CS101 Introduction to Computing

Lecture 14

Word Processing

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Focus of the last lecture was on Application SW

Application SW are programs that interact directly with the user for the performance of a certain type of work

That work generally falls into one of the following usage areas

- Scientific/engineering/graphics
- Business
- Productivity
- Entertainment
- Educational

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Today's Lecture

- First among the four lectures that we plan to have on productivity software, a sub-category of application software

- This first lecture will be on word processing

- We'll learn about what we mean by word processing and also desktop publishing

- We'll discuss the usage of various functions provided by common word processors

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Word Processing

- The art and science of converting written information into a form that looks pleasing when printed

- One of the most popular activities on the PC

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Word Processor

- The tool used to perform word processing

- Long time ago, a word processor was a HW/SW combination used solely for performing the word processing task. It looked like a computer terminal or a PC, but could do only one task – word processing

- Today, the term "word processor" generally means the SW used on a computer to perform the task of word processing

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Uses of Word Processors

- Write a letter

- Address labels

- Research paper or report

- Advertisement

- Newsletter

- Magazines

- Book

- And thousands of other tasks

English Only?

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Common Features

1. Type, cut, copy, paste, move text

2. Automatic line-breaks

3. Change font type, face, size, color

4. Change number of columns

5. Adjust margins and line, word, letter spacing

6. Have running headers, footers, page nos.

7. Insert tables, charts, graphics, drawings

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Evolution of WP's

1. **Manual & electric** typewriters (1930-1960)

   – Were page oriented

   – Type face/size was changed by replacing the typing ball

2. Typewriters with magnetic storage (1960's)

   – IBM added storage capability using magnetic tape

3. Line editors on computers(1960's)

4. Stand alone word processors (1960's-1970's)

   – cost: $15,000 to 20,000

5. Current WP programs on uCs (1980's onwards)

Types: WYSIWYG-based & Markup-based

- All early WP's and some of the modern ones as well are markup-based: similar to HTML
  – Generally are harder to learn, but may provide better control and smaller file size
  – Example: LaTeX

- Most current PC-based WP's belong to the WYSIWYG category
  – Easy to get started due to the WIMP interface
  – Example: MS Word, Corel WordPerfect, Sun Star.

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Desktop Publishing (DTP)

- A combination of word processing and graphic design. Used to develop elegant documents

- In the olden times, DTP was used for designing magazines, newspapers & other professional-looking items

- These days, because of the low cost of DTP SW, it is being used for less-demanding and ordinary tasks as well

- The original Macintosh PC started the era of DTP or "Personal Publishing" in 1984

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DTP –vs– WP

- The difference between the two is diminishing with time

- Most WP's now include many tools that, not long ago, were found only in DTP SW

- Generally, DTP SW is a bit more difficult to use for us common computer users, whereas WP SW is quite user-friendly

- DTP SW generally provides finer control over the design/layout of a document

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DTP: Requirements

- High-end PC with a large-screen monitor
- Laser printer
- Scanner
- DTP SW
  - Examples:
    - Adobe PageMaker
    - QuarkXPress
    - Corel Ventura
    - MS Publisher

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Word Processors for the Web

- Most common WP's and DTP packages now have the Web development ability
  - They also include features like auto-recognition of eMail addresses and URL's

- However, specialized SW just for developing Web pages and sites is also available
  - Examples: DreamWeaver, FrontPage

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The right font face & size for normal text

- If text is too small, it becomes hard to read

- Too large, wastage of space is the result. Plus the reader has to turn more pages than necessary

- Either way, the reader gets annoyed

- For general WP, 10-12 point size works well

- Most users, either use the Times New Roman or Arial/Helvetica type face

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Bold, Italic, Underlined Text

- Bold – **fat**

- Italic – *slanted* (Why the name italic?)

- <u>Underlined</u>

- All used to emphasize a certain segment of text

- Plea:

  - Please do not over-do them

  - Their over-use makes it very difficult for the reader

  - And please, use one at a time: Text that is no only bold but also italic & underlined looks +ively <u>*awful*</u>

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Select, Cut, Copy, Drag, Paste

- Just select and cut or copy or drag

- Can also paste after a cut or a copy

- Just think about the pain that people suffered before the advent of the modern WP's

  – Movement of a single sentence from one page to another would have required re-doing all the pages in between

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Spelling & Grammar

- Grammar checkers are not very helpful yet, but still useful and are improving with time

- Warning: Spell checkers are not all that smart! Use them with care.

- Disadvantage: My spelling ability is deteriorating day-by-day because of over-reliance on WP spell-checkers. I am having great difficulty in writing even short-ish hand-written notes without spelling errors

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Thesaurus

- My favorite tool

- Helps you find synonyms and, sometimes, antonyms as well

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Tables

- Tables are sometimes useful for presenting info in an ordered fashion

- Most WP's provide extensive table construction & manipulation features

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Graphics & Drawings

- You can insert graphics that are made using other apps into a WP document

- Several WP's have a built-in drawing tool, which can be used for adding simple diagrams (e.g. a flow chart, a simple street map) into a WP document

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The Best Feature: Undo

- Allows you to recover from your mistakes

- Allows you to experiment without risk

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Document View Mode

- Most WP's provide several ways of viewing a document

- I normally work in and recommend what is known as the "Print Layout" view mode

- In this view, the WP works in a true WYSIWYG mode

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Print-Preview & Printing

- Make sure to preview your document before printing it

- Do this to make sure about the "look" of the document before it is printed

- Most people these days either use inkjet printers or laser printers
  - Color inkjet printers cost less but are slower
  - B&W laser printers cost around twice as much, but are faster and generally have finer resolution
  - Color laser printers are expensive

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Automation

- Table of contents
  - TOC can be automatically generated
  - Page nos. in the TOC get readjusted automatically

- Index
  - Can be automatically generated
  - Page nos. in the index get readjusted automatically

- Application of predefined styles
  - Change style; text changes automatically throughout the doc

- Headers & Footers
  - Page numbers

- Spelling error auto-highlight

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Document-Centered Computing

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Getting On-Screen Help

- All WP's generally have some form of built-in help mechanism

- To me, it seems like that many of those help-systems are designed to be "not-very-helpful": they make finding answers to simple questions quite difficult

- Nevertheless, do try them when you are searching for answers

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Let's try to use MS Word for creating a CV

(Remember the TOC)

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Non-WYSIWIG Word Processing

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Assignment # 5

Write your 1-page CV using MS Word. Your CV should be similar to the one discussed during the lecture. You have the option of including any of the features provided by the word processor, but your must include the following:

- Table
- Headings
- Bullets
- Link to your e-mail address
- Link to your Web page

Consult the CS101 syllabus for the submission instructions & deadline

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Focus of the Next Lecture: Algorithms

- To become familiar with the concept of algorithms
  - What they are?
  - What is there use?

- To become able to write algorithms for simple problems

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