

# Bharati Script

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## What is Bharati Script?

Taking a cue from European languages, several of which have the same (Roman letter-based) script a team led by Srinivas Chakravathy of IIT Madras has developed a **unified script for nine Indian languages, named the Bharati script.**

**The scripts that have been integrated include** Devnagari, Bengali, Gurmukhi, Gujarati, Oriya, Telugu, Kannada, Malayalam and Tamil

The Bharati characters are made up of three tiers stacked vertically. The consonant at the root of the letter is placed in the centre and the modifiers are in the top and bottom tiers.

## Optical character recognition (OCR) scheme

- The team has now gone a step further since developing the script: it has developed a method for reading documents in Bharati script using a multi-lingual optical character recognition (OCR) scheme
- Generally optical character recognition schemes involve first separating (or segmenting) the document into text and non-text.
- The text is then segmented into paragraphs, sentences words and letters. Each letter has to be recognized as a character in some recognisable format such as ASCII or Unicode.
- The letter has various components such as the basic consonant, consonant modifiers, vowels etc.

## Finger-spelling method

- The team has also created a finger-spelling method that can be used to generate a sign language for hearing-

impaired persons

- In collaboration with Sunil Kopparappu of Innovation Labs, TCS, Mumbai, the team has developed a universal finger-spelling language for the nine Indian languages.