

Institute for World Languages & Cultures



An Introduction to Multilingual Computing

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Introduction to Multilingual Computing

Prepared by the Institute for World Languages and Cultures

What is multilingual computing?

- Basically, multilingual computing is using the computer to communicate with people in different languages.
- Browsing the World Wide Web in different languages
- Typing from right to left or from top to bottom, instead of from left to right
- Printing on different sized paper, like A4 sized paper
- Even if you use the English version of Microsoft Windows, you *can* read, print, and type in other languages.

Why is multilingual computing important?

- Multilingual computing is the critical link to using the Internet for global communication and business. E-commerce does not mean English-commerce.
- Multilingual computing is a valuable job skill.
- You may want to exchange email with friends and family from different countries.

Who uses multilingual computing?

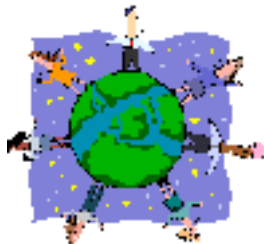
- If you have not completed your language requirement at CSUMB, then you *will* be using a computer in a foreign language.
- Also, our CSUMB international students need to communicate with their schools, friends and family in their home countries.

How can you use multilingual computing?

- For more information, visit the CSUMB Institute for World Languages and Cultures **Language Lab in building 48**.
- World Wide Web sites

<http://LanguageLab.csumb.edu/>
<http://www.unicode.org/>
<http://www.microsoft.com/seminar/>

- The following pages provide a brief description of current multilingual computing technology.



Multilingual Fonts

English fonts already have accented characters

Although English keyboards do not have keys for accented characters, English fonts, like *Arial* and *Times New Roman*, do contain accented characters. You just need to learn how to access the accented characters using the English keyboard.





Other languages, like Japanese, require special Japanese fonts

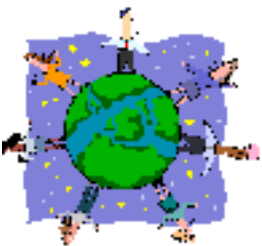
Some languages, like Japanese, use *thousands* of characters, so special fonts are required for Japanese computing. Thousands of characters and thousands of languages sometimes makes multilingual computing inconvenient, but a new technology, called Unicode, may be a solution.



Unicode provides for a new type of font that includes all languages

A group of companies created the Unicode Consortium to address the problem of multiple fonts and multiple languages. Unicode is a major step towards simplifying multilingual computing. Microsoft Word has always been able to use multiple fonts in one document, but consider typing in the Microsoft Windows Notepad application. In Notepad,

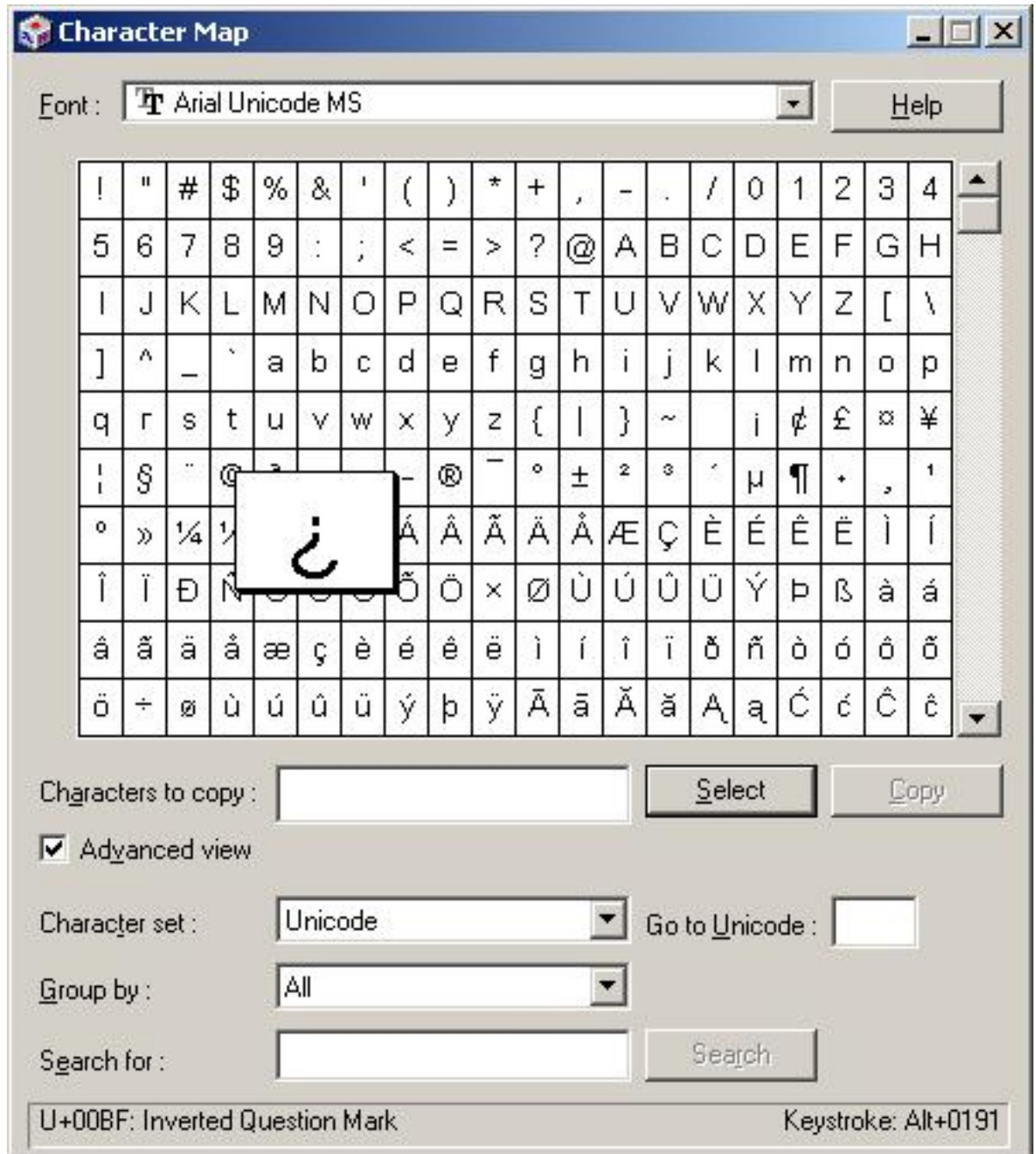
you can only use *one* font, so if you are using a Latin font, then you are limited to Latin characters. However, if you set the font in Notepad for *Arial Unicode MS*, then you will be able to type in multiple languages in the same text file.



Microsoft Windows Character Map Program

The Microsoft Windows Character Map program is one way to see all of the characters in a font. By default in Windows 2000, you can start the Character Map program by selecting

Start | Programs | Accessories | System Tools | Character Map.



ALT Keystrokes *(works with most PC programs)*

To type a character using ALT keystrokes, press and hold the left ALT key.

While holding down the ALT key, enter the letter's 3-digit keystroke code, then release the ALT key.

á 160
é 130
í 161

¿ 168
¡ 173
ª 166

ú 163
É 144
ó 162

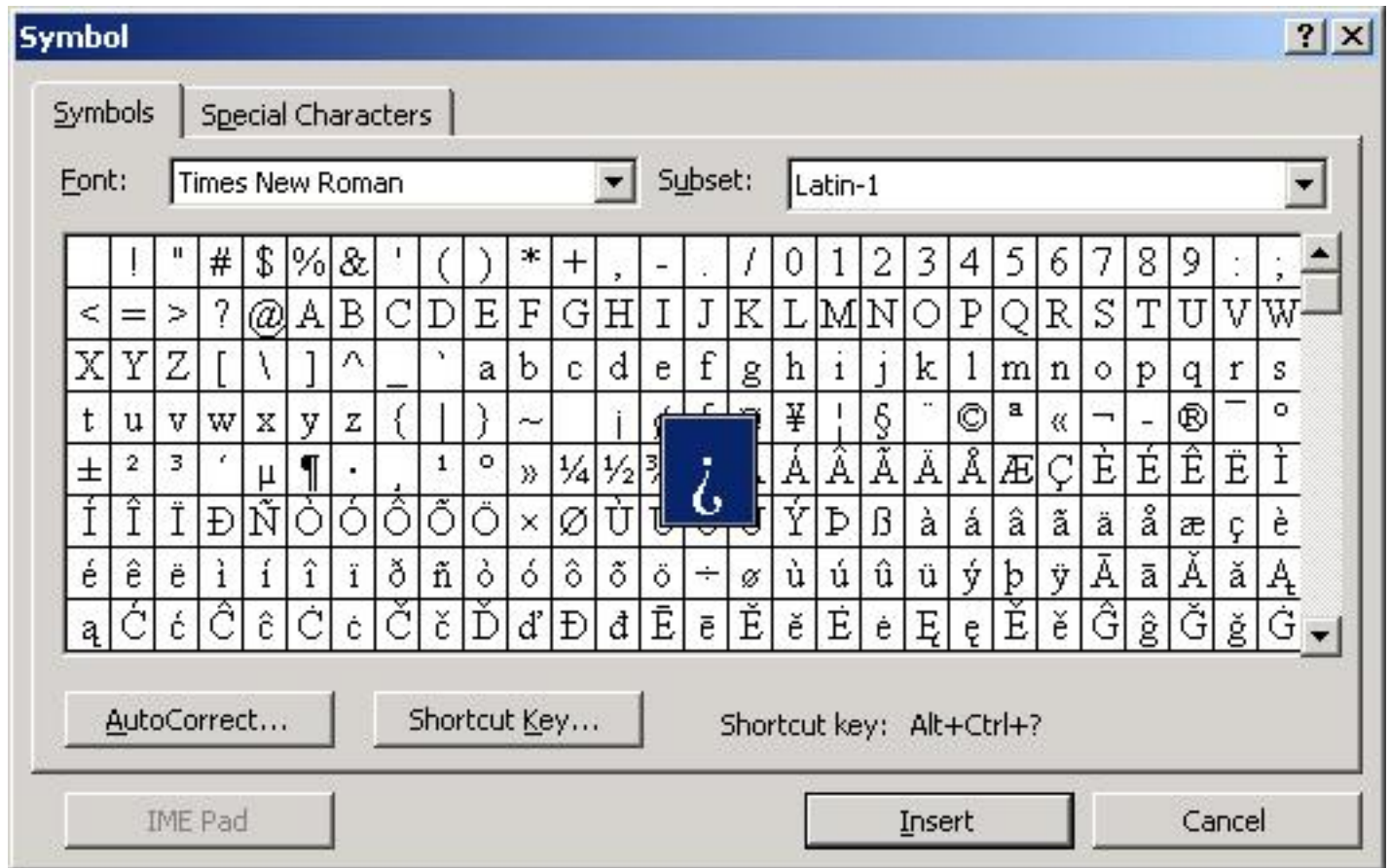
ñ 164
Ñ 165



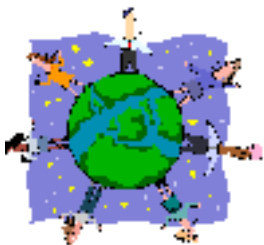
Microsoft Word Insert Symbol Command

In Microsoft Word, the **Insert | Symbol** command acts like the Character Map program, allowing you to insert characters that you cannot directly type on the keyboard.





*Note: Notice the **Shortcut Key** description. You can use keyboard commands instead of the **Insert | Symbol** command for many special characters.*



Multilingual Spelling and Grammar Checking

Spelling and Grammar Checking using Microsoft Word

Spell checking will identify most spelling mistakes, most diacritical mistakes, most typographical errors, many conjugation mistakes, and many other word-form mistakes.

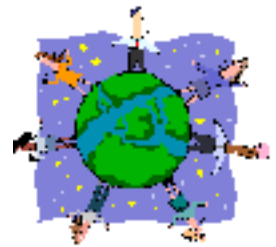
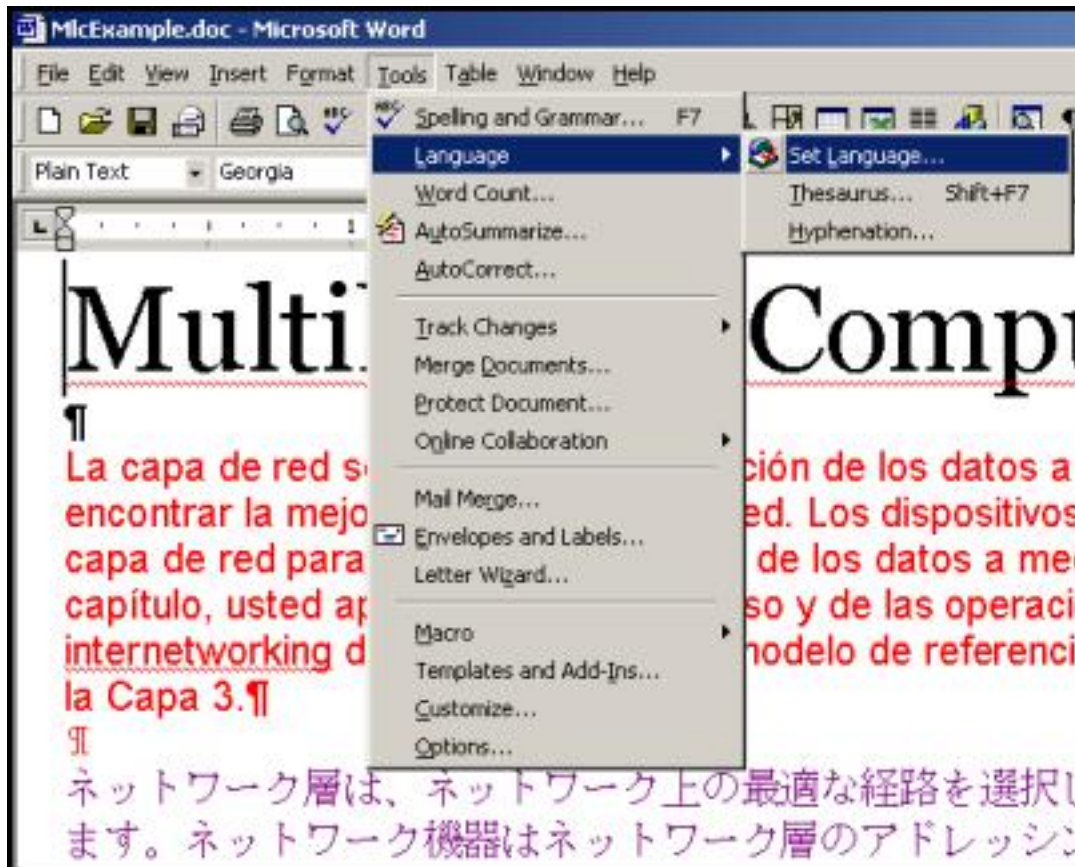
1. Open Microsoft Word
2. **File | Open** your new document; **Edit | Select All**.
3. Select **Tools | Language | Set Language**
4. Select the correct language.

Notes:

- *For Spanish using a PC, select **Spanish (Spain-Modern Sort)**.*
- *MS Word 2000 for MS Windows (PC) will usually correctly detect the language automatically.*

5. Select **Tools | Spelling and Grammar**.





Multilingual Typing with Latin Characters

English keyboard layout for Latin characters

Use the following key combinations to input special foreign

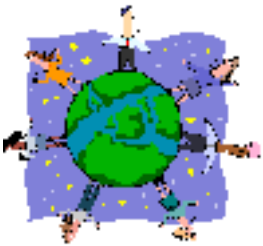
characters.

Note: Keep your keyboard set for English.

Character	Macintosh	MS Word 95/97/2000
acute	' ® E then <vowel>	b ' then <vowel>
grave	` ® ` then <vowel>	b ` then <vowel>
circumflex	^ ® I then <vowel>	J b 6 then <vowel>
umlaut	.. ® U then <vowel>	J b : then <vowel>
cedilla	ç ® C	b , then C
capital cedilla	Ç j ® C	b , then j C
tilde-n	ñ ® N then N	J b ~ then N
capital tilde-n	Ñ ® N then j N	J b ~ then j N
inverted question	¿ j ® ?	j a b ?

Inverted exclamation ring å	¡	Ⓜ !	j a b !
ring å	å	Ⓜ A	J b 2 then A
capital ring å	Å	j Ⓜ A	J b 2 then j A
ash	æ	Ⓜ '	j b then A
capital ash	Æ	j Ⓜ "	j b then j A
null set	∅	Ⓜ ○	b then ○
capital null set	∅	j Ⓜ ○	b then j ○
ligature œ	œ	Ⓜ ℚ	j b then ○
capital ligature œ	Œ	j Ⓜ ℚ	j b then j ○
s-tset	ß	Ⓜ S	j b then S
open Euroquote	«	Ⓜ \	b ` then j <
close Euroquote	»	j Ⓜ \	b ` then j >

Remember that you can also use the **ALT Keystroke** method to input special characters. Refer to the previous page describing the Microsoft Windows Character Map program.



Multilingual Typing with Japanese

For Japanese input, when using the Microsoft Input Method Editor (IME) or the MAC OS

ことえり、 use the following key combinations to type Japanese characters.

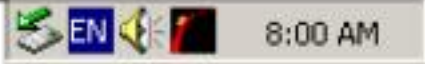
Keys	Characters
------	------------

nn



wo
 kya
 kyu
 kyo
 sya
 syu
 syo
 cya
 cyu
 cyo
 nya
 nyu
 nyo
 hya

を
 きゃ
 きゅ
 きょ
 しゃ
 しゅ
 しょ
 ちゃ
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 にゃ
 にゅ
 によ



hyu
 hyo
 mya
 myu

ひゃ
 ひゅ
 ひょ
 みゃ
 みゅ

myo	みよ
rya	りや
ryu	りゆ
ryo	りよ
matte	まって

For more help, visit the following Web pages:

<http://languagelab.csumb.edu/>

[http:// http://student.csumb.edu/Students_I-M/monteleoneenrico/world/jpcomp/jcompfaq.html](http://student.csumb.edu/Students_I-M/monteleoneenrico/world/jpcomp/jcompfaq.html)