

ordinalpt: counters as ordinal numbers in Portuguese

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1 Introduction

The package `ordinalpt` provides a counter style like `\arabic`, `\alph`, etc., but that produces as output strings like “primeiro” (first in Portuguese), “segundo” (second), “terceiro” (third), . . . , up to “milésimo noningentésimo nonagésimo nono” (1999th). There are counter commands to output the text in UPPERCASE, Capitalized or in lowercase, with masculine or feminine gender.

2 User commands

`\ordptmasc` Six commands to output all incarnations of ordinal numbers in portuguese —
`\Ordptmasc` masculine or feminine, in “lowercase”, “Capitalized” or in “UPPERCASE”—:
`\ORDPTMASC` `\ordptmasc{counter}` (lowercase masculine),
`\ordptfem` `\Ordptmasc{counter}` (capitalized masculine),
`\Ordptfem` `\ORDPTMASC{counter}` (uppercase masculine),
`\ORDPTFEM` `\ordptfem{counter}` (lowercase feminine),
`\Ordptfem{counter}` (capitalized feminine) and
`\ORDPTFEM{counter}` (uppercase feminine).

Example:

```
\renewcommand{\thepage}{--- \Ordptfem{page} p'agina ---}
```

will produce in the place for page numbers:

— Primeira página —

— Segunda página —

3 User options

`11-12-curtos` For the ordinals of 11, 12 and 13 there are two correct forms each:

<code>11-13-curtos</code>	Number	Shorter	Longer
<code>11-13-longos</code>	11	undécimo	décimo primeiro
	12	duodécimo	décimo segundo
	13	tredécimo	décimo terceiro

It is usual to find the shorter forms for 11^o and 12^o in texts, including some grammars. The shorter form for 13^o is a bit harder to find. It is kind of strange to see shorter for 11^o and longer for 12^o and the other way around, so it should not happen. If 13^o is presented in shorter form, then definitely the shorter forms should be used for 11^o and 12^o. Therefore we provide three package options ‘`11-12-curtos`’, ‘`11-13-curtos`’ and ‘`11-13-longos`’ with the following results:

Option	11 ^o	12 ^o	13 ^o
<code>11-12-curtos</code> (default)	undécimo	duodécimo	décimo terceiro
<code>11-13-curtos</code>	undécimo	duodécimo	tredécimo
<code>11-13-longos</code>	décimo primeiro	décimo segundo	décimo terceiro

Nota bene: These options affect all ordinals that finish in 11, 12 and 13. For instance, with option `11-12-curtos`, the ordinal for 112 becomes “centésimo duodécimo”.

`tricentesimo` The options ‘`tricentesimo`’ (default; closer to latin *tricentesimu*) and ‘`trecentesimo`’
`trecentesimo` are provided to choose between “tricentésimo” and “trecentésimo”, since both forms are correct for the ordinal of 300.

Option	300 ^o
<code>tricentesimo</code> (default)	tricentésimo
<code>trecentesimo</code>	trecentésimo

`sexcentesimo` The options ‘`sexcentesimo`’ (default; closer to the latin *sexcentesimu*) and
`seiscentesimo` ‘`seiscentesimo`’ are provided to choose between “sexcentésimo” and “seiscen-
tésimo”, since both forms are correct for the ordinal of 600.

Option	600 ^o
<code>sexcentesimo</code> (default)	sexcentésimo
<code>seiscentesimo</code>	seiscentésimo

`noningentesimo` The options ‘`noningentesimo`’ (default; from latin *noningentesimu*) and
`nongentesimo` ‘`nongentesimo` (from latin *nongentesimu*)’ are provided to choose between “non-
ingentésimo” and “nongentésimo”, since both forms are correct for the ordinal of 900.

Option	900 ^o
<code>noningentesimo</code> (default)	noningentésimo
<code>nongentesimo</code>	nongentésimo

4 Code

Identification of the package.

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{ordinalpt}[2007/02/08 v2.1 Ordinal numbers in Portuguese]
11-12-curtos   Declaring options ‘11-12-curtos’ (default) and ‘11-13-curtos’ and ‘11-13-longos’,
11-13-curtos   for the various situations for ordinals of 11, 12 and 13, as discussed before.
11-13-longos
3 \newif\if@ordpt@twelveshort
4 \newif\if@ordpt@thirteenshort
5 \@ordpt@twelveshorttrue
6 \@ordpt@thirteenshortfalse
7 \DeclareOption{11-12-curtos}{%
8   \@ordpt@twelveshorttrue
9   \@ordpt@thirteenshortfalse}
10 \DeclareOption{11-13-curtos}{%
11   \@ordpt@twelveshorttrue
12   \@ordpt@thirteenshorttrue}
13 \DeclareOption{11-13-longos}{%
14   \@ordpt@twelveshortfalse
15   \@ordpt@thirteenshortfalse}
16 \ExecuteOptions{11-12-curtos}
tricentesimo   Declaring options ‘tricentesimo’ (default) and ‘trecentesimo’, since both
trecentesimo   forms “tricentésimo” and “trecentésimo” are correct for the ordinal of 300.
17 \DeclareOption{tricentesimo}{\def\@ordpt@tricent{i}}
18 \DeclareOption{trecentesimo}{\def\@ordpt@tricent{e}}
19 \ExecuteOptions{tricentesimo}
sexcentesimo   Declaring options ‘sexcentesimo’ (default; closer to the latin sexcentesima)
seiscentesimo  and ‘seiscentesimo’, since both forms “sexcentésimo” and “seiscentésimo” are
                correct for the ordinal of 600.
20 \DeclareOption{sexcentesimo}{\def\@ordpt@sexcent{x}}
21 \DeclareOption{seiscentesimo}{\def\@ordpt@sexcent{is}}
22 \ExecuteOptions{sexcentesimo}
noningentesimo Declaring options ‘noningentesimo’ (default; from latin noningentesima) and
nongentesimo   ‘nongentesimo’ (from latin nongentesima), since both forms “noningentésimo”
                and “nongentésimo” are correct for the ordinal of 900.
23 \DeclareOption{noningentesimo}{\def\@ordpt@noningent{in}}
24 \DeclareOption{nongentesimo}{\def\@ordpt@noningent{}}
25 \ExecuteOptions{noningentesimo}
                Processing options.
26 \ProcessOptions
\@ordpt@lowercase   Commands that deal with letter case.
\@ordpt@capitalize 27 \newcommand{\@ordpt@lowercase}[2]{#1#2}
\@ordpt@uppercase 28 \newcommand{\@ordpt@capitalize}[2]{\uppercase{#1}#2}
29 \newcommand{\@ordpt@uppercase}[2]{\uppercase{#1#2}}
```

`\@ordpt@printunits`
`\@ordpt@printtens`
`\@ordpt@printhundreds`
`\@ordpt@printhousands`

These commands take as first and second parameters the command that deals with lettercase (commands above) and a letter “o” or “a” for the masculine or feminine genders. The other parameters are the digits necessary to print the number: one for numbers less than 10, two for numbers between 10 and 99, etc. This commands also have to take care of spaces that separate the words.

```

30 \newcommand{\@ordpt@printunits}[3]{%
31   \ifcase#3 \or
32     #1{p}{rimeir#2}\or
33     #1{s}{egund#2}\or
34     #1{t}{erceir#2}\or
35     #1{q}{uart#2}\or
36     #1{q}{uint#2}\or
37     #1{s}{ext#2}\or
38     #1{s}{\`etim#2}\or
39     #1{o}{itav#2}\or
40     #1{n}{on#2}%
41   \fi}
42 \newcommand{\@ordpt@printtens}[4]{%
43   \ifx#31%
44     \ifx#41%
45       \if@ordpt@twelveshort
46         #1{u}{nd\`ecim#2}%
47       \else
48         #1{d}{\`ecim#2}\space#1{p}{rimeir#2}%
49       \fi
50     \else
51       \ifx#42%
52         \if@ordpt@twelveshort
53         #1{d}{uod\`ecim#2}%
54       \else
55         #1{d}{\`ecim#2}\space#1{s}{egund#2}%
56       \fi
57     \else
58       \ifx#43%
59         \if@ordpt@thirteenshort
60         #1{t}{red\`ecim#2}%
61       \else
62         #1{d}{\`ecim#2}\space#1{t}{erceir#2}%
63       \fi
64     \else
65       #1{d}{\`ecim#2}%
66     \ifx#40%
67     \else
68       \space\@ordpt@printunits#1#2#4%
69     \fi
70   \fi
71   \fi
72   \fi
73 \else
  
```

```

74 \ifcase#3 \or\or
75 #1{v}{ig\'esim#2}\or
76 #1{t}{rig\'esim#2}\or
77 #1{q}{uadrag\'esim#2}\or
78 #1{q}{uinquag\'esim#2}\or
79 #1{s}{exag\'esim#2}\or
80 #1{s}{eptuag\'esim#2}\or
81 #1{o}{ctog\'esim#2}\or
82 #1{n}{onag\'esim#2}%
83 \fi
84 \ifx#40%
85 \else
86 \space\@ordpt@printunits#1#2#4%
87 \fi
88 \fi}
89 \newcommand{\@ordpt@printhundreds}[5]{%
90 \ifcase#3 \or
91 #1{c}{ent\'esim#2}\or
92 #1{d}{ucent\'esim#2}\or
93 #1{t}{r\@ordpt@tricent cent\'esim#2}\or
94 #1{q}{uadringent\'esim#2}\or
95 #1{q}{uingent\'esim#2}\or
96 #1{s}{e\@ordpt@sexcent cent\'esim#2}\or
97 #1{s}{eptingent\'esim#2}\or
98 #1{o}{ctingent\'esim#2}\or
99 #1{n}{on\@ordpt@noningent gent\'esim#2}%
100 \fi
101 \ifx#40%
102 \ifx#50%
103 \else
104 \space\@ordpt@printunits#1#2#5%
105 \fi
106 \else
107 \space\@ordpt@printtens#1#2#4#5%
108 \fi}
109 \newcommand{\@ordpt@printthousands}[6]{%
110 \ifcase#3 \or
111 #1{m}{il\'esim#2}%
112 \fi
113 \ifx#40%
114 \ifx#50%
115 \ifx#60%
116 \else
117 \space\@ordpt@printunits#1#2#6%
118 \fi
119 \else
120 \space\@ordpt@printtens#1#2#5#6%
121 \fi
122 \else
123 \space\@ordpt@printhundreds#1#2#4#5#6

```

```

124 \fi}
\@ordpt@print The command \@ordpt@print is defined with special arguments (not possible
to be defined with \newcommand). The arguments are expected as follows:
#1 lowercase command
#2 gender letter o or a
#3 digit
#4 digit or ? (only units)
#5 digit or ? (up to tens)
#6 digit or ? (up to hundreds)
#7 ? (up to thousands) or nothing
125 \newcommand{\@ordpt@print}{}
126 \def\@ordpt@print#1#2#3#4#5#6#7!{%
127 \ifx#4?%
128 \@ordpt@printunits#1#2#3%
129 \else
130 \ifx#5?%
131 \@ordpt@printtens#1#2#3#4%
132 \else
133 \ifx#6?%
134 \@ordpt@printhundreds#1#2#3#4#5%
135 \else
136 \@ordpt@printthousands#1#2#3#4#5#6%
137 \fi
138 \fi
139 \fi}
\@ordpt@ordinal In this command the value of the counter (third argument) is expanded, via
\expandafter, to a list of digits, and four “?” and a “” are added and expected
to be gobled by \@ordpt@print. We need the “?” because of the \ifx on
detecting how many digits the number has. This command checks if the value of
the counter is between 1 and 1999 (including both). After the expansion of the
\the, the command \@ordpt@print is used.
140 \newcommand{\@ordpt@ordinal}[3]{%
141 \ifnum\csname c@#3\endcsname<1
142 \@ctrerr
143 \else
144 \ifnum\csname c@#3\endcsname>1999
145 \@ctrerr
146 \else
147 \expandafter\@ordpt@print
148 \expandafter#1\expandafter#2\the\csname c@#3\endcsname????!%
149 \fi
150 \fi}
\ordptmasc The user commands. The diference between them is that the pass to
\Ordptmasc \@ordpt@ordinal the letter case commands as first argument and the final gender
\ORDPTMASC vowel as second, and the counter name as third argument.
\ordptfem 151 \newcommand{\ordptmasc}[1]{\@ordpt@ordinal\@ordpt@lowercase o{#1}}
\Ordptfem 152 \newcommand{\Ordptmasc}[1]{\@ordpt@ordinal\@ordpt@capitalize o{#1}}
\ORDPTFEM

```

```

153 \newcommand{\ORDPTMASC}[1]{\@ordpt@ordinal\@ordpt@uppercase o{#1}}
154 \newcommand{\ordptfem}[1]{\@ordpt@ordinal\@ordpt@lowercase a{#1}}
155 \newcommand{\Ordptfem}[1]{\@ordpt@ordinal\@ordpt@capitalize a{#1}}
156 \newcommand{\ORDPTFEM}[1]{\@ordpt@ordinal\@ordpt@uppercase a{#1}}

```

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Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in **roman** refer to the code lines where the entry is used.

Symbols	N	<code>\Ordptfem</code>	<i>1, 6</i>
<code>\@ordpt@capitalize</code>	<code>nongentesimo</code> (option)	<code>\ordptfem</code>	<i>1, 6</i>
<code>\@ordpt@lowercase</code>	<code>\ORDPTMASC</code>	<i>1, 6</i>
<code>\@ordpt@ordinal</code>	<code>nongentesimo</code> (op-	<code>\Ordptmasc</code>	<i>1, 6</i>
<code>\@ordpt@print</code>	tion)	<code>\ordptmasc</code>	<i>1, 6</i>
<code>\@ordpt@printhundreds</code>			
.	O		
.	options	S	
<code>\@ordpt@printtens</code>	<code>11-12-curtos</code>	<code>seiscentesimo</code> (op-	
<code>\@ordpt@printhousands</code>	<code>11-13-curtos</code>	tion)	<i>2, 3</i>
.	<code>11-13-longos</code>	<code>sexcentesimo</code> (option)	
<code>\@ordpt@printunits</code>	<code>nongentesimo</code>	<i>2, 3</i>
<code>\@ordpt@uppercase</code>	<code>nongentesimo</code>		
<code>11-12-curtos</code> (option)	<code>nongentesimo</code>	T	
.	<code>seiscentesimo</code>	<code>trecentesimo</code> (option)	
<code>11-13-curtos</code> (option)	<code>seiscentesimo</code>	<i>2, 3</i>
.	<code>sexcentesimo</code>	<code>tricentesimo</code> (option)	
<code>11-13-longos</code> (option)	<code>sexcentesimo</code>	<i>2, 3</i>
.	<code>trecentesimo</code>		
<code>11-13-longos</code> (option)	<code>tricentesimo</code>	<code>\ORDPTFEM</code>	<i>1, 6</i>
.	<code>\ORDPTFEM</code>		