Tooltips

• Hints for practitioners and experts
• Short length – 1,2, 3 words
• Show up after hovering for \( \frac{3}{4} \) second or so
• A must for toolbars, buttons
• A nice to have for other app widgets – menus, context menus, …
• Mixed Case
• Used to identify a control that does NOT have a caption and/or provide additional info.
Control Usage

• The usage of a control should determine the type of control you use for that UI aspect.

• Direct Manipulation
  – Click and Select, Drag and Drop on and between

• Selection
  – Icons, Radio Buttons, Checkboxes, Drop down list boxes, List Boxes,

• Text Entry
  – Single Item Text Entry or multiple item

• But make sure to test out in usability testing
  – predictions about the best control are often very wrong (Galitz p. 499)
Choices

- Mutual Exclusive Choice
  - Radio Buttons
  - Single Select Listboxes
- Non-exclusive Choice
  - Checkbox
  - Multiselect Listbox
- Complex combinations
  - Check/Radio buttons + drop downs
Values

• Integer
  – Spincontrol or text box

• Continuous numeric
  – Slider (gives relative visual indicator)
  – Text field (ex: 12.99) gives high preciseness

• Selection of a range of discrete values
  – Range select list box
  – Spin control start of range and end of range

• Unlimited information entry
  – Text field
Comprehensive list

• Review table 7.2 in Galitz (p. 503)
Text
Text

• Labels - Use a “:” or don’t but be consistent
• Avoid computer jargon, instead use terminology of the users, preferably.
• Avoid making up words, if you can
• Use short, familiar words
• Target a reading level of an 8th grader!
• Avoid abbreviations and acronyms, if possible, unless the term is well understood and NOT easily confused with another acronym/abbreviation with the same letters.
  – Ex: UPS
    • is that United Parcel Service or Uninterruptible Power Supply?
• Remember that other written languages may require more space to display the same information.
Avoid Contr’tions
  – contractions – he’ll, she’ll, isn’t, ain’t
Avoid prefixes and suffixes
  – “un-”, “-ness”
Use standard characters symbols –
  – “$”, “#”, “%”
  – only if familiar to all users, tend to be culturally specific, though
  – ex: “£”, “¥”, “€”, “☺”, “Ξ”, “Λ” – are these familiar to you?
Sentences

• Brief and simple
• Direct
• Affirmative – “Do you wish to cancel?”
  – Avoid – “To continue do not press cancel”
• Active Voice
  – Good: “Send message by pressing the Send button”
  – Avoid: “The message is sent by pressing Send”
• Minimize ambiguity
  – Be clear about what you are saying
  – Make sure the context of the sentence is easily understood by the other UI elements.
    • Example, when closing down windows with apps open, pops up dialogs that ask whether to save or discard contents but not sure what app they are asking about.
Sentences

• Main topic at the beginning
• All sentences in the app should use a parallel (standard form)
• Nonauthoritarian
  – Good: “Ready for the next command”
  – Avoid: “Enter next command”
• Nonthreatening and polite
  – Assume the application is the stupid one, not the user. Don’t insult the user.
Sentences

• Avoid giving the application a personality (be Nonanthropomorphic).
• People should feel like they control the computer.
  – Good: “What do you need?”
  – Avoid: “How can I help you?”
• Avoid humor
• Avoid being patronizing to the user
  – Avoid: “That was very good”
Messages

• System vs. Instructional

• System
  – Status – progress of an operation
  – Informational (notification) – uses the “I” icon. Give user info about the system that may not be obvious
  – Warning – usually the “!” icon. Ex: “Are you sure you want to delete the file?”
  – Critical (action) – Uses the stop sign or “Do Not” icon. Require user action to continue.
  – Question – some use the “?” icon other none. Asks a question and offers a selection of choices.
Message Boxes (Dialog Boxes)

• Standardized in OS
• Good clear title for the box – include the object that the message refers to. Avoid the type of the message.
  – Good: “Printer”
  – Avoid: “Printer out of paper”
• Text in box.
  – Use complete sentences.
  – Provide enough information to the user.
  – Avoid app codes like “Error – 000111232”
  – Avoid combining multiple conditions together in a single box.
Message Box Controls

• No choices – just an “OK” button
• If choice to continue or stopping action – “OK” and “Cancel”
• If state cannot be restored to state previous to action, include a “Stop” instead of “Cancel” button
• Provide a “Help” if more useful information can be presented.
• Enable the title bar “Close” (the “X”) only if message box includes a “Cancel”
Message Box Examples

- **Microsoft PowerPoint**: Windows cannot print due to a problem with the current printer setup. Try one or more of the following:
  - Check the printer by printing a test page from Windows.
  - Make sure the printer is turned on and online.
  - Reinstall the printer driver.

- **Microsoft Visual Basic**: The file Presentation1.ppt already exists. Do you want to replace the existing file?
  - Yes
  - No

- **Microsoft PowerPoint**: There was a problem creating the message.

- **Connecting To Microsoft Exchange Server**: Your Microsoft Exchange Server is unavailable.
  - Retry
  - Work Offline
  - Cancel
Body text

- Contents in a window or the canvas of the application – large chunks of text (one or more paragraphs long)
- Typeface / Font
  - Use simple fonts
  - Point size 12-14
  - Proportional
    - “This is non-proportional”
    - “This is proportional”
Body text

• Width
  – 40 – 60 characters per line (at 12-14 pt)
  – Left justify (not right)
  – Avoid hyphenation (braking a word across lines)

This is a sample of text that is only about 50 characters wide. It is a 14 point font. This is Another sentence in that same block of text.

This is a sample of text that is only about 30 characters wide. It is a 14 point font. This is Another sentence in that same block of text.
As it appears in the CS website
Non-proportional font
Computer Science Overview

Computer science -- sometimes defined as the study of information -- encompasses a wide range of deep and fascinating topics. Computer science is a core scientific discipline with unique intellectual challenges and, at the same time, an enabling discipline for all of science and engineering. Computer science serves as a foundation for thinking about and understanding all forms of computation, it builds insight into analyzing and solving problems of every imaginable variety, and it develops sophisticated knowledge and skills that will be in increasing demand in academia, business, and government for the foreseeable future.

NYU's Computer Science Department, part of the world-famous Courant Institute of Mathematical Sciences, is an

Our department offers the Ph.D. and M.S. in Computer Science, and the M.S. in Information Systems (a program coordinated with the Stern School of Business). This brochure provides a brief description of our faculty and their individual research interests, as well as of broadly defined research groups with closely related interests. We welcome your interest in our department and encourage visits to our Web site, www.cs.nyu.edu, for more details about our graduate programs.

-Margaret Wright, Chair
Computer Science Department
Courant Institute of Mathematical Sciences
New York University

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for example, the departments of Mathematics, Chemistry, Physics, and Biology, the Center for Neural Science; the Stern School of Business; the Tisch School of the Arts; the Wagner School of Public Service; and the NYU School of Medicine.

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Internationalization Concerns
Different languages have ...

• Different rules for expression of ideas i.e. spelling, syntax, grammar, accents, rules of modification, etc.
• Different character sets or ideograph sets.
• Different directions of writing
  – L-R, R-L top to bottom, …
• Dialectical variations
• Official vs. common (or slang)
• Archaic vs. modern
  • Good book for Internationalization in Java
Different cultural groups / countries use different writing systems

• USA & UK – *English* (though not exactly the same)
• Spain & Mexico – *Spanish* (though not exactly the same)
• France and Quebec Canada - *French*
• Vietnam - *Quốc ngữ, chu Nôm* and *chu Han*
• Japan - *kana* and *kanji*
• Korea - *hangul* and *hanja*
• China - *hanzi*
Different cultural groups / countries use different languages

• India
  – **Four** major families: Indo-Aryan, Dravidian, Austroasiatic and Sino-Tibetan
  – **Eighteen official**: Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu, and Urdu.
  – Sir George Grierson’s twelve-volume *Linguistic Survey of India*, published between 1903 and 1923, identified **179 languages and 544 dialects**

• Middle Eastern Languages/Families (> 17)
  – AKKADIAN, ARABIC, ARMENIAN, ASSYRIAN, AVESTA, BERBER, COPTIC, HEBREW, FARSI, JUDEO-ARABIC, JUDEO-PERSIAN, KURDISH, LADINO, MALTESE, PERSIAN, SYRIAC, TURKISH, ...

• European Languages (>100)
  – Abkhasian, Albanian, Arabic, Armenian, Avar, Bashkir, Basque, Breton, Bulgarian, Buryat, Catalan, Catalan, Catalan, Chechen, Chukchi, Chuvash, Circassian, Corsu, Czech, Danish, Danish, Dutch, English, Estonian, Evenki, Faroese, Finnish, French, Frisian, Galician, Georgian, German, Greek, Hungarian, Icelandic, Irish, Gaelic, Italian, Kabardian, Kurdish, Lappish, Latvian, Lithuanian, Luxemburgian, Macedonian, Maltese, Mari, Mordvin, Nenets, Norwegian, Ossetian, Ossetian, Ostyak, Permyak, Polish, Portuguese, Provençal, Rhaeto-Romanic, Romanian, Russian, Sardinian, Scottish Gaelic, Serbo-Croatian, Slovak, Slovenian, Sorbian, Spanish, Spanish, Swedish, Swedish, Tatar, Turkish, Udmurt, Ukrainian, Welsh, White Russian, Yakut, Zyrian
Kanji – Japanese pictogram/ideogram set borrowed from the Chinese via Korea

- The standard government set has >1900 pictographs.
- Kanji has two pronunciations in many cases – the original based on Chinese (on) and the Japanese (kun).
- In addition the Japanese use Kana …
Japanese Kana = Hiragana + Katakana symbol sets

• Hiragana symbol set
  • Katakana symbol set

あ か さ た な は ま や ら わ ん
い き し に ひ み り
う く す つ ぬ ふ む ゆ る
お こ そ と の ほ も よ ろ を
え け せ て ね へ め れ

オ コ ソ ト ノ ホ モ ヨ ロ ラ
ア カ サ タ ナ ハ マ ヤ ラ ワ リ
Chinese Writing

- A sample of some Chinese ideographs
- Anybody tell me what they are?
Arabic

• “Egyptian cookies are superb. “

• “In the afternoons I love to spend time with my friends.”

• “Alexandria is full of beautiful beaches.”

• 28 letters in the Arabic alphabet. Right to Left.

• Thanks to http://www.i-cias.com/babel/arabic/
USA (Dialectical and Slang)

• Poke, Sack, Bag
• Pop, Soda,
• Sub, Hero, Grinder
• Car, ride, cah, ve-hic-ul
• Girlfriend, squeeze, old lady, sweetheart
• Water fountain, Drinking Fountain, Bubbler
• Cop, Fuzz, the man, pig, 5 Oh, NYPD
• “Ji rohw” versus “yee rrrohw” - Gyro
What should we change?
Why?
What should we change? Why?

• Three About Dialog Boxes
What should we change? Why?
What should we change? Why?
What should we change? Why?
What should we change? Why?
What should we change? Why?

• From MS outlook
What should we change? Why?
HW #4

• This is to be done INDIVIDUALLY by each student.
• This exercise should be time boxed to take a MAX of 20 hours of your time to complete. You may NOT need 20 hours. This is a judgment call on your part and depends on how fast you do the assignment. If you spend more time than that, that is your choice, please do NOT complain to me about it taking more time. In the real world you need to budget your time appropriately. This is one of those times. If you are slow getting things done you may need to work longer hours or do a less than sufficient job. Think of it as though you work for me and I have given you only 2.5 work days to get me a prototype for an important shareholder / investor meeting (hence the 20 hours).
• Take the designs that you sketched out in the CDS with your group. Use those to build the Swing UI Prototype
• Score - Points 60 total
  – 20 points - Look (Layout, Colors, Labels, Menu Text) & Feel (Menu Structure, Accelerator/Mnemonic Choices, Flow, Arrangement, Tooltips)
  – 10 points - Implementation Quality/Productivity - what did you implement, how well does it work
  – 10 points - Application Constraints Doc and Secondary Application Description Doc
  – 20 points - Overall impressiveness of HW from a senior management perspective would I keep funding this enterprise based on what you delivered. Would this match the users needs and expectations?