CHAPTER 2

TEXT

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Introduction

- Text is obviously the simplest of data types and requires the least amount of storage.

- Text in the form of words, sentences, and paragraphs is used to communicate thoughts, ideas, and facts in daily life.

- Text may not be as visually exciting as some of the other media types, but it often conveys essential and precise information.

...continued

- Multimedia applications depend on text for many things including:

    - **Page titles**

    - **Delivering information in form of multiple sentences /**

    - **paragraphs Labels for pictures**

    - **Instructions for operating the application**

- Text is probably the most common form of information delivery.

… continued

- The power of meaning :
- Term "**HOME**", "**QUIT**", "**REFRESH**", "**HELP**", "**RECYCLE BIN**" etc..

- The power and Irregularity of English :
- 1 Billion people used for their main, second and third language.
- Type of English (written and spoken)
- SMS and Tweeter language : English acronym and Instant messaging jargon : FAQ, FB, IMO, XOXO, NME

Text elements

- Alphabet characters

  – A – Z and a – z

- Numbers

  – 0 – 9

- Special characters

  – Punctuation (. , ; " ' ! : - /)   Signs ($ + - = @ # % ^ & *)

Obtaining Text

- Text can be captured in following ways:

  - Keyboar
  - d Mouse
  - Scanner (OCR) – Optical Character Recognization*

    * designed to translate images of handwritten or typewritten text (usually captured by a scanner) into machine-editable text.

Fonts & Faces

- Typeface

  – Graphic representation or the shape of characters.

  ✍ A **typeface** is a family of related fonts

  – Example : Bookman Old Style

- Font

  − Collection of characters of different sizes and styles of a typeface.

  − Example : **Arial 18 point Bold**

Fonts & Faces

- Font Styles

  - Bold, Italic and Underline

- Font Size

  - Expressed in point

  - Example : **18 point (x)**

Font Terminology

- **Baseline** – the line on which the bases of characters are arranged

- **Leading** – the distance between successive baselines

- **x-height** – the distance between the baseline and the top of a lower- case letter *x*

- **Ascenders/descenders** – strokes that rise above the x-height/drop below the baseline

- **Kerning** – adjustment of space between certain pairs of letters (e.g. AV) to make them look more uniform

Font Terminology

- **Tracking** - Spacing between characters.

- **Serif** - Flag or decoration at the end of a character stroke.

- **Regular**, **Condensed** and **Expanded** – the body width of the font.

- **Cases** : upper and lower.   BALL vs ball

- **Case Sensitive** : exactly matched

Classification of Fonts

- **Spacing**: *monospaced* (fixed width)/*proportional*

- **Serifs**: *serifed*/*sans serif*
  Serifs are the small strokes added to the ends   of character shapes in conventional book fonts
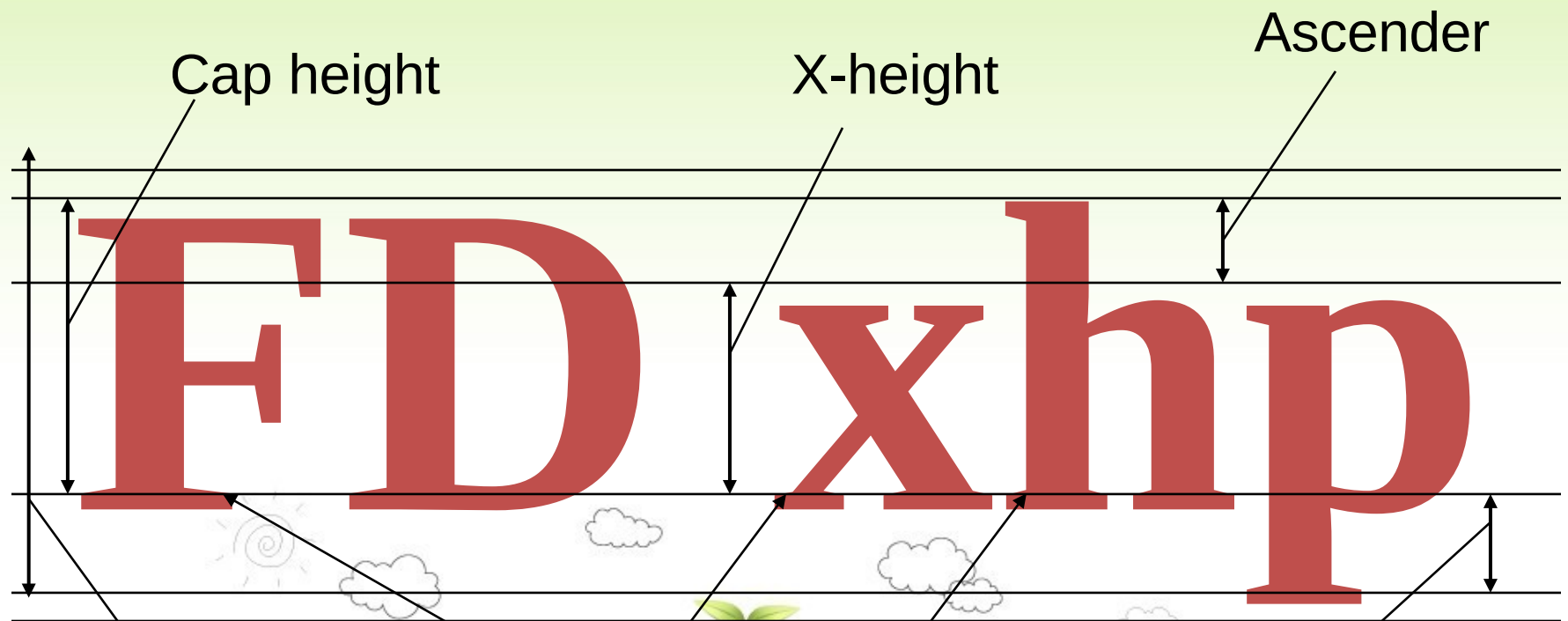
- **Shape**: *upright/italic/slanted*
  Slant is a vertical shear effect, italic uses different glyph shapes
   with a slant

- **Weight**: *bold/normal/light*

This example shows the Times New Roman font
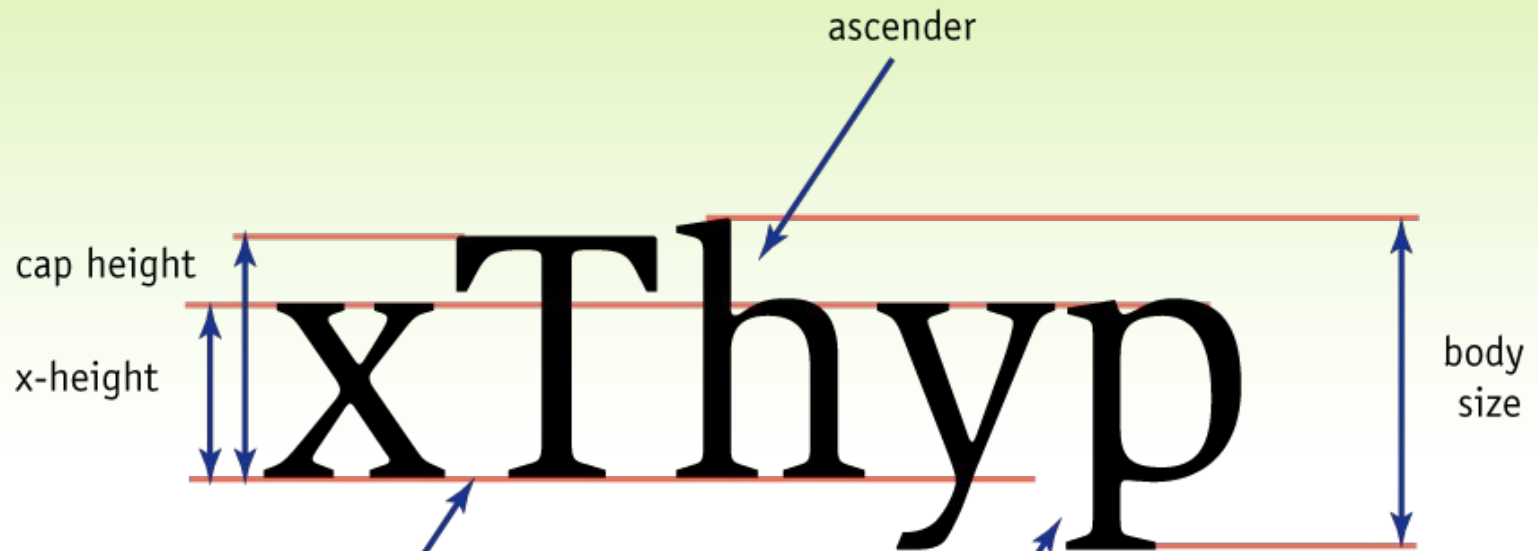
Tracking

Serif

Ascender

BD hp

Descender

Ke r

Av

ning

Leading

Tracking and Kerning

Tight tracking

Loose tracking

Av

Unkerned

A

V

Font Terminology

ultra-expanded
extra-expanded
expanded
semi-expanded
normal
semi-condensed
condensed
extra-condensed
ultra-condensed

Condensed and Expanded

Serif and sans serif fonts

- Fonts can broadly be said to be of one of two types: *serif or sans serif*
- A serif is the decorative 'bit' at the end of a letter stroke

- **Serif fonts** are usually used for printed media or documents that have large quantities of text.
  - This is because the serif helps guide the reader's eye along the line
- **Sans Serif fonts** are considered better for computer displays because of the sharper contrast.

Serif fonts

Times New Roman Bookman Old Style *Monotype Corsiva* Courier New

Sans serif fonts

Arial
Tahoma
Impact
Verdana

Font Styles

- **Bold**, *Italic*, <u>Underline</u>, Strikethrough, superscript or subscript, embossed or shadow
- **Colours**
- Some common fonts used today include:
  - Arial (or Helvetica)
    - A sans serif font
  - Times New Roman (or Times Roman)
    - A serif font
  - Courier New (or Courier)
    - A **monospaced** font (all characters have the same width)
  - Refer to microsoft word.

Font mapping

- **Some fonts installed in your machine** may not be **available in other user's machine.**

- If the fonts that you used is not available in other people's computer, a default font will be used for substitution.

- Specifying which font to be substitution is called **font mapping.**

CAN YOU READ THIS? IF NOT IT IS BECAUSE EVERYTHING IS WRITTEN IN CAPITAL LETTERS. THEREFORE THIS SHOULD ALWAYS BE AVOIDED.

Can you read this? It is easier because people will recognize shape of characters easier this way.

Can you read this? It is easier because people will recognize shape of characters easier this way.

Meaningful words

- Text is use for titles and headlines, menus, navigation, and content.

- Too much text – crowded or 'busy' screen

- Too little text – too many page

- Words must be chosen carefully

Guideline of choosing fonts

- For small size, **do not use decorative fonts** because in small size they are unreadable.

- Use **as few typefaces as possible** but you can vary the size and style using *italic* or **bold.**

- **Adjust the leading or line spacing** where you have a lot of text for easier reading.

- **Vary the size of a font** according to the importance of the message you are delivering.

- Use **bold or emphasize text** to highlight ideas or concept.

Guideline of choosing fonts

- In large headlines, adjust **the spacing between letters (kerning)** so that the spacing feels right.

- Use anti-aliasing for big fonts but turn off anti-aliasing for small fonts.

- Surround headlines with white space

- Distinguish **text links** with colors and underlining

- Use drop caps and initial caps

Efficient use of text

- Positive ways to communicate message by less text and other ways are

1. Hypertext
2. Pop-up Messages
3. Drop-down Boxes
4. Scroll Bars
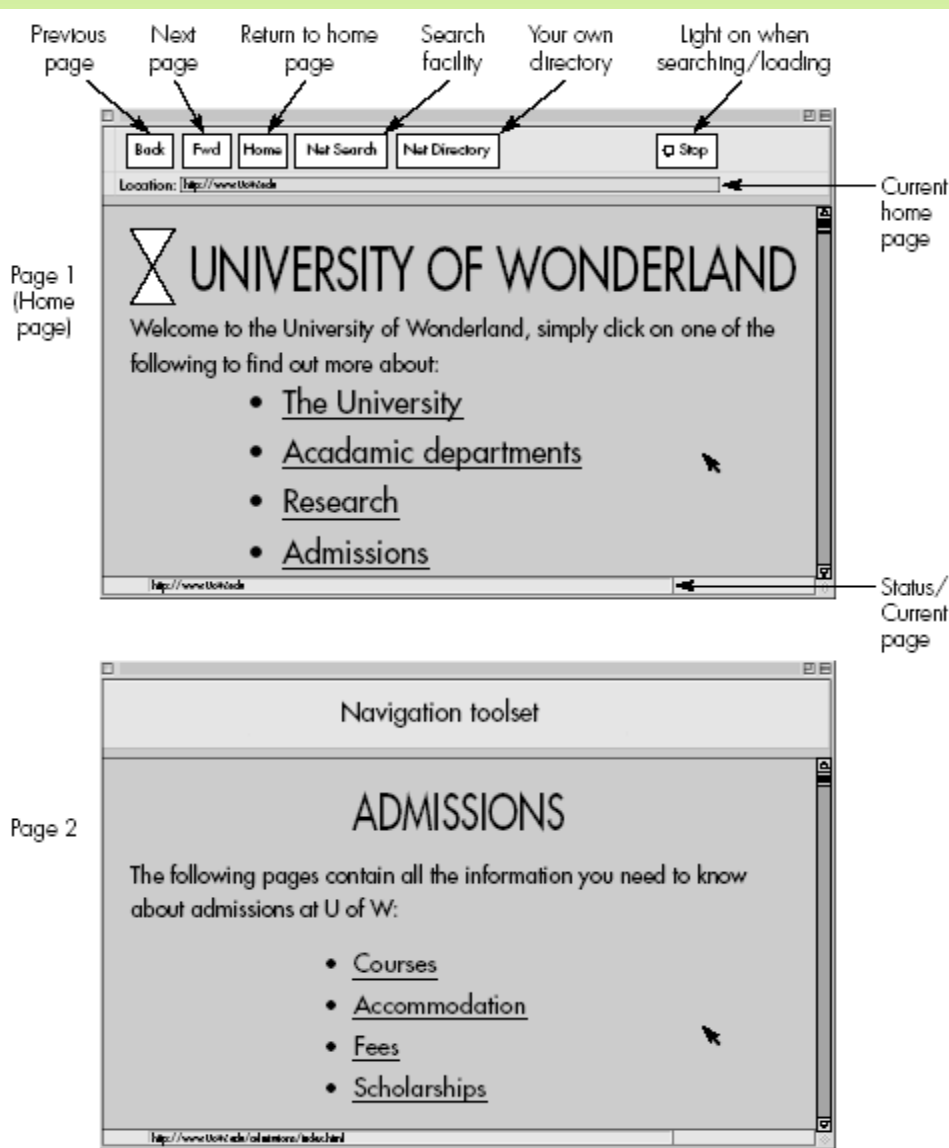5. Buttons for interaction
6. Symbols & Icons

Types of Text

Hypertext

- It enables the integrated set of documents (each comprising formatted text) to be created which have defined linkages between them.

Hyperte

Previous page | Next page | Return to home page | Search facility | Your own directory | Light on when searching/loading

Back | Fwd | Home | Net Search | Net Directory | Stop

Location: http://www.UofW.edu — Current home page

Page 1 (Home page)

UNIVERSITY OF WONDERLAND

Welcome to the University of Wonderland, simply click on one of the following to find out more about:

- The University
- Acadamic departments
- Research
- Admissions

http://www.UofW.edu — Status/Current page

Navigation toolset

Page 2

ADMISSIONS

The following pages contain all the information you need to know about admissions at U of W:

- Courses
- Accommodation
- Fees
- Scholarships

http://www.UofW.edu/admissions/index.html

Hypertext is a type of formatted text that enables a related set of documents, normally referred to as **pages**, *to be created which have defined linkage points, referred to as* **hyperlinks**, *between each other.*

Figure 2.3. Example of an electronic Document written in hypertext

Hypertext

- Linking a hypertext or hot word / hotspot to another part of the title that displays more text

- Very effectively used to retrieve info from databases

- Helps user in decision making

- User can process information faster and strategically

Pop-up messages

- Another type of Hot word used to save space

- Click on a hot word or a text, a small message pops up explaining in brief about the hot word

- Remains for some time and vanishes after programmed duration or by a mouse click

Drop-down boxes

- Gives the user a set of choices and reduces his strain of decision making

- That is making choice in a easier way and limited according to the system's capabilities

- Choosing may lead to another page with text or may retrieve info from database

Scroll Bars

- Usually not a good practice to use scroll bars

- Mostly irritates the user

- Important messages should not be posted using scrollbars, since the user may not notice it
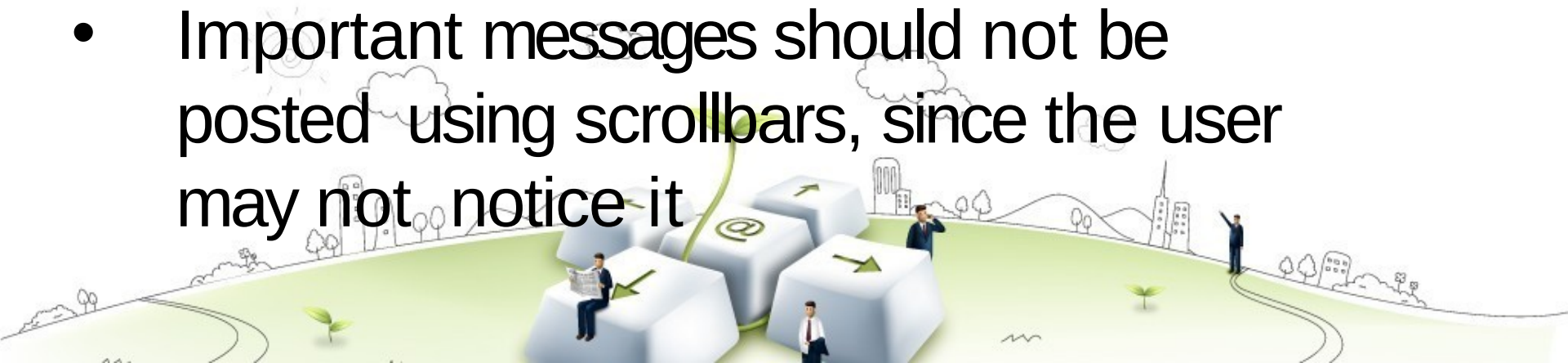
Button s

- The concept of hyper linking remains the same

- Change in appearance by using a button with text to glow on it rather than using a hyper text
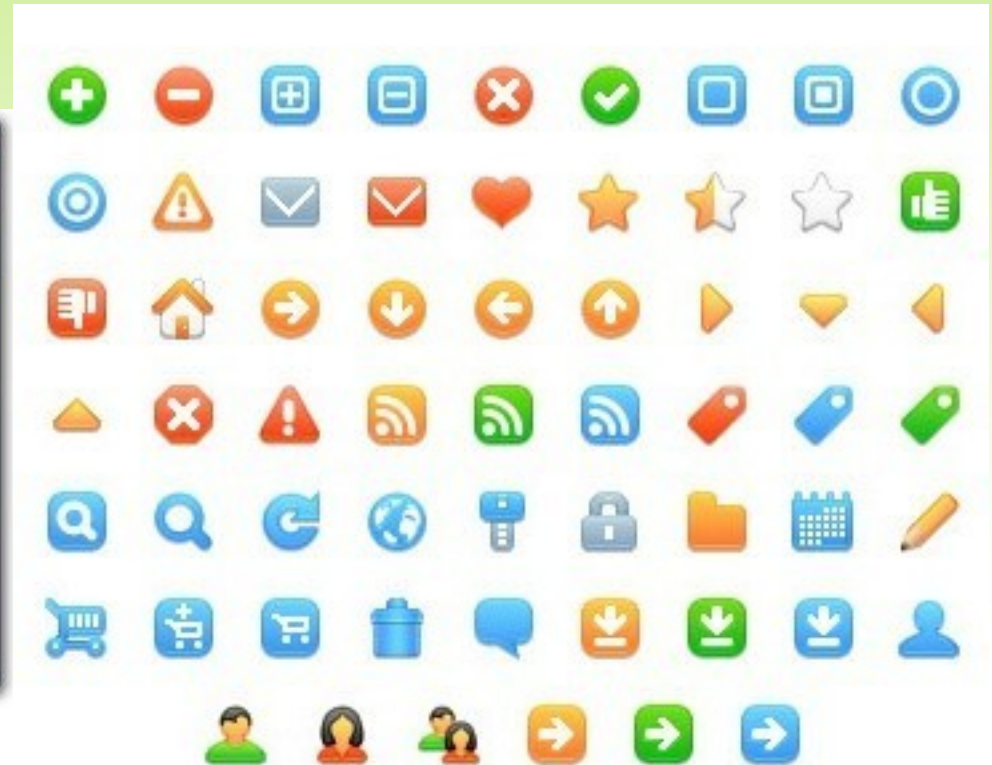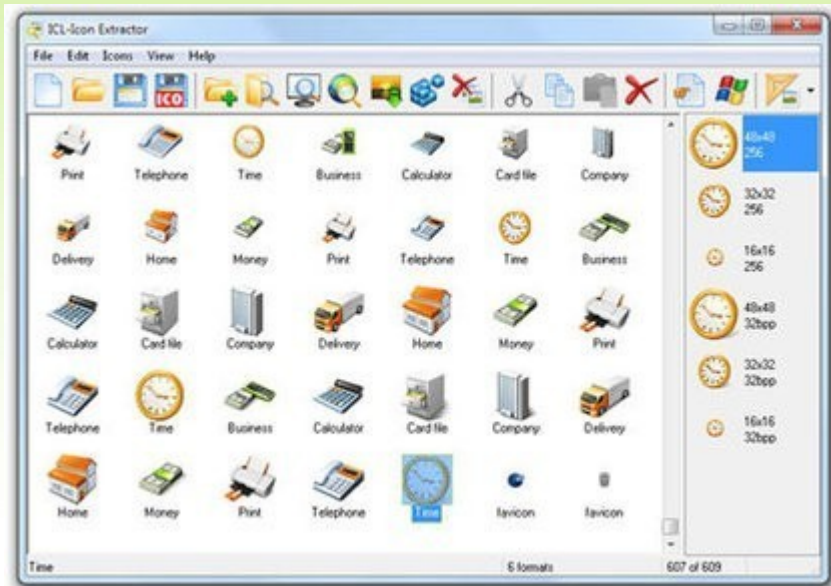
Symbols and Icons

symbols

- Concentrated text in the form of stand alone graphic constructs.

- Convey meaningful messages.

- Need to be learn and advice to use a standard symbols.

Example of Symbols and Icons

Computer and Text

Bit positions			7	0	0	0	0	1	1	1	1
			6	0	0	1	1	0	0	1	1
			5	0	1	0	1	0	1	0	1
4	3	2	1								
0	0	0	0	NUL	DLE	SP	0	@	P	\	p
0	0	0	1	SOH	DC1	!	1	A	Q	a	q
0	0	1	0	STX	DC2	"	2	B	R	b	r
0	0	1	1	ETX	DC3	#	3	C	S	c	s
0	1	0	0	EOT	DC4	$	4	D	T	d	t
0	1	0	1	ENQ	NAK	%	5	E	U	e	u
0	1	1	0	ACK	SYN	&	6	F	V	f	v
0	1	1	1	BEL	ETB	'	7	G	W	g	w
1	0	0	0	BS	CAN	(	8	H	X	h	x
1	0	0	1	HT	EM	)	9	I	Y	i	y
1	0	1	0	LF	SUB	*	:	J	Z	j	z
1	0	1	1	VT	ESC	+	;	K	[	k	{
1	1	0	0	FF	FS	,	<	L	\	l		
1	1	0	1	CR	GS	–	=	M	]	m	}
1	1	1	0	SO	RS	.	>	N	^	n	~
1	1	1	1	SI	US	/	?	O	—	o	DEL

This is a set of characters that are available in the **ASCII (American Standard Code for Information Interchange) character set**. *This is one of the most widely used character sets and the table includes the binary codeword used to represent each character.*

Basic ASCII character set

ASCII Code

ASCII Code

- Each character is represented by a unique 7-bit binary codeword, meaning that there are 128 (2^7) alternative characters.

- In addition to all normal alphabetic, numeric and punctuation characters, the total ASCII character set also includes **control characters** such as BS (backspace), DEL (delete), etc.

... Extended Character Set (ISO Latin- 1) continued

– Extra 1 bit in ASCII is filled with ANSI (American National Standards Institution) characters (256 characters)
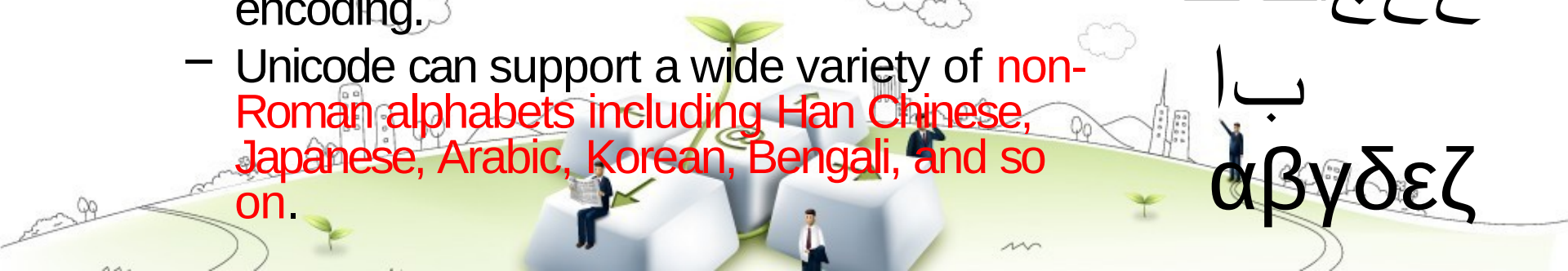
¢ 👍 ä
ü

Unicode

– Unicode is the universal standard for multi language characters published by Unicode Consortium.

– Unicode 4.0 standard covers 96,382 characters using 16 bits uniform encoding.

Unicode Characters

– Unicode can support a wide variety of non-Roman alphabets including Han Chinese, Japanese, Arabic, Korean, Bengali, and so on.

خثثثجحخ
ب ا

αβγδεζ

Summary

- Text is the simplest of data types and requires the least amount of storage

- 3 categories of text elements:

  Alphabet characters, Numbers, Special characters

- 3 types of text:

  Unformatted text, Formatted text, Hypertext

- Font is the collection of characters of different sizes and styles of a typeface.

- Typeface is the graphic representation or the shape of characters.

  Font Terminology:

  Baseline, Leading, x-height, Ascenders/Descenders, Kerning, Tracking, Serif

  Classification of fonts:

  Spacing, Serifs, Shape, Weight

Summary

- Font types:
  PostScript, TrueType, Bitmap

- Bitmaps require one bitmap for each size. **File size increases as more sizes are added. Require a lot of memory.**

  - Vector fonts can draw any size by scaling the vector drawing primitives mathematically.
    - File size is much smaller than bitmaps.
  - Rasterization refers that font is drawn on the screen one pixel at a time.
  - Anti-aliasing blends the font into the background colour to minimize the jagged edges making for smoother overall appearance.

Summary

- Font mapping specifies which font to be substitution if the fonts that you used is not available in other people's computer.

- Positive ways to communicate message by less text: Hypertext, Pop-up Messages, Drop-down Boxes,

  Scroll Bars, Buttons, Symbols & Icons.