

Use of Local languages in Computers

By completing this module, you will be able to understand and learn the following:

- Fonts, Different kinds of fonts
- Enabling regional language support in Windows XP
- Indic Components on windows XP
- How to use Indic IME support
- Typing in Hindi and different kinds of key boards information

Fonts

The word font refers to a collection of characters (letters, numerals, symbols and punctuation marks). The fonts that are selected affect the printing of the document. It also influences the ease of reading of the document and the volume of text. All fonts have common characteristics.

Font basic properties:

Name - Each font has a distinctive name that represents it. E.g. Courier, Arial, Comic.

Size - It is the height of a character that is expressed in points. Each point is 1/72 of an inch.

Style - This is the further variation of the basic font. The normal style is also referred to as Roman. Others are bold and italic. A group of a font in various styles (bold, italics, roman) is called a font family.

Depending upon the way Fonts are stored/represented, they can be categorized mainly as follows

A. Bitmap Fonts

A bitmap is nothing but a matrix of dots. Each character in a Bitmap font is stored as an array of dots (pixels). Bitmap fonts are very easy to generate and do not require complex rendering. Bitmap fonts are good as long as the characters to be rendered are of fixed sizes.

B. Outline or Vector Fonts

A character in an outline font is described as a set of lines and curves. These fonts can be scaled to any size. As opposed to bitmap fonts, outline fonts need sophisticated rendering technology; as a result they produce better display quality compared to bitmap fonts. The following are the various types of outline fonts based on the type of outlines they use.

i. Type1 Fonts

Type1 fonts, devised by Adobe, are widely used scalable fonts under Linux. Type1 format is used for printing in Linux. The outline file contains the descriptions of the character shapes, i.e., stroke, accent etc. It does not contain enough information for typesetting with the font.

True type Fonts

TrueType font format was developed by Apple and later extended by Microsoft. TrueType is widely supported over the web. TrueType font rendering is well hinted and good for screen display. TrueType fonts are distributed in a single file (.ttf extension) which contains shape as well as metric information. These are supported by GNU/Linux, Microsoft Windows, and Apple Macintosh etc.

Open Type Fonts

Open Type format is a combined initiative of Adobe and Microsoft with the aim to create an advanced font format required for internationalisation. The basic structure is same as TrueType fonts except that it can take either a Type1 or TrueType outline. OpenType fonts are distributed as a single file (.otf extension). As it is possible to keep complex rendering information with an OpenType font, this is the best font format available.

Unicode

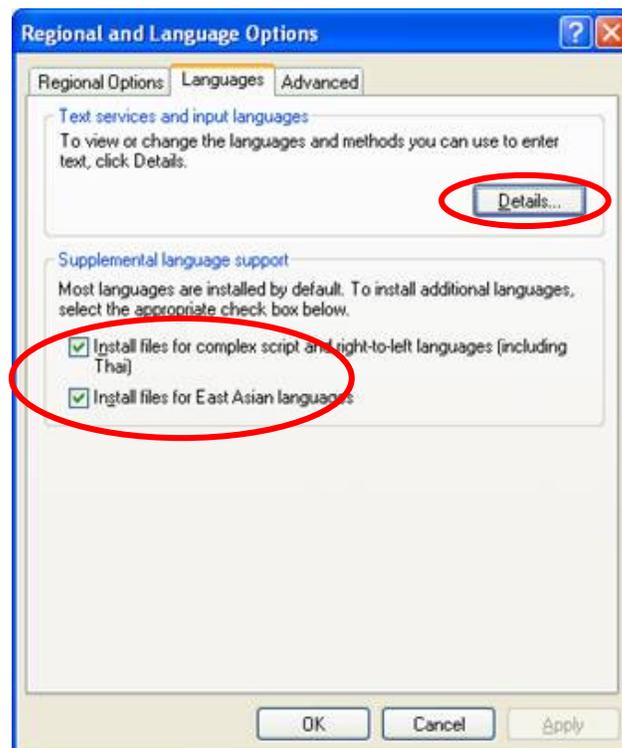
Fundamentally, computers just deal with numbers. They store letters and other characters by assigning a number for each one. Before Unicode was invented, there were hundreds of different encoding systems for assigning these numbers. No single encoding could contain enough characters. These encoding systems also conflict with one another. That is, two encodings can use the same number for two different characters, or use different numbers for the same character. Any given computer (especially servers) needs to support many different encodings; yet whenever data is passed between different encodings or platforms, that data always runs the risk of corruption.

Unicode provides a unique number for every character, no matter what the platform, no matter what the program, no matter what the language. The Unicode Standard has been adopted by major leading companies. It is supported in many operating systems, all modern browsers, and many other products.

Enabling regional language support in Windows XP

1st Step: Enable regional Language Functionality in the OS

- Go to Start -> Control Panel -> Regional and Language Options
- Click on Regional and Language Options
- Click on the Languages tab as shown below
- Enable both the options and click on Details button



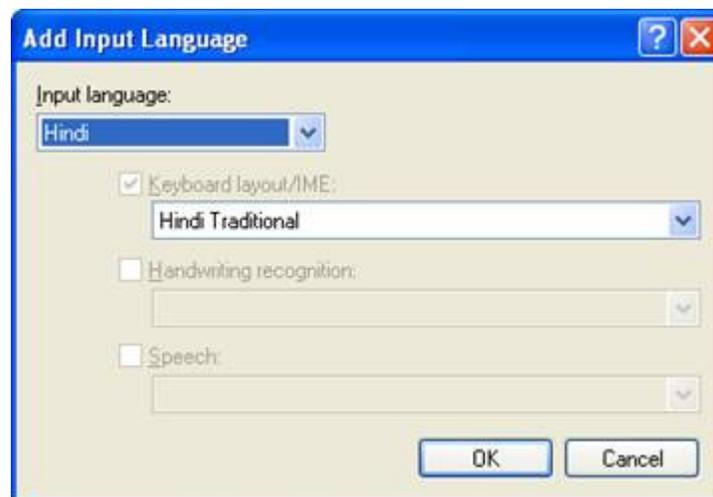
2nd Step: Setting-up the Indian Language Keyboards or Regional Languages

- Allow the OS to install necessary files from Windows XP disc with service pack 2 and Reboot the computer after files have been copied
- In Regional and Language Options panel, click on the Languages Tab
- Once Languages tab is selected click on the 'Details' tab to install different Regional Languages or Keyboards

- Click on the 'Add' button to add a keyboard for a particular language as shown.



In the drop-down box, select Telugu/Hindi/Tamil (Any language you select) as the Input Language and a corresponding keyboard layout/IME will be automatically selected as shown below. Click OK to close the dialog boxes.



The Telugu/Hindi-Traditional / Tamil (Any language you select) keyboards contain all the characters that are traditionally used and include English punctuation without the need to change to the English keyboard to get at the punctuation. It is the recommended keyboard for most users.

Indic Components on windows XP

IME allows a user to type the text in a phonetic manner and shows different key combinations for different sounds.

This is a programme that installs Hindi / Tamil/ Telugu or any other Indian language Indic IME software that would enable you to enter text in Hindi / Tamil/ Telugu or any other Indian language in popular software like MS Word, MS Excel, Power Point, Open Office, etc.

It offers a number of keyboards like Remington, Inscript, QWERTY etc. If you are familiar with any of the popular typewriter keyboards, you would be able to type in MS Office and Open Office Softwares. Indic IME also offers the Transliterator keyboard which would enable the use of the normal English QWERTY keyboard to type in Hindi. Thus if you type 'ye meraa ghar hai' the result would be 'ये मेरा घर है'.

Example: Indic Hindi IME installation process is given here. The process is same for any Indian language.

Installing the Indic Hindi IME : Open the 'Hindi Indic IME V-5.1-Jul-07' folder and click the 'Setup.exe' file. Software can be downloaded from the web site **www.bhashaindia.com/downloadsV2**

Installing Hindi Keyboards: After installing Hindi Indic IME, follow the instructions below to install Hindi keyboards:

- Go to control panel and click 'Regional and language options'
- Select 'Languages' Tab and click 'Details' button.
- Under the 'Installed Services' click the 'Add' button. A window titled 'Add Input Language' pops up.
- Click the 'Input Language' drop-down box and select 'Hindi'.
- Check the 'Keyboard Layout/IME' check-box and select 'Hindi Indic IME 1 [V 5.1]' from the drop-down box below.
- Click 'OK', 'OK' and 'OK' in successive windows to close them.
- The Hindi Keyboards are now installed.

How to Use Indic IME:

- After installing Indic IME start any MS Office application or any Open Office application or WordPad or Notepad.
- Click the Language Indicator 'EN' located in the System Tray on the right side of the Windows taskbar, and click to select 'Hindi' from the pop-up menu. A small toolbar appears.
- Click the 'H' button and select 'Hindi'.
- Click the keyboard button on the toolbar. You will find the following keyboard choices:
 - Hindi Transliteration
 - Hindi Remington (GAIL)
 - Hindi Typewriter
 - Hindi Inscript
 - Choose the keyboard of your preference and start typing in Hindi.

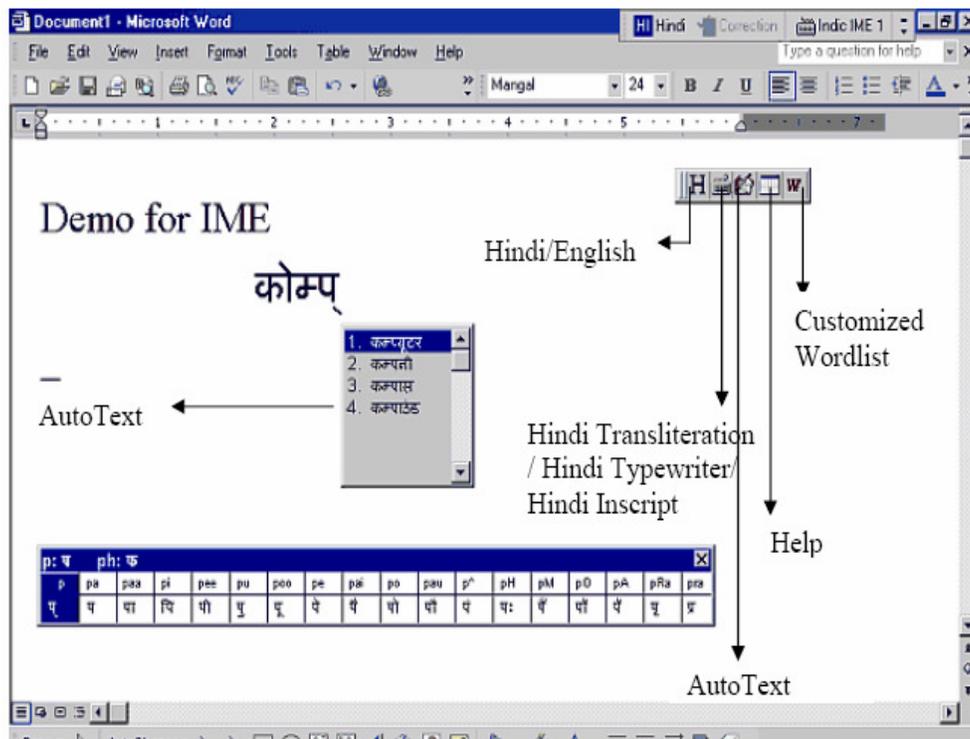
Details of the **keyboards are** as follows:

Hindi Transliteration – Using phonetic typing, the user can type his message in Roman using the Standard English keyboard, which is transliterated on-the-fly to Hindi. It works on the logic of phonetics and is most effective when you spell the word the way it is spoken.

Hindi Remington- Hindi Remington is usual Remington Hindi typewriter Typing can be done as per the key mapping of the Remington keyboard.

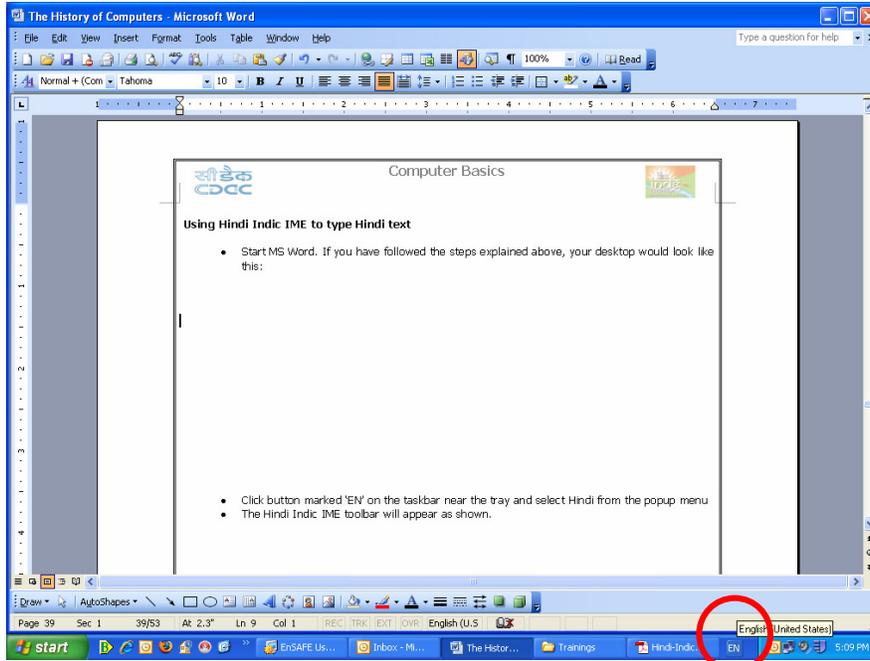
Hindi Typewriter- Another Hindi keyboard used in typing. Typing can be done as per the key mapping of Hindi typewriter keyboard.

Inscript Keyboard- Another Hindi Keyboard where the user types the basic characters in sequence and an underlying logic determines that which of these characters have to be combined and substituted to form a glyph.

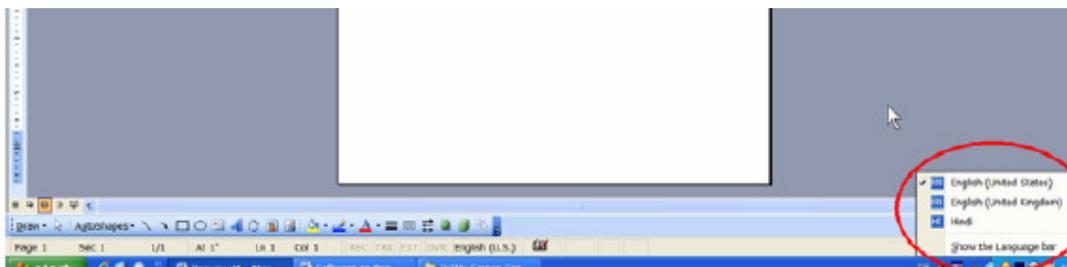


Using Hindi Indic IME to type Hindi text

- Start MS Word. If you have followed the steps explained above, your desktop would look like this:



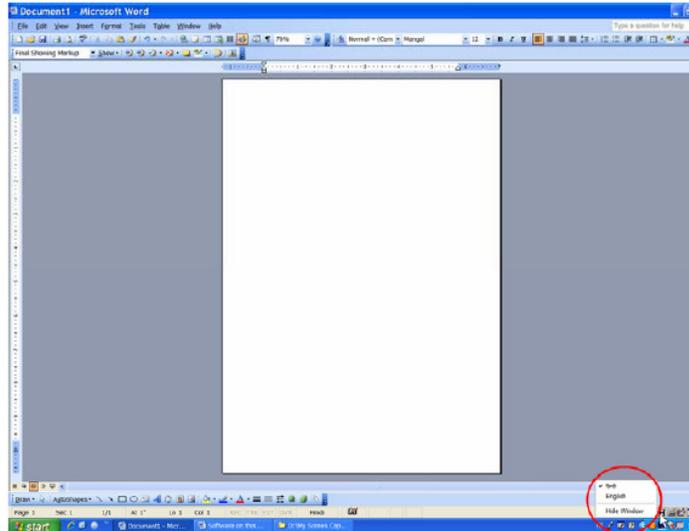
- Click button marked 'EN' on the taskbar near the tray and select Hindi from the popup menu



- The Hindi Indic IME toolbar will appear as shown.



- Click the 'H' button. You will see the following options in the pop-up menu:
 - Hindi
 - English
 - Hide window



- By default, 'Hindi' is selected. If not, select 'Hindi'.
- Click the keyboard button on Hindi Indic IME toolbar. Select the keyboard of your choice from the popup menu.

Start typing. If you are using the Transliteration Keyboard, you may need to learn the sequence of keys to be pressed to produce a particular Hindi letter. Please refer to 'Using the Transliteration Keyboard' document in the 'Read Me First' directory to see a complete chart of English letter sequences for all Hindi alphabets. To see the keyboard mapping of all keyboards go to 'Start' > 'All Programmes' > 'Indic IME 1' > 'Hindi' > 'Hindi Indic IME 1 V 5.1 Help'.

If you wish to type a document that has both Hindi and English text, it can be done easily using the Hindi Indic IME. When you wish to type in Hindi, keep the 'Hindi' option selected in the popup menu that is shown on clicking 'H' button on the Hindi Indic IME toolbar, and when you wish to type in English, choose the 'English' option in the same popup menu.