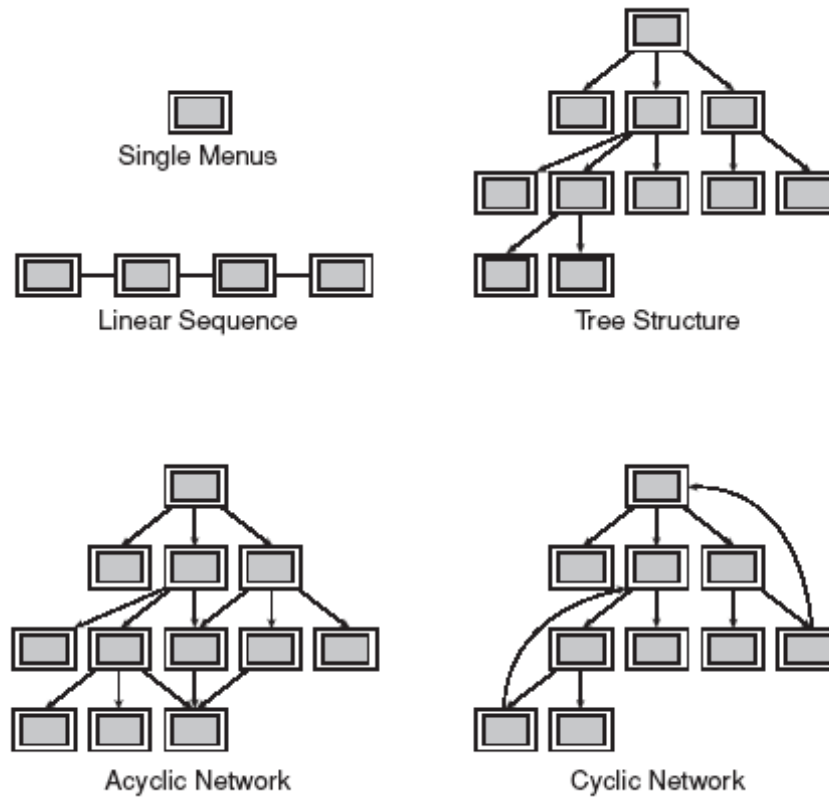
Menus, Form Fill-In, Dialog Boxes



# Goal

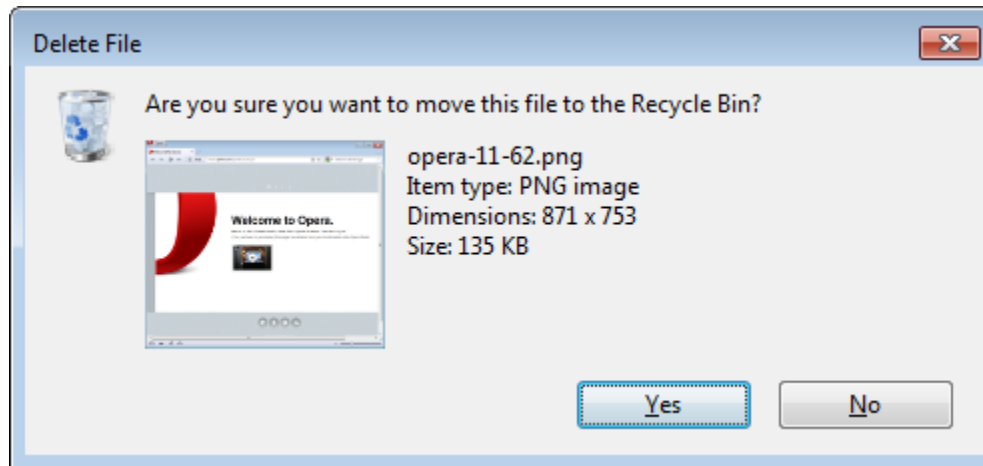
- "The primary goal for menu, form-fillin, and dialog-box designers is to create a sensible, comprehensible, memorable, and convenient organization relevant to the user's task."
- Hierarchical Decomposition
- What are examples of non-computer menus?

# Menu-Selection Applications

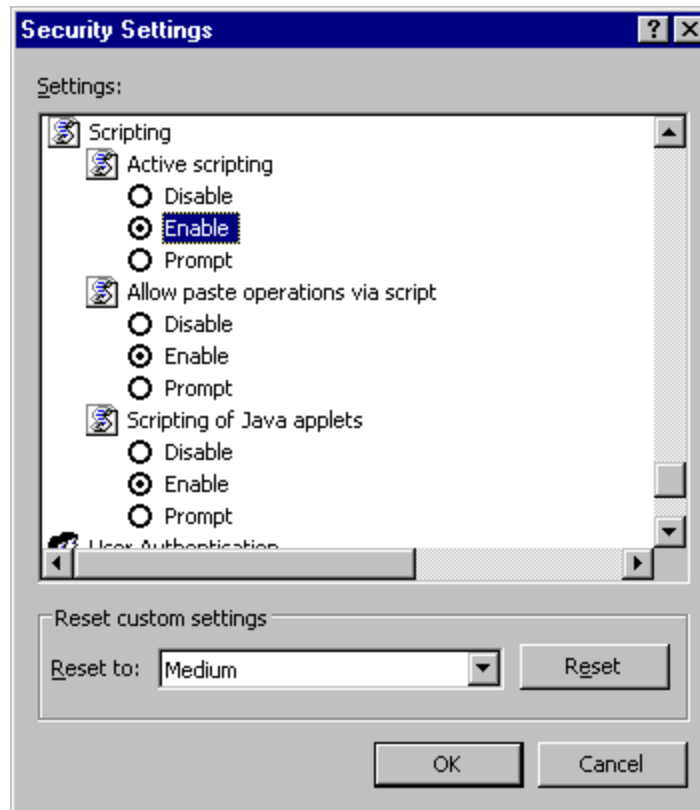


# Single Menus

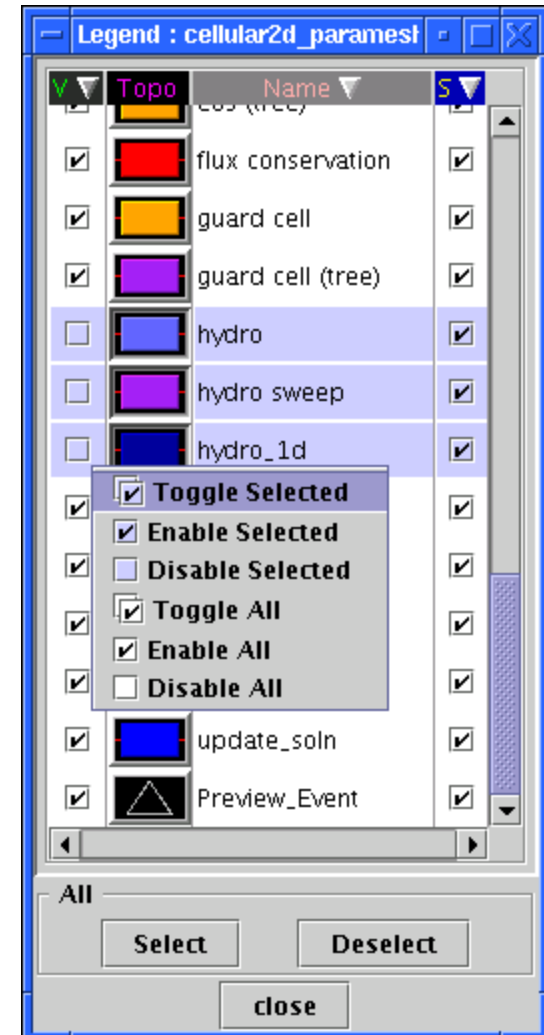
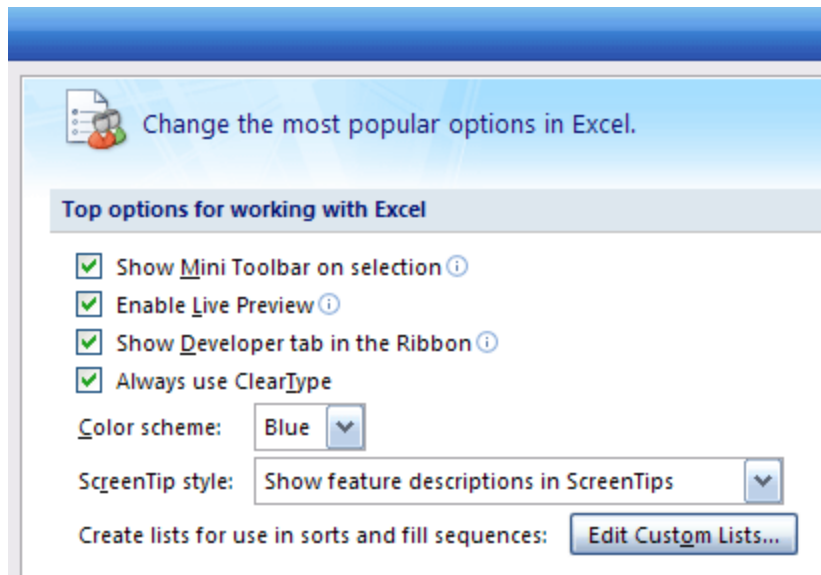
# Binary Menu



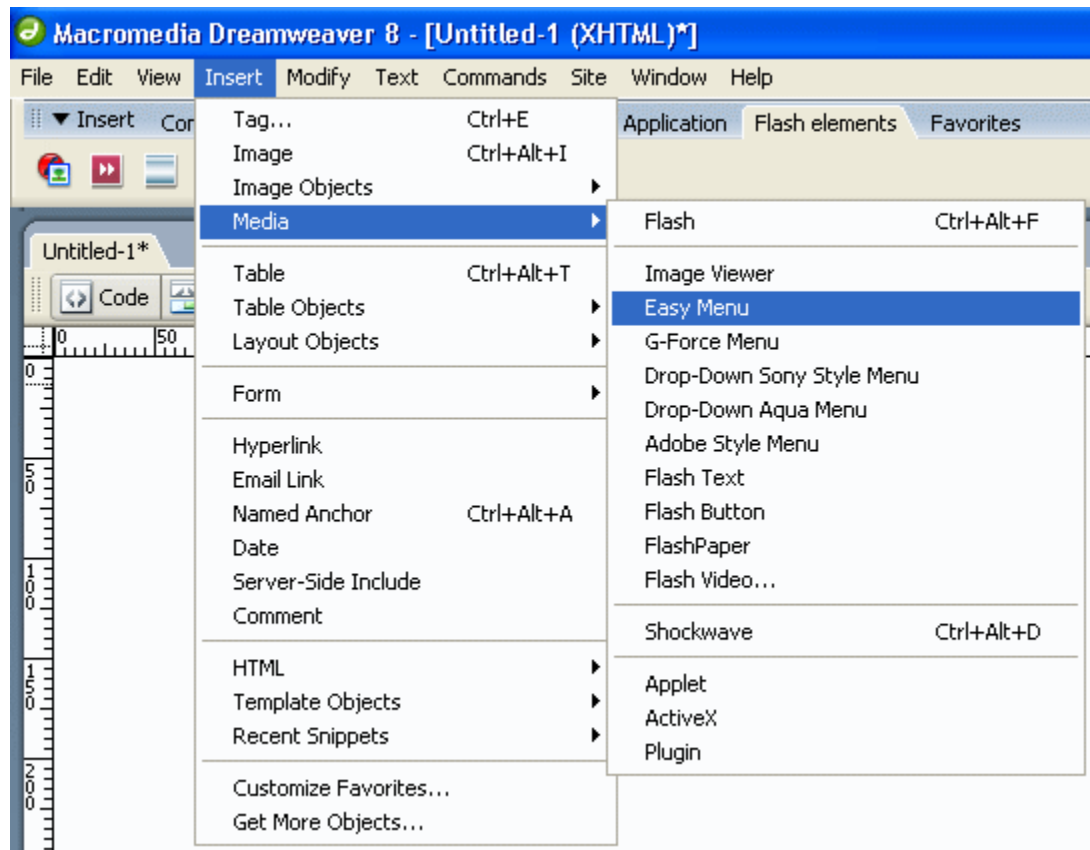
# Radio Buttons



# Check Boxes

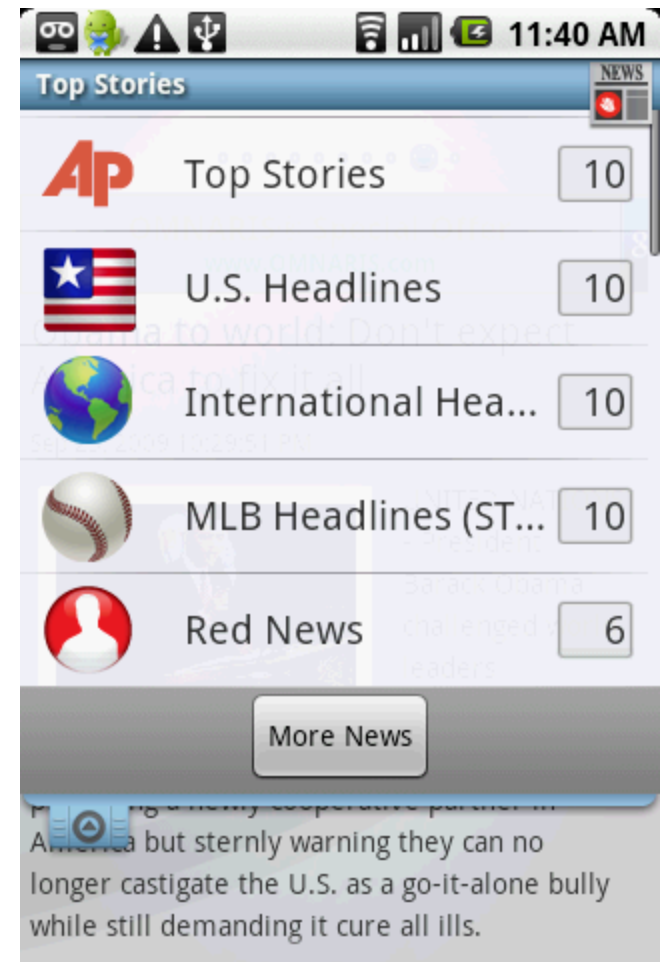
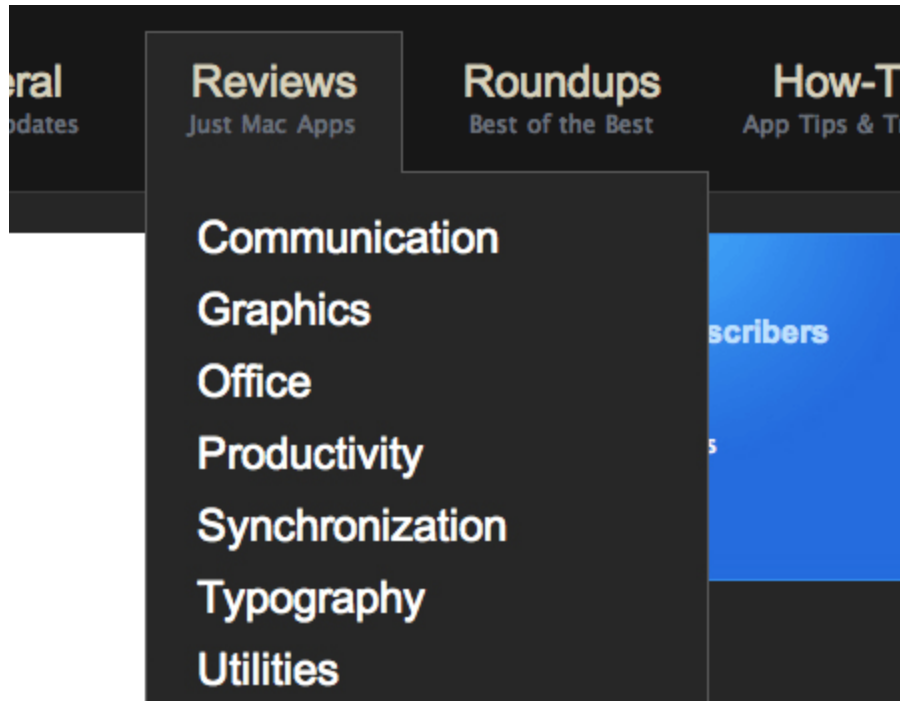


# Pull-Down Menu

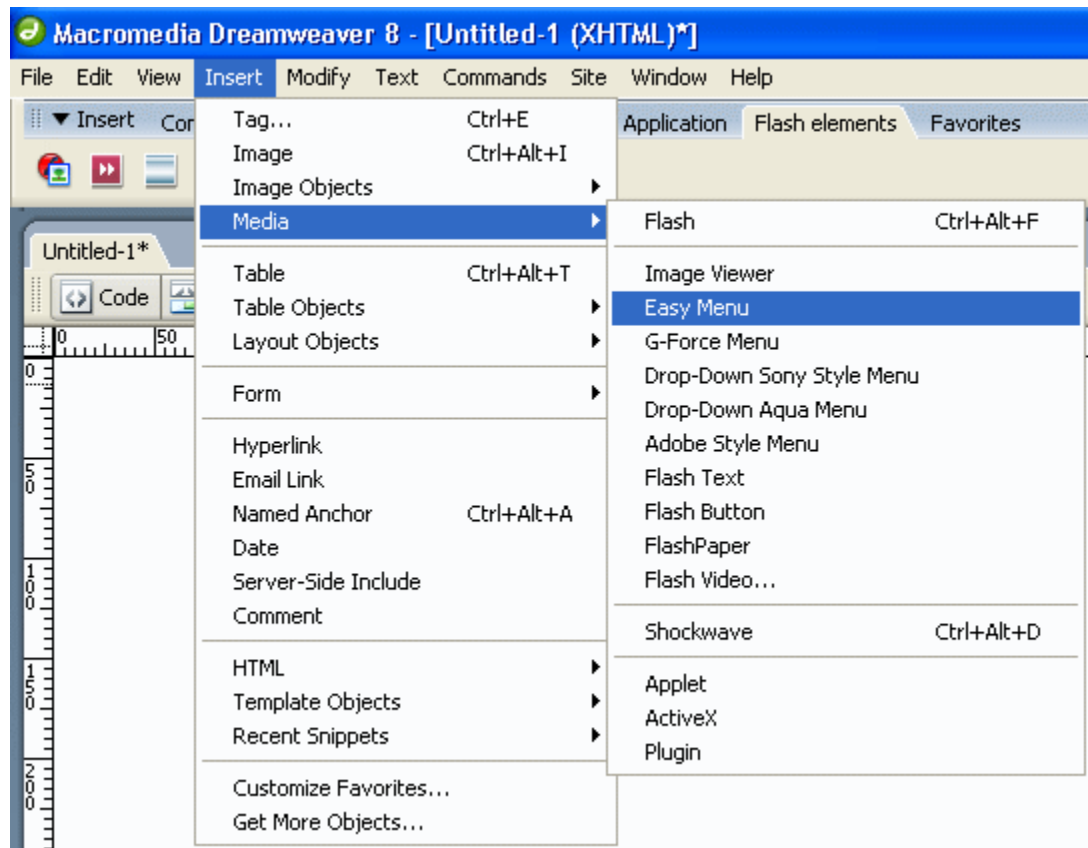




# Pull-Down Menu



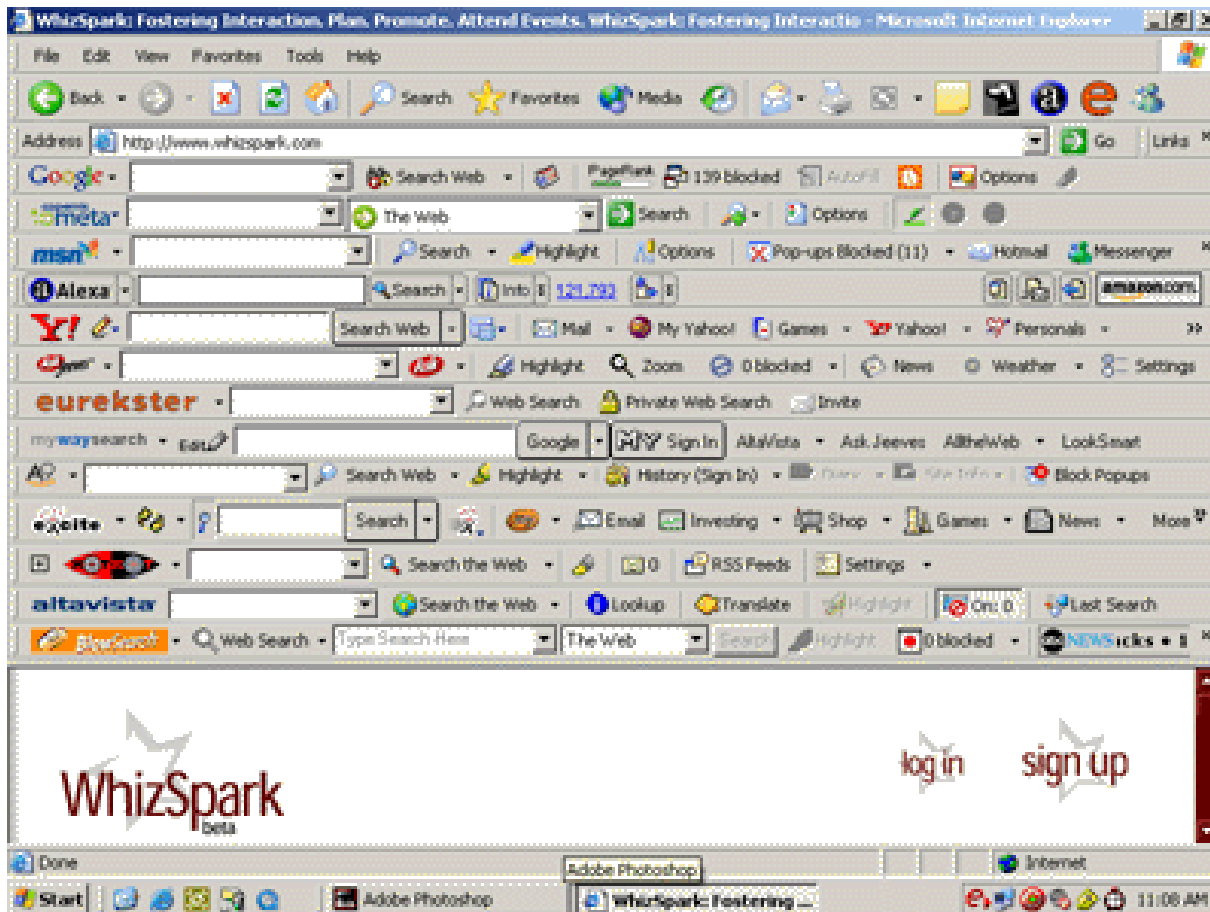
# Keyboard Shortcuts



# Toolbars, Iconic Menus, and Palettes



# Toolbars Gone Mad



cA1 - Tim voi Google - Mozilla Firefox (Build 20100722155716)

Search the Web

PDF Search: Search for PDF... PDF Viewer: Enter a URL of PDF file...

Search Facebook Quick Links

Search Links Web Searches People Searches News, Blogs & More Videos, Images & Audio

senado quartel porto bogora templo academia mercado gruta

Bookmarks Record is Off Move Down

SQLite Manager NoScript ProCon AVIM Revoke Temporary Permissions Maximize Flash

User ID: Password: Login Auto logout: 20 minutes Sign

No RSS feed listed!

Search Community Forums Guides Databases Maps Tools Other Features Runescape Options

by Express-Service by JAP/JorDos by TOR FAQ Forum

Search Web Search highlight

Wikipedia go random watchlist talk/article edit history watch unwatch move WLH NR purge my navigate

AMLI Arabic Search Editor Update status Write Arabic

From: To:

PriceTrace Input Item number or Title Search Trace the item on this page Filters

Start Stumbling... or Sign-in FireFTP IE Tab 2 VQR VQR Inspect Wr Ielex

FoxLingo ca Search TextTrans Dictionary GrammarCheck WebTrans AutoTrans Services

Disable Cookies CSS Forms Images Information Miscellaneous Outline Resize Tools View Source Options

LinkExtend ca Search Safety GdSafe PageRank SiteTraffic SearchTraffic Visited SiteTools SimilarSites ca Options

Real-time web search... Add Social Network/M...

Add-ons - Extensions [154/1]

AutoPager found a setting for www.google.com.vn from Wind Li. Do you want to enable auto paging on this site using it?

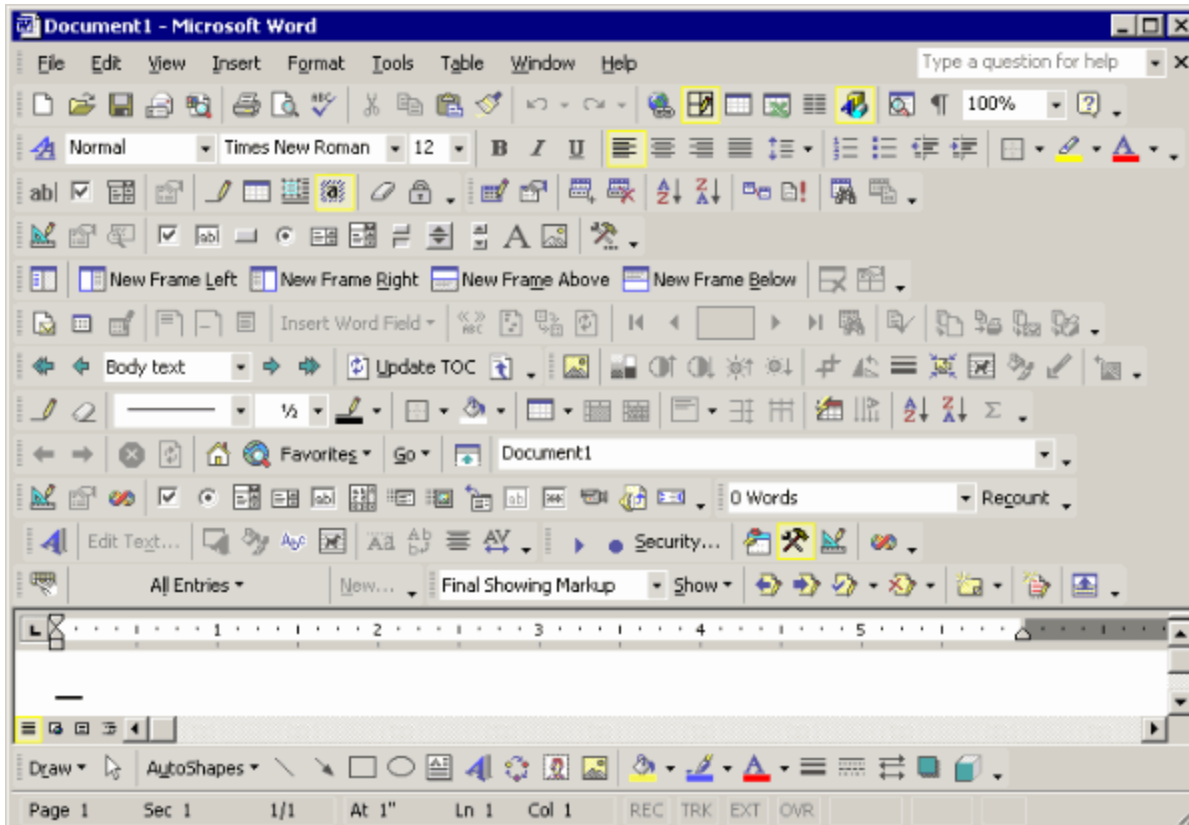
Scripts Currently Forbidden | <SCRIPT>: 8 | <OBJECT>: 0

amazon Search All Departments

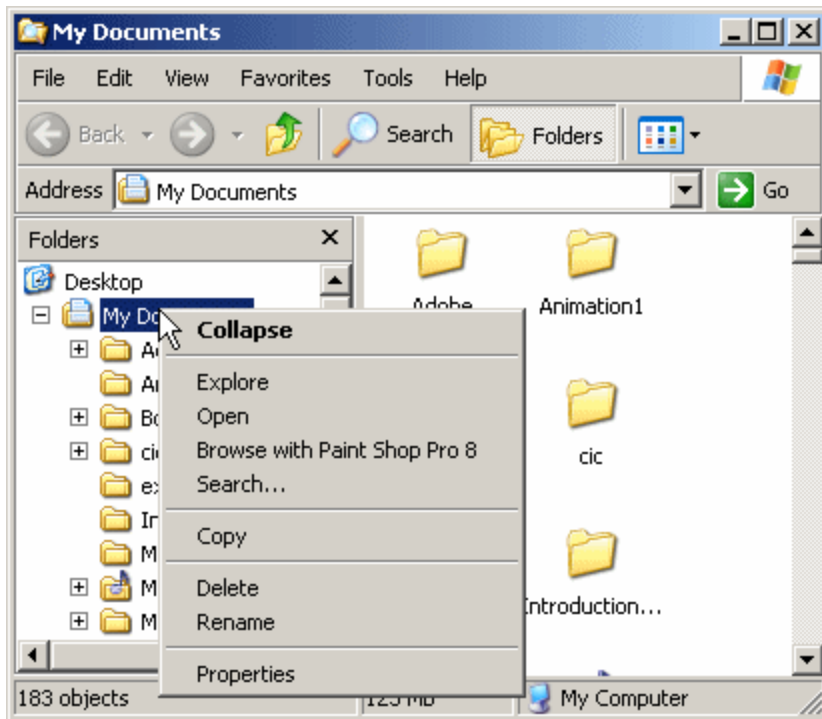
# What do these mean?



# Which Toolbars are Decipherable to You?



# Pop-Up Menus

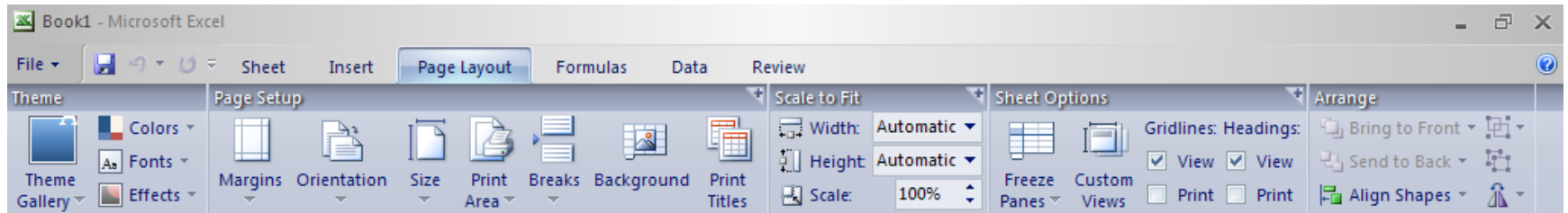




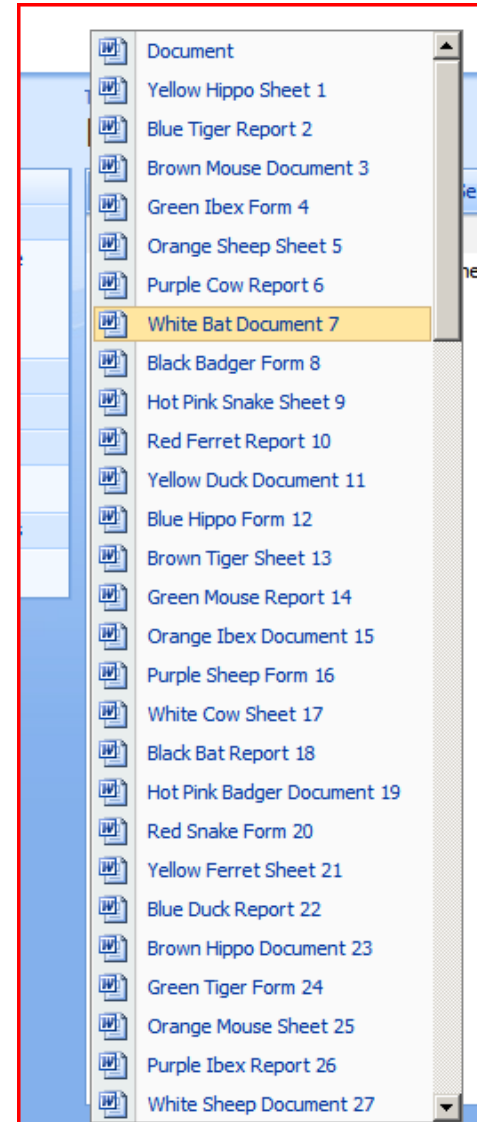
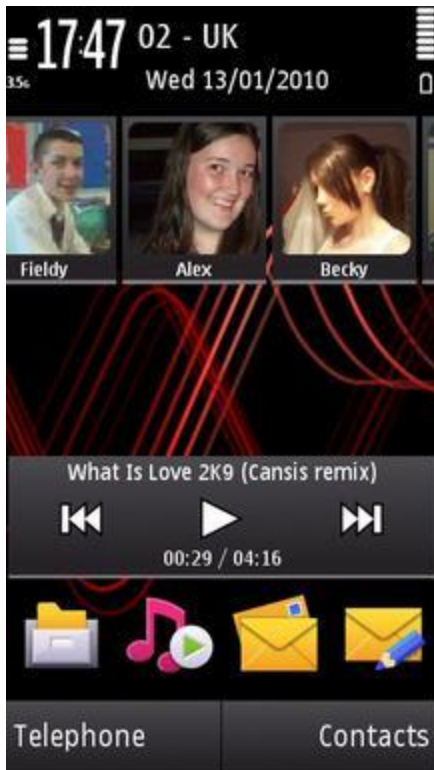
# Pop-Up Menu / Pie Menu



# Ribbons



# Scrolling Menu



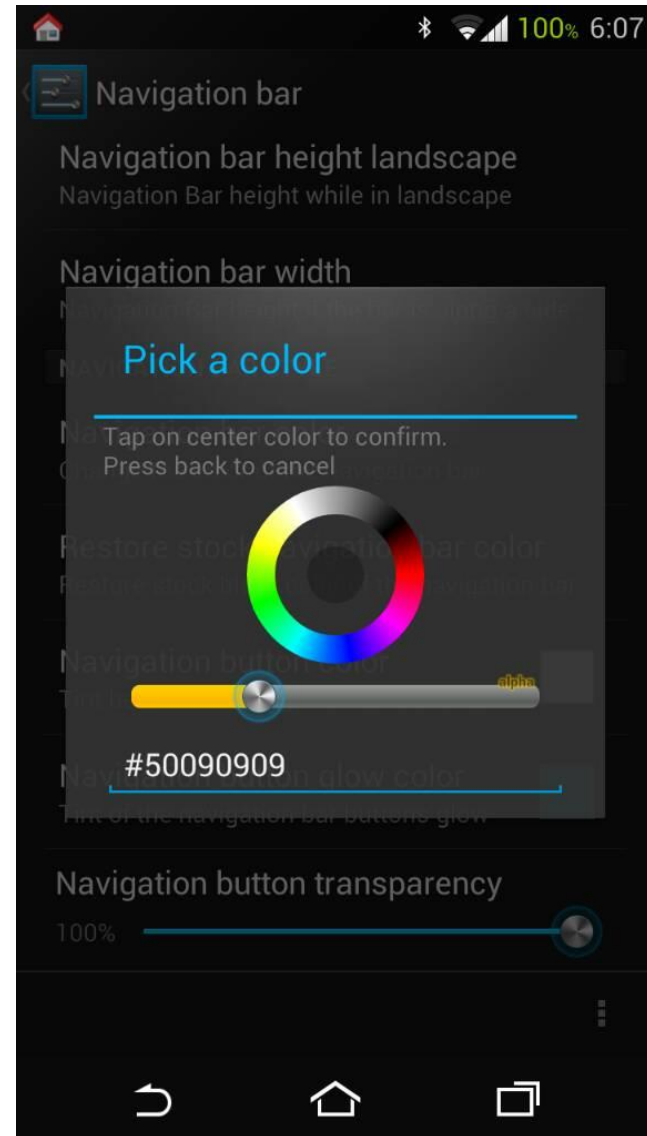
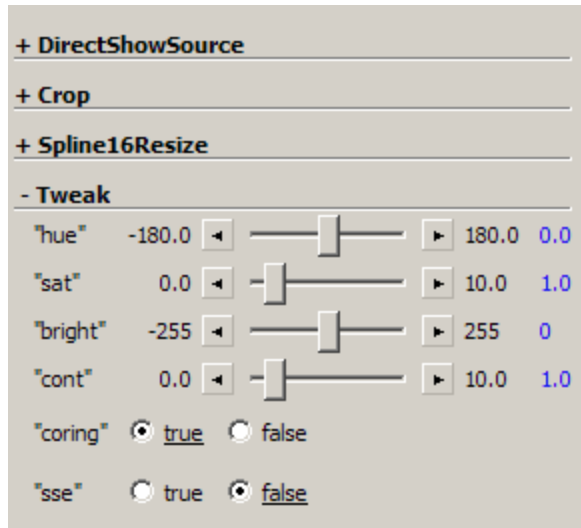
# Combo Box Menu



# Fisheye Menu



# Sliders, Alphasliders



# Two Dimensional Menus

The screenshot displays the Peapod website interface. At the top, there is a navigation bar with links for "Save & Exit", "My Account", "Help", and "Quick Guide". Below this is a secondary navigation bar with "Peapod Home", "Express Shop", "Browse Aisles", "My Lists", "Specials", "Recipes & More", and "Delivery Times". A search bar is located below the navigation, with a "Search" button and a checked box for "Show product images".

The main content area is a grid of product categories, each with an icon and a text label:

- General Grocery (highlighted)
- Produce Stand
- Meat & Seafood
- The Deli
- Meals Made Easy
- Health & Beauty
- Dairy
- Frozen Foods
- Beverages
- Bread & Bakeshop
- Breakfast Foods
- Snacks, Cookies & Candy
- Grains, Pasta & Side Dishes
- Soups & Canned Goods
- Baking Goods
- Condiments
- Oil, Vinegar & Salad Dressing
- Sauces, Spices & Seasonings
- Baby's Place
- Natural & Organic
- Kosher Foods
- Pet Store
- Household
- Office & School Supplies
- Newsstand & Videos
- Holiday

On the right side, there is a shopping cart summary. The total amount is \$10.97. Below the total are buttons for "Review Order" and "CHECKOUT". The cart contains two items:

- 2 units of Nutella Chocolatey Creamy Hazelnut Spread Pepperidge Farm Swirl Bread Raisin Cinnamon
- 1 unit of Nutella Chocolatey Creamy Hazelnut Spread Pepperidge Farm Swirl Bread Raisin Cinnamon

Below the cart items, there is an "Empty Cart" button and a "May we suggest" section. The suggestion is for Perrier Sparkling Mineral Water 25 oz. with a coupon for "Buy 3, Save \$1" and a "Click to Shop" link.

# Two Dimensional Menus

**craigslist**

post to classifieds  
my account

search craigslist

for sale

**event calendar**

S	M	T	W	T	F	S
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27

help, faq, abuse, legal  
avoid scams & fraud  
personal safety tips  
terms of use  
system status

about craigslist  
craigslist is hiring in sf  
craigslist blog  
best-of-craigslist  
craigslist TV

portland, OR <sup>w</sup> mlt wsc clk clc nco yam grg

**community**

activities lost+found  
artists musicians  
childcare local news  
general politics  
groups rideshare  
pets volunteers  
events classes

**personals**

strictly platonic  
women seek women  
women seeking men  
men seeking women  
men seeking men  
misc romance  
casual encounters  
missed connections  
rants and raves

**discussion forums**

1099 gifts pets  
apple haiku philos  
arts health politic  
atheist help psych  
autos history queer  
beauty housing recover  
bikes jobs religion  
celebs jokes rofo  
comp kink science

**housing**

apts / housing  
rooms / shared  
sublets / temporary  
housing wanted  
housing swap  
vacation rentals  
parking / storage  
office / commercial  
real estate for sale

**for sale**

appliances arts+crafts  
antiques auto parts  
barter baby+kids  
bikes beauty+hlth  
boats cars+trucks  
books cds/dvd/vhs  
business cell phones  
computer clothes+acc  
free collectibles  
furniture electronics  
general farm+garden  
jewelry garage sale  
materials household  
rvs motorcycles  
sporting music instr  
tickets photo+video  
tools toys+games  
wanted video gaming

**jobs**

accounting+finance  
admin / office  
arch / engineering  
art / media / design  
biotech / science  
business / mgmt  
customer service  
education  
food / bev / hosp  
general labor  
government  
human resources  
internet engineers  
legal / paralegal  
manufacturing  
marketing / pr / ad  
medical / health  
nonprofit sector  
real estate  
retail / wholesale  
sales / biz dev  
salon / spa / fitness  
security  
skilled trade / craft  
software / qa / dba  
systems / network  
technical support  
transport  
tv / film / video

**nearby cl**

bellingham  
bend  
comox valley  
corvallis  
east oregon  
eugene  
fraser valley  
kelowna  
klamath falls  
lewiston  
medford  
moses lake  
nanaimo  
olympic pen  
oregon coast  
portland  
pullman-moscow  
roseburg  
salem  
seattle  
siskiyou co  
skagit  
spokane  
sunshine coast  
tri-cities  
vancouver  
victoria  
wenatchee  
whistler  
yakima

**us cities**

**us states**

**canada**

**cl worldwide**



# Combinations of Multiple Menus

# Linear Menu Systems

**Lookup Wizard**

This wizard creates a lookup column, which displays a list of values you can choose from. How do you want your lookup column to get its values?

I want the lookup column to look up the values in a table or query.

I will type in the values that I want.

XXXXXXXX

XXXXXXXXXX

XXXXXXXX

XXXXXXXX

Cancel < Back Next > Finish

# Simultaneous Menus

Best Buy > Mobile Phones > Samsung > Unlocked Mobile Phones

## You've Selected

Device Brand: Samsung  
[\[Remove\]](#)

## Narrow Your Results

Check Stock in Stores Near Me

[GO](#)

### Operating System

Android (30)

Windows Phone 7 OS (1)

### Mobile Phone Features

Smartphone (32)

Touch Screen (35)

QWERTY Keyboard (8)

[See all...](#)

### Price

Less than \$50 (3)

\$50 - \$99.99 (10)

\$100 - \$149.99 (6)

\$150 - \$199.99 (4)

\$250 - \$499.99 (14)

\$500 - \$749.99 (5)

\$750 - \$999.99 (2)

### Current Offers

On Sale (12)

Free Shipping (44)

Clearance & More (6)

### Collection

Best Buy Items (44)

Online Only (41)

## Shop Unlocked Phones and SIM Cards



Smartphone



Basic Phones



SIM card



What is an Unlocked Phone?



Why Buy an Unlocked Phone?



Shop Mobile Phones and SIM Cards

1 - 15 of 44

1 2 3 >

View: 15 per page

Compare up to 4 items



COMPARE

Sort by: Best Match



Compare

### Samsung - Galaxy S III 4G Mobile Phone (Unlocked) - White

Model: Samsung Galaxy S III I9300 White SKU: 5759172

- From our expanded online assortment
- Android 4.0.4 operating system
- 4G LTE speed
- Wi-Fi hotspot capability
- Bluetooth
- Super AMOLED capacitive touch screen
- 8.0MP digital camera

Customer Reviews: 3.8 of 5 (6 reviews)

[Check Shipping & Availability >](#)

**Sale: \$599.99**

Reg. Price: \$699.99

You Save: \$100.00

- Free Shipping
- 18-Month Financing
- Get 4% Back in Rewards. See How

Add to Cart



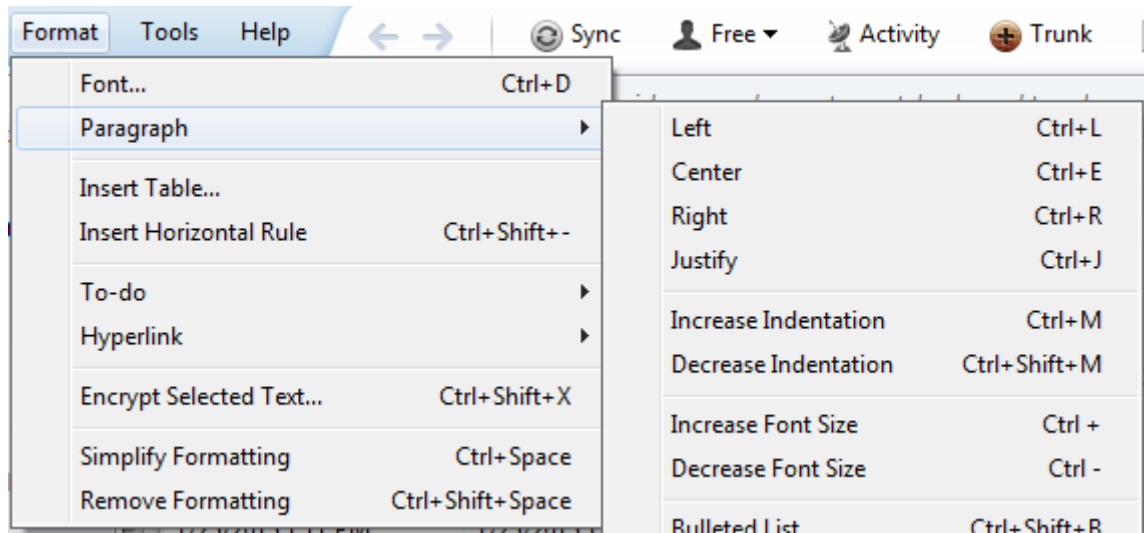
### Samsung - Galaxy S III Mini Mobile Phone (Unlocked) - White

Model: Samsung Galaxy S III Mini I8190 White SKU: 7456315

**\$499.99**

- Free Shipping
- 18-Month Financing

# Tree Structured Menu



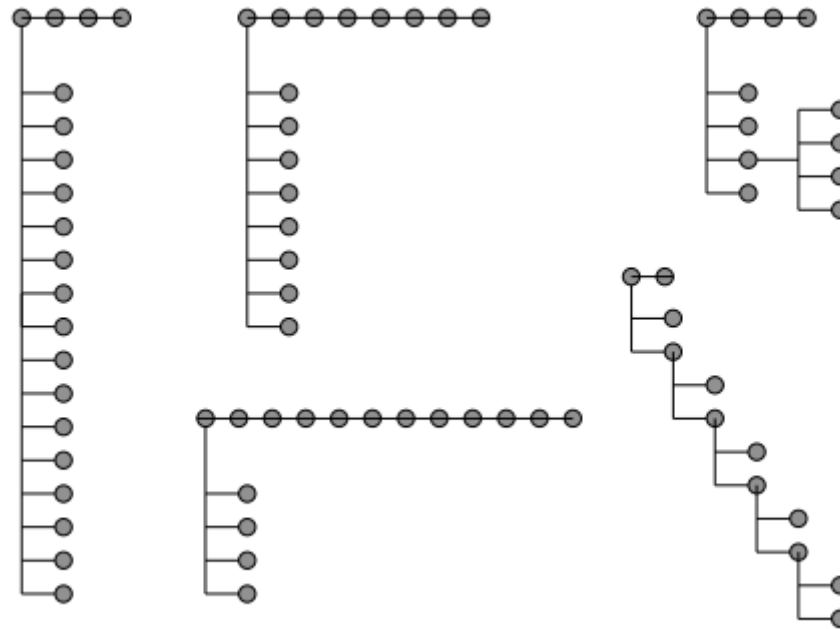
# Tree Menu

- Too many choices for one menu
  - Menu with 4 levels
  - Each level has 30 items
  - Total of 810,000 choices ( $30^4$ )
- Categorization and grouping are not an easy task

# Deep or Broad

- Depth: number of levels
- Breadth: number of items per level
- Several ways to group. For 64 items:
  - 8 items on 2 levels; 4 items on 3 levels; 2 items on 6 levels
  - 4 item menu followed by a 16 item menu
  - 16 item menu followed by a 4 item menu
- Strong evidence that breadth should be preferred
- Rule of thumb: limit menu trees to 3-4 levels

# Deep or Broad



# Content Organization



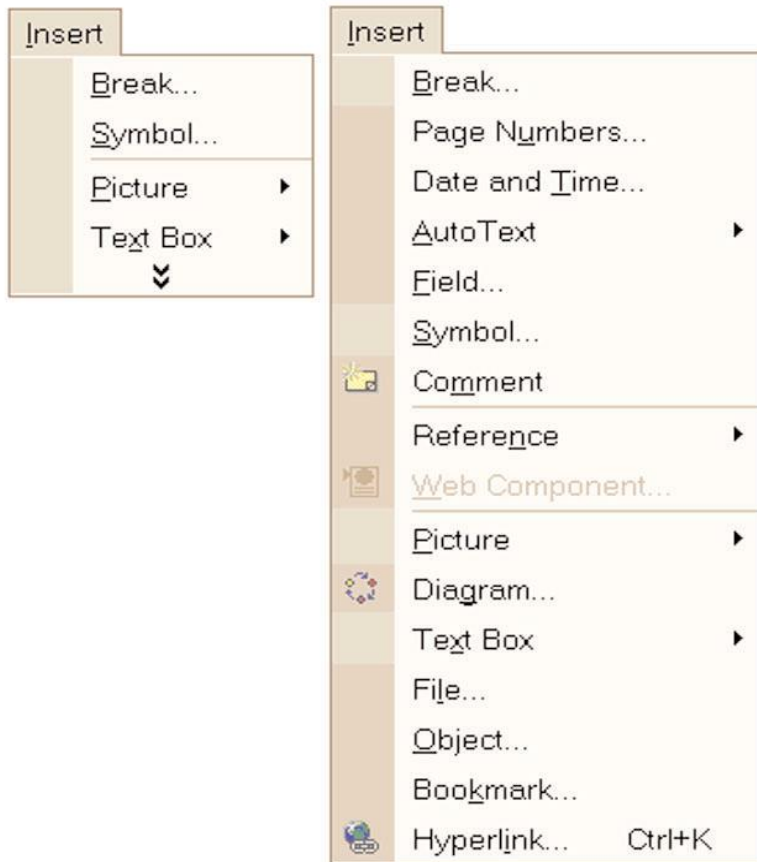
# Content Organization

- **Task-related grouping in tree organization**
  - Create groups of logically similar items
  - Form groups that cover all possibilities
  - Make sure that items are nonoverlapping
  - Use familiar terminology, but ensure that items are distinct from one another

# Content Organization

- **Item Presentation Sequence**
  - The order of items in the menu is important, and should take natural sequence into account when possible:
    - Time
    - Numeric ordering
    - Physical properties
  - When cases have no task-related orderings, the designer must choose from such possibilities as:
    - Alphabetic sequence of terms
    - Grouping of related items
    - Most frequently used items first
    - Most important items first.

# Content Organization



- Adaptive vs. Adaptable Menus

# Card Sorting

- Card sorting is a methodology that can be used to capture users' mental models of how information is organized in a software interface



# Conducting a Card Sort

- **Dual group membership.** Dual group membership means that the participants believes an item belongs to more than one group.
- **Miscellaneous Group.** It is typical for participants to put ambiguous items into a "Miscellaneous" group.
- **Individual Differences.** Individual differences, such as experience and level of expertise, often contribute to the different rules that individuals use when sorting cards into groups.
- **Semantic Clustering.** Words have semantic meanings that force some people to group words by similarity of meaning rather than according to the goal of the sorting exercise.

# Analyzing Card Sorting Results

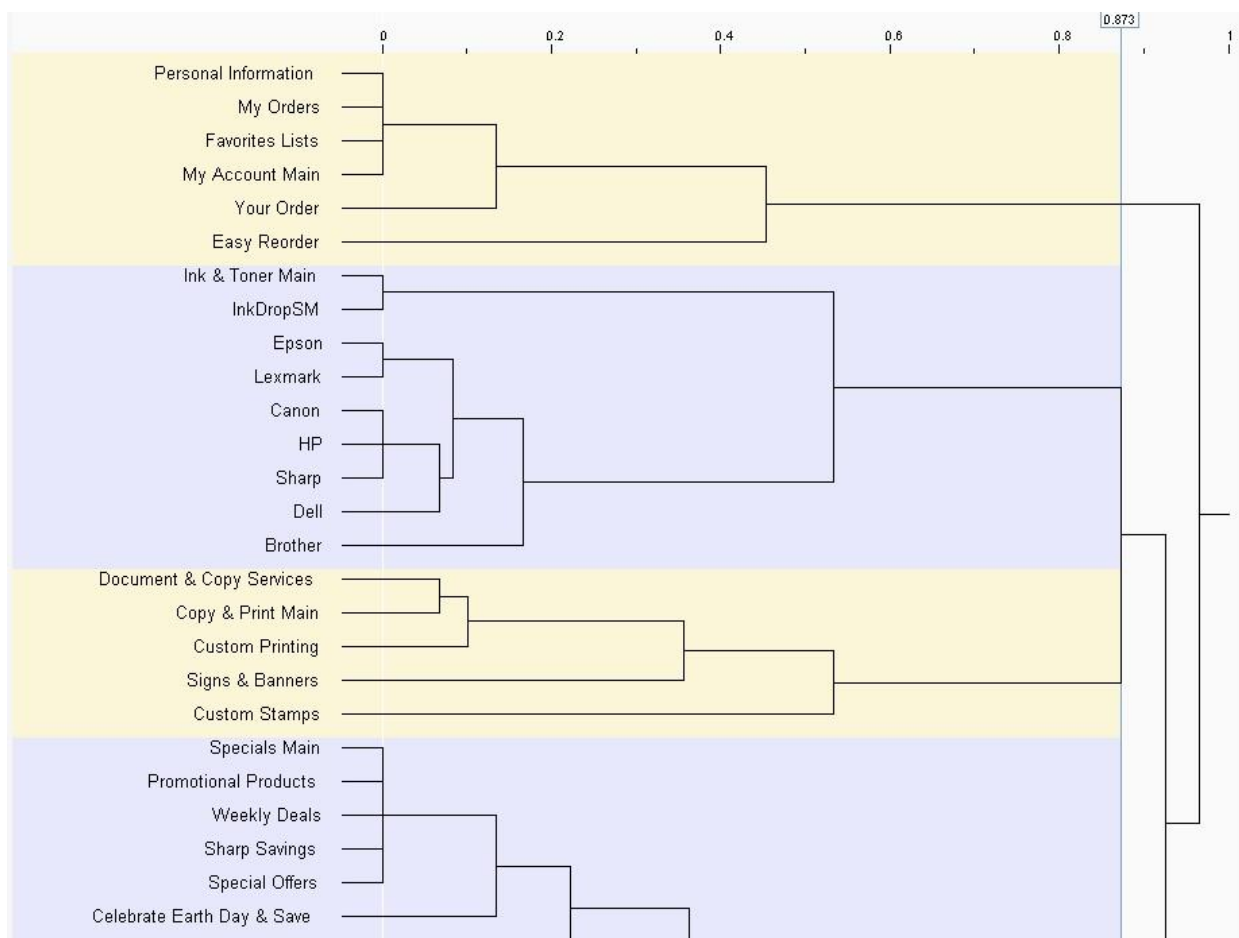
- **Frequency.** This is as simple as adding all the items participants put in a group and then doing a frequency count.
- **Hierarchical cluster analysis.** This is typically used to create a proximity matrix or a dendrogram, and it is the most common method used to analyze card sorting results.

# Proximity Matrix

	<b>Cat</b>	<b>Dog</b>	<b>Bird</b>	<b>Lion</b>
<b>Cat</b>	1	.5	.01	.7
<b>Dog</b>	.5	1	.01	.3
<b>Bird</b>	.01	.01	1	.01
<b>Lion</b>	.7	.3	.01	1



# Dendrogram



# In-Class Activity

- Sort the following cards for a camping website

# References

- <http://www.codinghorror.com/blog/2006/02/sometimes-a-word-is-worth-a-thousand-icons.html>
- <http://blogs.msdn.com/b/jensenh/archive/2005/09/14/467126.aspx>
- <http://blogs.msdn.com/b/jensenh/archive/2006/01/30/519335.aspx>
- <http://boxesandarrows.com/card-sorting-a-definitive-guide/>