Structured Word Processing — Styles

Assigned reading
• “The Non–Designer’s Design Book,” by Robin Williams (first half)
• “Adobe on Basic Typography” (https://www.student.cs.uwaterloo.ca/~cs200/Adobe/main.html)

Please read and highlight before this week’s lab
• Assignment 2 (due Tuesday May 16 at 9:00 am)
• Notes for this lecture

Today and Thursday
• [named] styles
• the Poke pearl
• backups (the backups assignment—A00—is now online)
The Poke Pearl

What happens if you

• double-click here?
• triple-click here?
• option-click here?
• control-click here?
• command-click here?
• etc...

What happens if you

• click and drag on this?
• option-click and drag on this?
• control-click and drag on this?
• command-click and drag on this?
• etc...

Assumptions

You have used a word processor before

You understand and correctly use the following WP tools

• Word Wrap (hard carriage return vs. soft carriage return)
• Cut/Copy and Paste
• Font usage (size, style and typeface)
• Rulers and Margins
• Proper use of tabs
• Headers and footers (page numbering)
• Footnotes
Things to Think About

• What are the data objects in a Word Processor?
• Is there more than one way to do any given task?
• What are deficiencies of the interface?
• What are efficiencies of the interface?

The idea

• name a collection of paragraph or character attributes
• you then apply the NAME to text instead of individually setting attributes

Hence changing a document's appearance is

• easier & faster, more accurate (⇒consistency, if used intelligently)
• — you just change the definition of the name; everywhere it's used, text changes

Does appearance matter? → Yes!

• legibility
• understandability
• professionalism
Terminology

- **Attributes**: Helvetica, Palatino, bold, italic, underlined, red, 15 pt leading, etc. are attributes

- **[Named Style]**: A *(named) style* is a (specific) “bundle of attributes”

- We usually specify that it is a “named style” for emphasis/clarity

  - ex. “Heading” could be a named style with attributes “24 pt Myriad Pro Light with 12 pts of Before Paragraph leading & 2 cm of left indent”

**Compare this and the preceding slide**

Terminology Attributes: Helvetica, Palatino, bold, italic, underlined, red, 15 pt leading, etc. are attributes [Named Style]: A (named) style is a (specific) “bundle of attributes” We usually specify that it is a “named style” for emphasis/clarity ex. “Heading” could be a named style with attributes “24 pt Myriad Pro Light with 12 pts of Before Paragraph leading & 2 cm of left indent” You want to give your styles names that reflect the purpose (ex. “heading”) rather than the specific attributes, because you might change the specific attributes but the purpose will remain the same ex. You might change how you want your headings to look, but you will still be applying the new attributes apply to headings. If you name your style based on its purpose, the name will still make sense.
Indirection

The underlying concept is indirection
  • referring to something through something else

Indirection is useful in many contexts, including...
  • drawing programs (object properties)
  • HTML (tags in web pages; CSS)
  • electronic mail (aliases, forwards)
  • spreadsheets (named cells/ranges)

Remember the Model pearl?

Demo 1

The text being formatted

The style definitions (built-in & user-defined)

Block

Block, Centered
  Font (Default): Times, 12 pt, English (US), Centered, Line spacing: single, Widow/Orphan control, No bullets or numbering

Default Paragraph Font
  The font of the underlying paragraph style

Emphasis, Slight
  Default Paragraph Font + Font:italic

Figure, Caption

Footer
  Font (Default): Times, 10 pt, English (US), Left, Line spacing: single, Widow/Orphan control, Tabs: 3.25", Centered + 6.5", Right

Footnote Reference
  Default Paragraph Font + Superscript

Footnote Text

Header
  Font (Default): Times, 10 pt, English (US), Left, Line spacing: single, Widow/Orphan control, Tabs: 3.25", Centered + 6.5", Right

Heading 1

Heading 2

Instruction
Showing Style Usage in MS Word

In Draft view, the “style area width” controls the width of the style name column in the document display; if it's zero, the style name column vanishes.

In Draft view, View > Reveal Formatting to enable the (yellow) Formatting popup.

Hierarchical Styles

The idea

• style B is “everything style A is, except for . . .”
• style C is “everything style B is, except for . . .”
• etc.

Style A
Helvetica, 24 pt, Bold

Style B
Helvetica, 22 pt, Bold

Style D
Times, 22 pt, Bold

Style C
Helvetica, 24 pt, Italic

Style E
Helvetica, 26 pt, Italic
Hierarchical Styles cont’d

When you change an attribute of A’s definition

- styles based on A change, too, unless that attribute has been explicitly set for the derived style

![Hierarchical Styles Diagram]

Hierarchical Styles Relativity

There are choices in how to implement some aspects of this; eg, if I change B’s font size, is the new value

- absolute (MS Word), or relative to the size of A?
- does changing A’s size later automatically change B’s?
- by a fixed number of points, or by a percentage?

Ditto with paragraph indents

Ditto.

![Hierarchical Styles Relativity Diagram]
Hierarchical Styles — Comments

Comments

- this is a MODEL of named styles, though with parameters
- there’s no point to this unless parent and child styles:
  - share some attributes
  - but not others
- you might have a forest instead of a tree
  (our previous example had no hierarchy at all — a forest of flat trees, so to speak)

In the “Files for Styles Lectures” under Week 2: Styles on Learn, compare

- User Manual Extract (Tree)
- User Manual Extract (Forest)
Character Styles

Should character attributes be part of a paragraph style definition?

Are character styles hierarchical?

- yes in MS Word
- no in FrameMaker
- yes in Nisus Writer Express & Nisus Writer Pro
- yes in Adobe InDesign

Are character styles used to specify the (default) character attributes of paragraph styles?

- no in MS Word
- optionally in Nisus Writer Express & Pro

Incidentally, if you own a Mac, Nisus Writer Pro is a very nice $39 US (ed) word processor (www.nisus.com).
Naming Named Styles

Style names should reflect function, not appearance

“Quotation” not “Indented Paragraph”
“Emphasis” not “Bold”
“List Item” not “Bulleted Paragraph”

Style names

should be chosen **logically**

— **NOT** based on their appearance

so if you change the appearance,
you don’t have to change the name,
and you avoid confusion

Tables-of-Contents (TOCs)

What’s our model of a TOC? *(example on the next slide)*

Steps to create a table-of-contents

• identify paragraph styles from which to build the TOC
  • ex. Heading 1, Heading 2, Heading 3, etc, in Word
• specify a TOC style for each TOC level
  • TOC 1, TOC 2, TOC 3, etc, in Word
• build the TOC (most word processors do this for you)
  • copy paragraphs with specified paragraph style tags into the TOC
  • apply the corresponding TOC style to each
    • *Heading 1 to TOC 1, Heading 2 to TOC 2, Heading 3 to TOC 3, etc.*
  • append a tab character & page number to each
• modify the TOC styles to get the desired layout
• rebuild the TOC whenever appropriate

**Note the application of two distinct styles to each piece of text**

*Demo 3!*

CS 200 Spring 2017
Display or not display
Print or not print
• in MS Word these are separate attributes
• is that a good idea?

Look up “Hidden Text” in Word’s help index

Word only implements one class of conditional
• but it makes sense to have more
• you can simulate having more than one class of conditional text using named styles
The Format > Style… Dialog in Word

Format → Style...

Interaction techniques

A preview checkbox would be better.
& everywhere—not just here.

Recall the Model Pearl (interaction)

• Nested dialog boxes + radio buttons, check boxes, etc.
• Which is better? Should you have both?

Use this dropdown menu to change more attributes.
The Format > Style... > Organizer sub-dialog

Word’s Format > Paragraph dialog box

Not all paragraph attributes are available in this dialog
ex. bullets, borders...
although they belong here
Widows and Orphans

Widow
stranded line at top of page

Orphan
stranded line at bottom of page

Word’s Format > Font... (ie. Character) dialog box
Style Templates

Store style definitions in a separate “template” or “style sheet” file

Use templates to keep styles consistent across multiple documents
- each such document is linked to the template
- when the template is changed, the appearance of every linked document
  - changes automatically? (optional in MS Word)
  - or do you have to request an update? (Keynote)

Another data model...

Style Templates in MS Word

Every document is based on a template (“Normal” by default)
- apparently in the “~ / Documents / Microsoft User Data / “ folder.
  (instead of ~ / Library / Application Support / Microsoft ... sigh)
- whose styles are copied to the document

To use a different base template
- use the “Attach” button in the Tools → Templates and Add-ins… dialog box

To have Word reload the template’s styles every time you open the document
- check “Automatically Update Document Styles” in the Tools → Templates and Add-ins… dialog box

To cause a style change applied in a document to update its template definition
- Use the “Add to template” button in the Modify Styles dialog box, or change it directly in the template
“Invisible” (aka “non-printing”) characters

See Word’s Preferences > View dialog

Or, press [Ctrl]+[Shift]+[V] from Word’s Home menu

Character attributes in paragraph styles
• are a matter of convenience
• when done, one set of character attributes is a property of the paragraph as a whole

The Style Column
• is visible only in Outline or Draft View, not Web Layout or Print Layout

Some paragraph attributes
• are in “auxiliary” dialog boxes instead of the paragraph dialog box even though they are paragraph attributes
• ex. borders, bullets, numbering, shading

Paragraph attributes
• are “stored in” the ¶ at the end of each paragraph
• are automatically copied to a new paragraph if you press RETURN
• you can copy/paste this character to transfer its attributes to another paragraph
The Case For Styles

It's easier / quicker to change
  • the appearance of an existing document
  • determine the appearance of a conforming document

They make it easier to achieve consistent appearance
  • within a document
  • using templates, across documents

You can switch media much more easily

The Case Against

It takes longer to get started
In well-designed applications you can do everything via
- menu items
- dialog boxes opened by a menu item
- a toolbar opened from a menu item
  — Why?

Often there are other ways of doing things
- typically faster but more obscure
  — Why?

Are there other ways to
- DEFINE named styles in Word?
- APPLY named styles in Word?

Explore the Styles pull-down in the Formatting toolbar
- (The Poke pearl)

These ideas are applicable anywhere you have objects with attributes, though the term may not be used
- graphics applications
- printing
- web pages

So look for them!
Next Week

Pixel Graphics
Have a digital photo ready for lab next week.