|  |
| --- |
|  |
| Phonetic Translation Library |
| Open source Platform-compatible Transliteration |
|  |
| **Gopalakrishna Palem** |
| **3/27/2009** |

|  |
| --- |
| Phonetic Translation Library Manual: Feature listing and Usage guidelines. Presents the complete phonetic table listings. |

## Contents

[Contents 2](#_Toc225095306)

[Features 3](#_Toc225095307)

[API Usage 4](#_Toc225095308)

[Bengali Phonetic Table 6](#_Toc225095309)

[Gujarati Phonetic Table 7](#_Toc225095310)

[Hindi Phonetic Table 8](#_Toc225095311)

[Kannada Phonetic Table 9](#_Toc225095312)

[Malayalam Phonetic Table 10](#_Toc225095313)

[Oriya Phonetic Table 11](#_Toc225095314)

[Sanskrit Phonetic Table 12](#_Toc225095315)

[Tamil Phonetic Table 13](#_Toc225095316)

[Telugu Phonetic Table 14](#_Toc225095317)

[Example Transliterations: 15](#_Toc225095318)

## Features

Phonetic Translation Library is a project that aims to create reusable components (C++ libraries, COM components, and Edit controls) for Phonetic Transliteration of Indian languages, such as Telugu, Tamil, and Kannada etc. Reuse, platform-compatibility and easy-of-use are the primary design considerations (more on this later). This release ships with both ready to use end-user tools and programming API libraries, components. In-built support for 10 Indian Languages.

End-user tools available as part of this are:

* A simple phonetic transliteration application for typical users who use Indian language content (mails, instant messaging, greeting card designs). Just enter the words and get them transliterated phonetically to the chosen language.
* A complete RichText editing application to typeset documents in Indian languages. This is for more serious users who would like to use phonetic transliteration for creating Indian language documents (Desktop publishing). Helpful for preserving old Indian classical books and documents in native language format. Supports multiple platform-compatible output formats such as Html, OpenOffice document and Acrobat PDF.

Library API/Components available for Developers are:

* C/C++ API for using directly as a Library (through source reference or Dll reference) from any C/C++ project
* COM components for use with Script languages (vb/java script). The component is Registration-free-COM ready.
* DllImport options for use with .Net and VB applications
* Multi-platform compatible Phonetic RichEdit Text control ready to be used with GUI applications. Supports Mac, Linux and Windows versions

Supported Languages: Bengali, Gujarati, Hindi, Kannada, Malayalam, Oriya, Punjabi, Sanskrit, Tamil, Telugu

* বেন্গালি
* ગુજરાતી
* हिन्दी
* ಕನ್ನಡ
* മലയാലമ്
* ଓରିଯା
* ਪੁਨ੍ਜਾਬੀ
* संस्कृतम्
* தமிழ்
* తెలుగు

In-addition to these in-built translation tables, support is available for customized tables. One can save any in-built table to a phonetic table file, edit it and load it as a custom language.

## API Usage

Using the Phonetic Translation Library API is simple and straight forward. From scripting languages, such as VBScript one can achieve the transliteration with just two lines of code as below:

set obj = createobject("PhTranslation.TamilTranslator")

Msgbox(obj.Translate(“tamizL”))

For C/C++ style of languages, the API offers GetxxxTranslator() and Translate() methods that work together. A typical usage would be as below:

#include “PhTranslateLib.h”

wchar\_t szTranslatedSting[128];

::Translate(GetTeluguTranslator(), “iDi telugu vaakyaM”, szTranslatedSting, 127);

The Translate() method takes its input phonetic string in the char \* format. TranslateW() is its sibling that accepts wchar\_t\* format input. In both cases the translated content is always filled in a wchar\_t\* buffer. All GetxxxTranslator() methods return a pointer to one of the in-built translators (such as Bengali translator, Gujarati Translator etc…). If you want to load a custom translator based on custom phonetic tables, use the CreateCustomTranslator() method as shown below:

wchar\_t szTranslatedSting[128];

void\* pTranslator = CreateCustomTranslator(“c:\\MyPhoneticTable.PhTable”);

Translate(pTranslator, “input scentence”, szTranslatedSting, 127);

ReleaseCustomTranslator(pTranslator);

Note that the Translate method takes a wchar\_t\* buffer as one of its parameter to fill it with the translated content. We may not the size of buffer required apriori. In such case we can either specify a large enough buffer (typically twice the input size should work), or use the GetTranslatedBufferLength method along with GetTranslatedBuffer.

A typical .Net usage of these two methods is:

String strInput = textBox\_Input.Text;

IntPtr ppHint = System.IntPtr.Zero;

int nLen = GetTranslatedBufferLengthW(m\_CurrentTranslator, strInput, ref ppHint);

StringBuilder strBufferW = new StringBuilder(nLen);

GetTranslatedBuffer(strBufferW, ref ppHint);

textBox\_Output.Text = strBufferW.ToString();

GetTranslatedBufferLengthW is unicode version of GetTranslatedBufferLength. Note that when we use GetTranslatedBufferLength, we should not use *Translate* method, instead we should use GetTranslatedBuffer method. GetTranslatedBufferLength returns a hint pointer that should be passed to GetTranslatedBuffer method. This is because of two reasons:

1. The GetTranslatedBufferLength method computes the size of the output buffer required by actually performing the translation. By calling GetTranslatedBuffer, we can retrieve the translated string without recomputing it.
2. GetTranslatedBufferLength returns a pointer to the actual transliterated string, which should be passed to GetTranslatedBuffer method (where it will be freed). Not calling GetTranslatedBuffer after calling GetTranslatedBufferLength will lead to memory leaks.

The DllImports for .Net will typically look like:

[DllImport("PhTranslateLib.dll")]

public static extern IntPtr GetTamilTranslator();

[DllImport("PhTranslateLib.dll")]

public static extern IntPtr CreateCustomTranslator([MarshalAs(UnmanagedType.LPStr)] String szPhoneticTableFilePath);

[DllImport("PhTranslateLib.dll")]

public static extern void ReleaseCustomTranslator(IntPtr Translator);

[DllImport("PhTranslateLib.dll")]

public static extern int Translate(IntPtr Translator, [MarshalAs(UnmanagedType.LPStr)] String szInput, [MarshalAs(UnmanagedType.LPWStr)] StringBuilder szOutput, int nLen);

In-built phonetic tables can be saved to files by using the method as shown below:

SavePhoneticTable(GetSanskritTranslator(), saveFileDialog1.FileName);

The phonetic table is a text file that lists the phonetic string and Unicode character mappings. You can edit and reload it as a custom phonetic table (with CreateCustomTranslator method).

## Bengali Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | অ | a | আ | aa, A | ই | i | ঈ | ee, ii, I | উ | u | | ঊ | oo, U | ঋ | zr | ঌ | zl | এ | e, E | ঐ | ai | | ও | o, O | ঔ | au | ৠ | zR | ৡ | zL | ঁ | AO | | ং | M | ঃ | H |  |  |  |  |  |  | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ০ | z0 | ১ | z1 | ২ | z2 | ৩ | z3 | ৪ | z4 | | ৫ | z5 | ৬ | z6 | ৭ | z7 | ৮ | z8 | ৯ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | ক | k, K | খ | kh, Kh | গ | g, G | ঘ | gh, Gh | ঙ | NG | | চ | ch | ছ | Ch | জ | j, J | ঝ | jh, Jh | ঞ | NY | | ট | T | ঠ | Th | ড | d | ঢ | dh | ণ | N | | ত | t | থ | th | দ | D | ধ | Dh | ন | n | | প | p | ফ | ph, f | ব | b, B | ভ | bh, Bh | ম | m | | য | y | র | r, R | ল | l, L | ব | v, w | শ | sh | | ষ | Sh | স | s | হ | h | ড় | zd | ঢ় | zdh | | য় | zy |  |  |  |  |  |  |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | । | | | ॥ | || |  |  |  |  |  |  | |  |

## Gujarati Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | અ | a | આ | aa, A | ઇ | i | ઈ | ee, ii, I | ઉ | u | | ઊ | oo, U | ઋ | zr | ઌ | zl | ઍ | e | એ | E | | ઐ | ai | ઑ | o | ઓ | O | ઔ | au | ૠ | zR | | ૡ | zL | ઁ | AO | ં | M | ઃ | H | ૐ | OM | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ૦ | z0 | ૧ | z1 | ૨ | z2 | ૩ | z3 | ૪ | z4 | | ૫ | z5 | ૬ | z6 | ૭ | z7 | ૮ | z8 | ૯ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | ક | k, K | ખ | kh, Kh | ગ | g, G | ઘ | gh, Gh | ઙ | NG | | ચ | ch | છ | Ch | જ | j, J | ઝ | jh, Jh | ઞ | NY | | ટ | T | ઠ | Th | ડ | d | ઢ | dh | ણ | N | | ત | t | થ | th | દ | D | ધ | Dh | ન | n | | પ | p | ફ | ph, f | બ | b, B | ભ | bh, Bh | મ | m | | ય | y | ર | r, R | લ | l | ળ | L | વ | v, w | | શ | sh | ષ | Sh | સ | s | હ | h |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | ઽ | zS | । | | | ॥ | || |  |  |  |  | |  |

## Hindi Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | अ | a | आ | aa, A | इ | i | ई | ee, ii, I | उ | u | | ऊ | oo, U | ऋ | zr | ऌ | zl | ऍ | e | ए | E | | ऐ | ai | ऑ | o | ओ | O | औ | au | ॠ | zR | | ॡ | zL | ँ | AO | ं | M | ः | H | ॐ | OM | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ० | z0 | १ | z1 | २ | z2 | ३ | z3 | ४ | z4 | | ५ | z5 | ६ | z6 | ७ | z7 | ८ | z8 | ९ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | क | k, K | ख | kh, Kh | ग | g, G | घ | gh, Gh | ङ | NG | | च | ch | छ | Ch | ज | j, J | झ | jh, Jh | ञ | NY | | ट | T | ठ | Th | ड | d | ढ | dh | ण | N | | त | t | थ | th | द | D | ध | Dh | न | n | | ऩ | zN | प | p | फ | ph, f | ब | b, B | भ | bh, Bh | | म | m | य | y | र | r | ऱ | R | ल | l | | ळ | L | ऴ | zL | व | v, w | श | sh | ष | Sh | | स | s | ह | h | क़ | zk | ख़ | zkh | ग़ | zg | | ज़ | zj | ड़ | zd | ढ़ | zdh | फ़ | zph | य़ | zy | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | ऽ | zS | । | | | ॥ | || |  |  |  |  | |  |

## Kannada Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | ಅ | a | ಆ | aa, A | ಇ | i | ಈ | ee, ii, I | ಉ | u | | ಊ | oo, U | ಋ | zr | ಌ | zl | ಎ | e | ಏ | E | | ಐ | ai | ಒ | o | ಓ | O | ಔ | au | ೠ | zR | | ೡ | zL | ಂ | M | ಃ | H |  |  |  |  | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ೦ | z0 | ೧ | z1 | ೨ | z2 | ೩ | z3 | ೪ | z4 | | ೫ | z5 | ೬ | z6 | ೭ | z7 | ೮ | z8 | ೯ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | ಕ | k, K | ಖ | kh, Kh | ಗ | g, G | ಘ | gh, Gh | ಙ | NG | | ಚ | ch | ಛ | Ch | ಜ | j, J | ಝ | jh, Jh | ಞ | NY | | ಟ | T | ಠ | Th | ಡ | d | ಢ | dh | ಣ | N | | ತ | t | ಥ | th | ದ | D | ಧ | Dh | ನ | n | | ಪ | p | ಫ | ph | ೞ | f | ಬ | b, B | ಭ | bh, Bh | | ಮ | m | ಯ | y | ರ | r | ಱ | R | ಲ | l | | ಳ | L | ವ | v, w | ಶ | sh | ಷ | Sh | ಸ | s | | ಹ | h |  |  |  |  |  |  |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | ಽ | zs | । | | | ॥ | || |  |  |  |  | |  |

## Malayalam Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | അ | a | ആ | aa, A | ഇ | i | ഈ | ee, ii, I | ഉ | u | | ഊ | oo, U | ഋ | zr | ഌ | zl | എ | e | ഏ | E | | ഐ | ai | ഒ | o | ഓ | O | ഔ | au | ൠ | zR | | ൡ | zL | ം | M | ഃ | H |  |  |  |  | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ൦ | z0 | ൧ | z1 | ൨ | z2 | ൩ | z3 | ൪ | z4 | | ൫ | z5 | ൬ | z6 | ൭ | z7 | ൮ | z8 | ൯ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | ക | k, K | ഖ | kh, Kh | ഗ | g, G | ഘ | gh, Gh | ങ | NG | | ച | ch | ഛ | Ch | ജ | j, J | ഝ | jh, Jh | ഞ | NY | | ട | T | ഠ | Th | ഡ | d | ഢ | dh | ണ | N | | ത | t | ഥ | th | ദ | D | ധ | Dh | ന | n | | പ | p | ഫ | ph, f | ബ | b, B | ഭ | bh, Bh | മ | m | | യ | y | ര | r | റ | R | ല | l | ള | L | | ഴ | zL | വ | v, w | ശ | sh | ഷ | Sh | സ | s | | ഹ | h |  |  |  |  |  |  |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | । | | | ॥ | || |  |  |  |  |  |  | |  |

## Oriya Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | ଅ | a | ଆ | aa, A | ଇ | i | ଈ | ee, ii, I | ଉ | u | | ଊ | oo, U | ଋ | zr | ଌ | zl | ଏ | e, E | ଐ | ai | | ଓ | o, O | ଔ | au | ୠ | zR | ୡ | zL | ଁ | AO | | ଂ | M | ଃ | H |  |  |  |  |  |  | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ୦ | z0 | ୧ | z1 | ୨ | z2 | ୩ | z3 | ୪ | z4 | | ୫ | z5 | ୬ | z6 | ୭ | z7 | ୮ | z8 | ୯ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | କ | k, K | ଖ | kh, Kh | ଗ | g, G | ଘ | gh, Gh | ଙ | NG | | ଚ | ch | ଛ | Ch | ଜ | j, J | ଝ | jh, Jh | ଞ | NY | | ଟ | T | ଠ | Th | ଡ | d | ଢ | dh | ଣ | N | | ତ | t | ଥ | th | ଦ | D | ଧ | Dh | ନ | n | | ପ | p | ଫ | ph, f | ବ | b, B | ଭ | bh, Bh | ମ | m | | ଯ | y | ର | r | ଲ | l | ଳ | L | ଵ | v, w | | ଶ | sh | ଷ | Sh | ସ | s | ହ | h | ଡ଼ | zd | | ଢ଼ | zdh | ୟ | zy |  |  |  |  |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | । | | | ॥ | || |  |  |  |  |  |  | |  |

## Sanskrit Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | अ | a | आ | aa, A | इ | i | ई | ee, ii, I | उ | u | | ऊ | oo, U | ऋ | zr | ऌ | zl | ए | e, E | ऐ | ai | | ओ | o, O | औ | au | ॠ | zR | ॡ | zL | ँ | AO | | ं | M | ः | H | ॐ | OM |  |  |  |  | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ० | z0 | १ | z1 | २ | z2 | ३ | z3 | ४ | z4 | | ५ | z5 | ६ | z6 | ७ | z7 | ८ | z8 | ९ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | क | k, K | ख | kh, Kh | ग | g, G | घ | gh, Gh | ङ | NG | | च | ch | छ | Ch | ज | j, J | झ | jh, Jh | ञ | NY | | ट | T | ठ | Th | ड | d | ढ | dh | ण | N | | त | t | थ | th | द | D | ध | Dh | न | n | | ऩ | zN | प | p | फ | ph, f | ब | b, B | भ | bh, Bh | | म | m | य | y | र | r | ऱ | R | ल | l | | ळ | L | ऴ | zL | व | v, w | श | sh | ष | Sh | | स | s | ह | h | ़ | zx |  |  |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | ऽ | zS | । | | | ॥ | || |  |  |  |  | |  |

## Tamil Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | அ | a | ஆ | aa, A | இ | i | ஈ | ee, ii, I | உ | u | | ஊ | oo, U | எ | e | ஏ | E | ஐ | ai | ஒ | o | | ஓ | O | ஔ | au | ஂ | M | ஃ | H |  |  | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ௦ | z0 | ௧ | z1 | ௨ | z2 | ௩ | z3 | ௪ | z4 | | ௫ | z5 | ௬ | z6 | ௭ | z7 | ௮ | z8 | ௯ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | க | k, K | ங | NG | ச | ch | ஜ | j, J | ஞ | NY | | ட | T | ண | N | த | t | ந | n | ன | zN | | ப | p | ம | m | ய | y | ர | r | ற | R | | ல | l | ள | L | ழ | zL | வ | v, w | ஶ | sh | | ஷ | Sh | ஸ | s | ஹ | h |  |  |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | । | | | ॥ | || |  |  |  |  |  |  | |  |

## Telugu Phonetic Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Vowels** | | | | | | | | | | | అ | a | ఆ | aa, A | ఇ | i | ఈ | ee, ii, I | ఉ | u | | ఊ | oo, U | ఋ | zr | ఌ | zl | ఎ | e | ఏ | E | | ఐ | ai | ఒ | o | ఓ | O | ఔ | au | ౠ | zR | | ౡ | zL | ఁ | AO | ం | M | ః | H |  |  | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Digits** | | | | | | | | | | | ౦ | z0 | ౧ | z1 | ౨ | z2 | ౩ | z3 | ౪ | z4 | | ౫ | z5 | ౬ | z6 | ౭ | z7 | ౮ | z8 | ౯ | z9 | | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Consonants** | | | | | | | | | | | క | k, K | ఖ | kh, Kh | గ | g, G | ఘ | gh, Gh | ఙ | NG | | చ | ch | ఛ | Ch | జ | j, J | ఝ | jh, Jh | ఞ | NY | | ట | T | ఠ | Th | డ | d | ఢ | dh | ణ | N | | త | t | థ | th | ద | D | ధ | Dh | న | n | | ప | p | ఫ | ph, f | బ | b, B | భ | bh, Bh | మ | m | | య | y | ర | r | ఱ | R | ల | l | ళ | L | | వ | v, w | శ | sh | ష | Sh | స | s | హ | h | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Special Symbols** | | | | | | | | | | | । | | | ॥ | || |  |  |  |  |  |  | |  |

## Example Transliterations:

shaarNgapaaNi

* শার্ণ্গপাণি
* શાર્ણ્ગપાણિ
* शार्ण्गपाणि
* ಶಾರ್ಣ್ಗಪಾಣಿ
* ശാര്ണ്ഗപാണി
* ଶାର୍ଣ୍ଗପାଣି
* ਸ਼ਾਰ੍ਣ੍ਗਪਾਣਿ
* शार्ण्गपाणि
* శార్ణ్గపాణి

vijNYaanaM

* বিজ্ঞানং
* વિજ્ઞાનં
* विज्ञानं
* ವಿಜ್ಞಾನಂ
* വിജ്ഞാനം
* ଵିଜ୍ଞାନଂ
* ਵਿਜ੍ਞਾਨਂ
* विज्ञानं
* விஜ்ஞாநஂ
* విజ్ఞానం

maikrOsaaphT

* মৈক্রোসাফ্ট্
* મૈક્રોસાફ્ટ્
* मैक्रोसाफ्ट्
* ಮೈಕ್ರೋಸಾಫ್ಟ್
* മൈക്രോസാഫ്ട്
* ମୈକ୍ରୋସାଫ୍ଟ୍
* ਮੈਕ੍ਰੋਸਾਫ੍ਟ੍
* मैक्रोसाफ्ट्
* மைக்ரோஸாப்ஹ்ட்
* మైక్రోసాఫ్ట్

taDEvaahamasmiH ||

* তদেবাহমস্মিঃ ॥
* તદેવાહમસ્મિઃ ॥
* तदेवाहमस्मिः ॥
* ತದೇವಾಹಮಸ್ಮಿಃ ॥
* തദേവാഹമസ്മിഃ ॥
* ତଦେଵାହମସ୍ମିଃ ॥
* ਤਦੇਵਾਹਮਸ੍ਮਿਃ ॥
* तदेवाहमस्मिः ॥
* తదేవాహమస్మిః ॥

tamizL

* தமிழ்