

मराठी – LINGUISTIX-mARATHI

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🏠 <https://ctan.org/pkg/linguistix>

🔗 <https://puszcza.gnu.org.ua/projects/linguistix>

🔗 <https://matrix.to/#/#linguistix:matrix.org>

I initialise the package with basic information.

```
1 <*marathi>
2 \ProvidesExplPackage{linguistix-marathi}
3     {2026-01-19}
4     {v0.7}
5     {मराठी (Marathi)}
```

Average height of Marathi conjuncts could be more than that of Latin letters with descenders. This requires minor adjustments in the baseline stretch. To do it uniformly for footnotes also, I use the `setspace` package (if not loaded already).

```
6
7 \IfPackageLoadedF { setspace } {
8   \RequirePackage { setspace }
9 }
```

We need to set the spacing between lines and words for which I use internal floating point numbers. They are declared here.

```
10
11 \fp_gzero_new:N \g_मराठी_शब्दांतील_अंतर_fp
12 \fp_gzero_new:N \g_मराठी_ओळींतील_अंतर_fp
```

This macro grabs an argument and passes it to the key `शब्दांतील अंतर` which is used to set the inter-word space for Marathi.

```
13
14 \cs_new_protected:Npn \मराठी_शब्दांतील_अंतर:n #1 {
15   \ltx_set_keys:n { शब्दांतील~ अंतर = { #1 } }
16 }
17
18 \cs_gset_eq:NN \शब्दांतीलअंतर \मराठी_शब्दांतील_अंतर:n
```

The LINGUISTIX bundle

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This macro grabs an argument, (g-)sets it as the value of `\g_मराठी_ओळीतील_अंतर_fp` and resets the baseline stretch with `\setstretch` command. If the current class is `memoir`, then there is a method to do that without any package. I use that.

```

19
20 \cs_new_protected:Npn \मराठी_ओळीतील_अंतर:n #1 {
21   \fp_gset:Nn \g_मराठी_ओळीतील_अंतर_fp { #1 }
22   \IfClassLoadedTF { memoir } {
23     \setSingleSpace {
24       \fp_use:N \g_मराठी_ओळीतील_अंतर_fp
25     }
26     \SingleSpacing
27   } {
28     \setstretch {
29       \fp_use:N \g_मराठी_ओळीतील_अंतर_fp
30     }
31   }
32 }
33
34 \cs_gset_eq:NN \ओळीतीलअंतर \मराठी_ओळीतील_अंतर:n

```

Here I define two keys for adjusting the space between words and lines respectively. Their defaults are also set here.

```

35
36 \keys_define:nn { मराठी } {
37   शब्दांतील~ अंतर
38     .fp_gset:N          = \g_मराठी_शब्दांतील_अंतर_fp,
39   शब्दांतील~ अंतर
40     .initial:n         = { 1.25 },
41   ओळीतील~ अंतर
42     .code:n            = {
43     \मराठी_ओळीतील_अंतर:n { #1 }
44   }
45 }

```

The `babel` package defines `\extrasxxxx` commands for languages where the additional code that should go with a particular language (`xxxx` in this case) is set. The `\addto` command is used for appending to the same. I start with defining additional macros for Marathi.

```

46
47 \addto { \extrasmarathi } {

```

I have added the command for using the socket for native numbering. It will pickup its value from the current assignment of the plugs and produce the results accordingly.

```

48   \socket_use:n { lngx / native-numbering }

```

By default, \LaTeX prints roman numeral (in capital) as part numbers. They are not suitable for Marathi. Thus we change them to be printed with `\lngx_counter:n` instead.

```

49   \cs_set:Npn \thepart { \lngx_counter:n { part } }

```

The default \LaTeX produces Latin numerals, roman (small and capital both) alphabets and a-z alphabets with `enumerate` at different levels of nesting. In Marathi, both are irrelevant. Thus I renew all of the concerned commands and change them to print Marathi numbers. Since Marathi doesn't have much variety available for counters, I have chosen a simpler style, i.e. I, I.I, I.I.I and I.I.I.I.

```

50   \cs_set:Npn \thenumi { \lngx_counter:n { enumi } }

```

```

51 \cs_set:Npn \theenumii {
52   \lngx_counter:n { enumi } .
53   \lngx_counter:n { enumii }
54 }

```

A period is added after each ‘label’ in enumerate. In default L^AT_EX, the label for second level enumeration is printed inside brackets. We don’t need it in Marathi. So I change the `\labelenumii` command and add a period. It is not added for the first level because that’s L^AT_EX-default too. Similarly, this is extended to all the other levels.

```

55 \cs_set:Npn \labelenumii { \theenumii . }
56 \cs_set:Npn \theenumiii {
57   \lngx_counter:n { enumi } .
58   \lngx_counter:n { enumii } .
59   \lngx_counter:n { enumiii }
60 }
61 \cs_set:Npn \labelenumiii { \theenumiii . }
62 \cs_set:Npn \theenumiv {
63   \lngx_counter:n { enumi } .
64   \lngx_counter:n { enumii } .
65   \lngx_counter:n { enumiii } .
66   \lngx_counter:n { enumiv }
67 }
68 \cs_set:Npn \labelenumiv { \theenumiv . }

```

The `expex` package has an independent mechanism of defining and using counters. I define a set called देवनागरी here and make it the default when Marathi is used. Note that this change will go with the `\lngx_misc_reset:` command. Refer to `linguistix.pdf` for more information on this.

```

69 \IfPackageLoadedT { expex } {
70   \definelabeltype { देवनागरी } {
71     labelgen          = { list },
72     labellist         = {
73       अ, आ, इ, ई,
74       उ, ऊ, ए, ऐ,
75       ओ, औ, अं, अः,
76       ॐ, ऋ, ॠ, ऌ, ॡ, ओं
77     },
78     labelformat       = {A.},
79     fullrefformat     = {XA},
80     labelalign        = {left},
81     labelwidth        = {1.5em}
82   }
83   \lingset {
84     labeltype         = { देवनागरी }
85   }
86 }

```

Marathi doesn’t distinguish between Italic and Upright. So I redefine `\emph` to produce the argument in bold instead. This also goes when `\lngx_misc_reset:` is used.

```

87 \cs_gset_eq:NN \emph \textbf
88 }

```

With the following code, I add the date conversion settings and the parameters to `onchar` command inside `\babelprovide`. This is done only if Marathi is the main language of

the document. I also set the numbering style to **strictly native** if Marathi is the main language.

```

89
90 \tl_if_eq:NnTF \g_lngx_main_language_tl { marathi } {
91   \lngx_set_keys:n { native~ numbering = { strict } }
92   \babelprovide [
93     onchar              = { ids~ fonts },
94     date.gregorian /
95     date.long           = {
96       [d|digits]~ [MMMM],~ [y|digits]
97     },

```

We need numbers in words when in frontmatter. They are added in a special counter **आकडे** and used with a hook for frontmatter. The settings are reset after mainmatter is started.

```

98   counters / आकडे =
99   एक~ दोन~ तीन~ चार~ पाच~
100  सहा~ सात~ आठ~ नऊ~ दहा~
101  अकरा~ बारा~ तेरा~ चौदा~ पंधरा~
102  सोळा~ सतरा~ अठरा~ एकोणीस~ वीस~
103  एकवीस~ बावीस~ तेवीस~ चोवीस~ पंचवीस~
104  सव्वीस~ सत्तावीस~ अठ्ठावीस~ एकोणतीस~ तीस~
105  एकतीस~ बत्तीस~ तेहतीस~ चौतीस~ पस्तीस~
106  छत्तीस~ सदतीस~ अडतीस~ एकोणचाळीस~ चाळीस~
107  एकेचाळीस~ बेचाळीस~ त्रेचाळीस~ चव्वेचाळीस~ पंचेचाळीस~
108  शेहेचाळीस~ सत्तेचाळीस~ अठ्ठेचाळीस~ एकोणपन्नास~ पन्नास~
109  एकावन्न~ बावन्न~ त्रेपन्न~ चौपन्न~ पंचावन्न~
110  छप्पन्न~ सत्तावन्न~ अठ्ठावन्न~ एकोणसाठ~ साठ~
111  एकसष्ट~ बासष्ट~ त्रेसष्ट~ चौसष्ट~ पासष्ट~
112  सहासष्ट~ सदुष्ट~ अडुसष्ट~ एकोणसत्तर~ सत्तर~
113  एकाहत्तर~ बाहत्तर~ त्र्याहत्तर~ चौऱ्याहत्तर~ पंचाहत्तर~
114  शाहत्तर~ सत्याहत्तर~ अठ्ठ्याहत्तर~ एकोणऐंशी~ ऐंशी~
115  एक्याऐंशी~ ब्याऐंशी~ त्र्याऐंशी~ चौऱ्याऐंशी~ पंच्याऐंशी~
116  श्याऐंशी~ सत्याऐंशी~ अठ्ठ्याऐंशी~ एकोणनव्वद~ नव्वद~
117  एक्याण्णव~ ब्याण्णव~ त्र्याण्णव~ चौऱ्याण्णव~ पंचाण्णव~
118  शहाण्णव~ सत्याण्णव~ अठ्ठाण्णव~ नव्याण्णव~ शंभर
119 ] { marathi }
120 \hook_gput_code:nnn { cmd / frontmatter / after } { . } {
121   \cs_set:Npn \thepage {
122     \localecounter { आकडे } { page }
123   }
124 }
125 \hook_gput_code:nnn { cmd / mainmatter / after } { . } {
126   \cs_set:Npn \thepage {
127     \marathicounter { page }
128   }
129 }

```

The **\arraystretch** command needs to be reset to a larger value so that it can incorporate Marathi's vertical conjuncts.

```

130   \cs_set:Npn \arraystretch { 1.2 }

```

I have used only the bold and light variant of Mukta for all the fonts. In sans and mono, the width of the New Computer Modern fonts is slightly more, so I use the 'regular'

variant of Mukta there. Otherwise, Mukta-Light is a better match for New Computer Modern Book.

```

131 \clist_map_inline:nn {
132   upright,
133   italic,
134   slanted,
135   swash
136 } {
137   \lngx_set_keys:n {
138     text~ #1          = { Mukta - Light . ttf },
139     text~ bold~ #1    = { Mukta - Bold . ttf },
140     text~ sans~ #1    = { Mukta - Regular . ttf },
141     text~ sans~ bold~ #1 = { Mukta - Bold . ttf },
142     text~ mono~ #1    = { Mukta - Regular . ttf },
143     text~ mono~ bold~ #1 = { Mukta - Bold . ttf }
144   }
145 }

```

Using the `text extra features` key, I declare NFSS families called `देवनागरी_main`, `देवनागरी_sans`, `देवनागरी_mono` that will be used later. Also, I use the key for interword-spacing here.

```

146 \lngx_set_keys:n {
147   text~ extra~
148   features          = {
149     NFSSFamily      = { देवनागरी_main },
150     WordSpace       = {
151       \fp_use:N \g_मराठी_शब्दांतील_अंतर_fp
152     }
153   },
154   text~ sans~ extra~
155   features          = {
156     NFSSFamily      = { देवनागरी_sans },
157     WordSpace       = {
158       \fp_use:N \g_मराठी_शब्दांतील_अंतर_fp
159     }
160   },
161   text~ mono~ extra~
162   features          = {
163     NFSSFamily      = { देवनागरी_mono },
164     WordSpace       = {
165       \fp_use:N \g_मराठी_शब्दांतील_अंतर_fp
166     }
167   }
168 }
169 } {

```

In the false branch (i.e., if Marathi is not the main language), I use the macros that set the ‘other’ (non-main) fonts for Marathi. The fonts are the same, but the key-value interface is not available, so the code is slightly verbose. Before that we load the `onchar` option with `ids` and `fonts` options.

```

170 \babelprovide [ onchar      = { ids~ fonts } ] { marathi }
171 \lngx_other_main_font:nee { marathi } {
172   WordSpace      = {
173     \fp_use:N \g_मराठी_शब्दांतील_अंतर_fp

```

```

174 },
175 NFSSFamily = { देवनागरी_main },
176 UprightFont = { Mukta - Light . ttf },
177 ItalicFont = { Mukta - Light . ttf },
178 BoldFont = { Mukta - Bold . ttf },
179 BoldItalicFont = { Mukta - Bold . ttf },
180 SlantedFont = { Mukta - Light . ttf },
181 BoldSlantedFont = { Mukta - Bold . ttf },
182 SwashFont = { Mukta - Light . ttf },
183 BoldSwashFont = { Mukta - Bold . ttf },
184 SmallCapsFont = { Mukta - Light . ttf }
185 } { Mukta - Light . ttf }
186 \ltx_other_sans_font:nne { marathi } {
187   WordSpace = {
188     \fp_use:N \g_मराठी_शब्दांतील_अंतर_fp
189   },
190   NFSSFamily = { देवनागरी_sans },
191   UprightFont = { Mukta - Regular . ttf },
192   ItalicFont = { Mukta - Regular . ttf },
193   BoldFont = { Mukta - Bold . ttf },
194   BoldItalicFont = { Mukta - Bold . ttf },
195   SlantedFont = { Mukta - Regular . ttf },
196   BoldSlantedFont = { Mukta - Bold . ttf },
197   SwashFont = { Mukta - Regular . ttf },
198   BoldSwashFont = { Mukta - Bold . ttf },
199   SmallCapsFont = { Mukta - Regular . ttf }
200 } { Mukta - Regular . ttf }
201 \ltx_other_mono_font:nne { marathi } {
202   WordSpace = {
203     \fp_use:N \g_मराठी_शब्दांतील_अंतर_fp
204   },
205   NFSSFamily = { देवनागरी_mono },
206   UprightFont = { Mukta - Regular . ttf },
207   ItalicFont = { Mukta - Regular . ttf },
208   BoldFont = { Mukta - Bold . ttf },
209   BoldItalicFont = { Mukta - Bold . ttf },
210   SlantedFont = { Mukta - Regular . ttf },
211   BoldSlantedFont = { Mukta - Bold . ttf },
212   SwashFont = { Mukta - Regular . ttf },
213   BoldSwashFont = { Mukta - Bold . ttf },
214   SmallCapsFont = { Mukta - Regular . ttf }
215 } { Mukta - Regular . ttf }
216 }

```

In order to allow Devanagari in math mode, I use the following code. Since this setting has to be done after the initialisation, I use a hook for lazy loading.

```

217
218 \hook_gput_code:nnn { begindocument / end } { . } {
219   \DeclareSymbolFont { देवनागरी }
220     { TU }
221     { देवनागरी_main }
222     { m }
223     { n }
224   \int_step_inline:nnn { "0900 } { "097F } {

```

```
225 \Umathcode #1 = "0 ~ \use:c { symदेवनागरी } ~ #1
226 }
227 }
228 </marathi>
```