

# The soul package

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## Abstract

This version is a merge of the original package `soul` (version 2.5 which contains some small corrections compared to the version 2.4 from 2003) and the `soulutf8` which added some support for UTF-8. Namely the input encodings `utf8.def` from package `inputenc` and package `ucs`'s `utf8x.def` are supported. The original `soul` package has been renamed to `soul-ori` and is still loaded. Its documentation is still relevant.

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\*Please report any issues at <https://github.com/ho-tex/soul/issues>

# 1 Documentation

This package `soul` does not have own options and does not define new user commands. Any option is passed to package `soul-ori` [1] that is loaded first. Then some internal macros of `soul-ori` are redefined to add support for UTF-8. The following input encodings are supported:

```
utf8      LATEX base    TDS:tex/latex/base/utf8.def [3]
utf8x     Package ucs   TDS:tex/latex/ucs/utf8x.def [2]
```

UTF-8 byte sequences are added as token group to a word, even if these UTF-8 characters are some kind of hyphen or space. As exception the following three Unicode characters are handled specially:

Slot	Name	Action
U+00A0	NO-BREAK SPACE	like ~
U+2013	EN DASH	--
U+2014	EM DASH	---

## 1.1 Patch

Also package `soul` tries to patch package `soul-ori` to improve its behaviour:

- A problem with additional levels of curly braces is fixed. As advantage more implicate kernings are detected. However, the result may be incompatible with the original behaviour of package `soul-ori` because of these respected implicate kernings.
- $\varepsilon$ -T<sub>E</sub>X, especially `\unexpanded` is supported. This allows a better protection of token groups (`\mbox{...}`, `math`, ...).

## 1.2 Future

Currently package `soul-ori` does not seem to be maintained. Nevertheless if there will be a new version that adds support for UTF-8, then this package may become obsolete.

# 2 Implementation

```
1 <*soulutf8>
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{soulutf8}%
4 [2023-02-18 v3.0 Permit use of UTF-8 characters in soul (H0)]%
5 \PackageWarning{soulutf8}
6   {This package is obsolete,\MessageBreak
7     use the soul package directly. \MessageBreak
8   }{}%
9 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{soul}}%
10 \ProcessOptions\relax
11 \RequirePackage{soul}
12 </soulutf8>
13 <*package>
```

## 2.1 Reload check and package identification

Reload check, especially if the package is not used with L<sup>A</sup>T<sub>E</sub>X.

```
14 \begingroup\catcode61\catcode48\catcode32=10\relax%
15 \catcode13=5 % ^~M
16 \endlinechar=13 %
17 \catcode35=6 % #
```

```

18 \catcode39=12 % '
19 \catcode44=12 % ,
20 \catcode45=12 % -
21 \catcode46=12 % .
22 \catcode58=12 % :
23 \catcode64=11 % @
24 \catcode123=1 % {
25 \catcode125=2 % }
26 \expandafter\let\expandafter\x\csname ver@soul.sty\endcsname
27 \ifx\x\relax % plain-TeX, first loading
28 \else
29   \def\empty{}%
30   \ifx\x\empty % LaTeX, first loading,
31     % variable is initialized, but \ProvidesPackage not yet seen
32   \else
33     \expandafter\ifx\csname PackageInfo\endcsname\relax
34       \def\x#1#2{%
35         \immediate\write-1{Package #1 Info: #2.}%
36       }%
37     \else
38       \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
39     \fi
40     \x{soul}{The package is already loaded}%
41     \aftergroup\endinput
42   \fi
43 \fi
44 \endgroup%

```

Package identification:

```

45 \begingroup\catcode61\catcode48\catcode32=10\relax%
46 \catcode13=5 % ^^M
47 \endlinechar=13 %
48 \catcode35=6 % #
49 \catcode39=12 % '
50 \catcode40=12 % (
51 \catcode41=12 % )
52 \catcode44=12 % ,
53 \catcode45=12 % -
54 \catcode46=12 % .
55 \catcode47=12 % /
56 \catcode58=12 % :
57 \catcode64=11 % @
58 \catcode91=12 % [
59 \catcode93=12 % ]
60 \catcode123=1 % {
61 \catcode125=2 % }
62 \expandafter\ifx\csname ProvidesPackage\endcsname\relax
63   \def\x#1#2#3[#4]{\endgroup
64     \immediate\write-1{Package: #3 #4}%
65     \xdef#1{#4}%
66   }%
67 \else
68   \def\x#1#2[#3]{\endgroup
69     #2[#3]}%
70   \ifx#1\@undefined
71     \xdef#1{#3}%
72   \fi
73   \ifx#1\relax
74     \xdef#1{#3}%
75   \fi
76 }%
77 \fi
78 \expandafter\x\csname ver@soul.sty\endcsname

```

```

79 \ProvidesPackage{soul}%
80 [2023-02-18 v3.0 Permit use of UTF-8 characters in soul (HO)]%

```

## 2.2 Catcodes

```

81 \begingroup\catcode61\catcode48\catcode32=10\relax%
82 \catcode13=5 % ^^M
83 \endlinechar=13 %
84 \catcode123=1 % {
85 \catcode125=2 % }
86 \catcode64=11 % @
87 \def\x{\endgroup
88 \expandafter\edef\csname SOuL@AtEnd\endcsname{%
89 \endlinechar=\the\endlinechar\relax
90 \catcode13=\the\catcode13\relax
91 \catcode32=\the\catcode32\relax
92 \catcode35=\the\catcode35\relax
93 \catcode61=\the\catcode61\relax
94 \catcode64=\the\catcode64\relax
95 \catcode123=\the\catcode123\relax
96 \catcode125=\the\catcode125\relax
97 }%
98 }%
99 \x\catcode61\catcode48\catcode32=10\relax%
100 \catcode13=5 % ^^M
101 \endlinechar=13 %
102 \catcode35=6 % #
103 \catcode64=11 % @
104 \catcode123=1 % {
105 \catcode125=2 % }
106 \def\TMP@EnsureCode#1#2{%
107 \edef\SOuL@AtEnd{%
108 \SOuL@AtEnd
109 \catcode#1=\the\catcode#1\relax
110 }%
111 \catcode#1=#2\relax
112 }
113 \TMP@EnsureCode{10}{12}% ^^J
114 \TMP@EnsureCode{33}{12}% !
115 \TMP@EnsureCode{34}{12}% "
116 \TMP@EnsureCode{36}{3}% $
117 \TMP@EnsureCode{39}{12}% '
118 \TMP@EnsureCode{40}{12}% (
119 \TMP@EnsureCode{41}{12}% )
120 \TMP@EnsureCode{42}{12}% *
121 \TMP@EnsureCode{43}{12}% +
122 \TMP@EnsureCode{44}{12}% ,
123 \TMP@EnsureCode{45}{12}% -
124 \TMP@EnsureCode{46}{12}% .
125 \TMP@EnsureCode{47}{12}% /
126 \TMP@EnsureCode{58}{12}% :
127 \TMP@EnsureCode{60}{12}% <
128 \TMP@EnsureCode{62}{12}% >
129 \TMP@EnsureCode{91}{12}% [
130 \TMP@EnsureCode{93}{12}% ]
131 \TMP@EnsureCode{94}{7}% ^
132 \TMP@EnsureCode{96}{12}% `
133 \TMP@EnsureCode{126}\active % ~
134 \TMP@EnsureCode{128}{12}% ^^80
135 \TMP@EnsureCode{147}{12}% ^^93
136 \TMP@EnsureCode{148}{12}% ^^94
137 \TMP@EnsureCode{160}{12}% ^^a0

```

```

138 \TMP@EnsureCode{194}{12}% ^^c2
139 \TMP@EnsureCode{226}{12}% ^^e2
140 \edef\Soul@AtEnd{\Soul@AtEnd\noexpand\endinput}

```

## 2.3 Loading packages

Package soul-ori uses `\documentclass` to detect L<sup>A</sup>T<sub>E</sub>X.

```

141 \ifx\documentclass\@undefined

```

### 2.3.1 plain T<sub>E</sub>X

First we check, whether package soul-ori is already loaded.

```

142 \expandafter\ifx\csname SOUL@\endcsname\relax

```

In case of plain T<sub>E</sub>X package soul-ori defines some macros in a simple manner that will break the definitions of `miniltx.tex`, for example. Therefore these macros are first saved and restored afterwards.

```

143 \let\Soul@orgDeclareRobustCommand\DeclareRobustCommand
144 \let\Soul@orgnewcommand\newcommand
145 \let\Soul@orgDeclareOption\DeclareOption
146 \let\Soul@orgPackageError\PackageError
147 \def\Soul@restorelatexcmds{%
148   \let\DeclareRobustCommand\Soul@orgDeclareRobustCommand
149   \let\newcommand\Soul@orgnewcommand
150   \let\DeclareOption\Soul@orgDeclareOption
151   \let\PackageError\Soul@orgPackageError
152 }%
153 \input soul-ori.sty\relax
154 \Soul@restorelatexcmds
155 \fi

```

`\SOUL@error` Package soul-ori's use of `\PackageError` is replaced by `\@PackageError` of package `infwarerr`.

```

156 \input infwarerr.sty\relax
157 \let\Soul@orgSOUL@error\SOUL@error
158 \def\SOUL@error{%
159   \begingroup
160     \let\PackageError\@PackageError
161     \Soul@orgSOUL@error
162   \endgroup
163 }%
164 \input etexcmds.sty\relax

```

`\@onelevel@sanitize` Define L<sup>A</sup>T<sub>E</sub>X's `\@onelevel@sanitize` if not already available.

```

165 \expandafter\ifx\csname @onelevel@sanitize\endcsname\relax
166   \def\@onelevel@sanitize#1{%
167     \edef#1{%
168       \expandafter\strip@prefix\meaning#1%
169     }%
170   }%

```

`\strip@prefix`

```

171   \def\strip@prefix#1>{%}%
172 \fi
173 \else

```

### 2.3.2 L<sup>A</sup>T<sub>E</sub>X

```

174 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{soul-ori}}%
175 \ProcessOptions\relax
176 \RequirePackage{soul-ori}[2023-02-18]%
177 \RequirePackage{infwarerr}[2019/12/03]%
178 \RequirePackage{etexcmds}[2019/12/15]%
179 \fi

```

### 2.3.3 ε-T<sub>E</sub>X

In plain T<sub>E</sub>X command \+ is an *outer* macro. Therefore numbers are used to avoid problems.

```

180 \ifetex@unexpanded
181 \catcode33=14 % '!: comment
182 \catcode43=9 % '+: ignore
183 \else
184 \catcode33=9 % '!: ignore
185 \catcode43=14 % '+: comment
186 \fi

```

## 2.4 Macro for redefinitions

\SOuL@redefine

```

187 \def\SOuL@redefine#1{%
188 \begingroup
189 \def\SOuL@cmd{#1}%
190 \afterassignment\SOuL@cmdcheck
191 \def\SOuL@temp
192 }

```

\SOuL@cmdcheck

```

193 \def\SOuL@cmdcheck{%
194 \expandafter\ifx\SOuL@cmd\SOuL@temp
195 \else
196 \edef\SOuL@temp*{\expandafter\string\SOuL@cmd}%
197 \@PackageWarningNoLine{soul}{%
198 Command \SOuL@temp* has changed.\MessageBreak
199 Supported versions of package 'soul-ori': 2021/12/14.\MessageBreak
200 Depending on the unknown changes the redefinition\MessageBreak
201 of \SOuL@temp* may not behave correctly%
202 }%
203 \fi
204 \expandafter\endgroup
205 \expandafter\def\SOuL@cmd
206 }

```

## 2.5 Redefinition of \SOUL@eval

\SOUL@eval Macro \SOUL@eval is redefined to add detection of the first byte of a UTF-8 sequence. Because \SOUL@eval is overwritten, a warning is issued, if the contents of \SOUL@eval is not as expected.

```

207 \SOuL@redefine\SOUL@eval{%
First the expected definition.
208 \def\SOUL@n*##1{\SOUL@scan}%
209 \if\noexpand\SOUL@@\SOUL@spc
210 \else
211 \SOUL@ignorespacesfalse
212 \fi
213 \ifnum\SOUL@minus=\thr@@
214 \SOUL@flushminus
215 \else\ifnum\SOUL@comma=\tw@

```

```

216 \SOUL@flushcomma
217 \else\ifnum\SOUL@apo=\tw@
218 \SOUL@flushapo
219 \else\ifnum\SOUL@grave=\tw@
220 \SOUL@flushgrave
221 \fi\fi\fi\fi
222 \ifx\SOUL@@-\else\SOUL@flushminus\fi
223 \ifx\SOUL@@,\else\SOUL@flushcomma\fi
224 \ifx\SOUL@@'\else\SOUL@flushapo\fi
225 \ifx\SOUL@@'\else\SOUL@flushgrave\fi
226 \ifx\SOUL@@-%
227 \advance\SOUL@minus\@ne
228 \else\ifx\SOUL@@,%
229 \advance\SOUL@comma\@ne
230 \else\ifx\SOUL@@'%
231 \advance\SOUL@apo\@ne
232 \else\ifx\SOUL@@'%
233 \advance\SOUL@grave\@ne
234 \else
235 \SOUL@flushminus
236 \SOUL@flushcomma
237 \SOUL@flushapo
238 \SOUL@flushgrave
239 \ifx\SOUL@@\SOUL@stop
240 \def\SOUL@n*{%
241 \SOUL@doword
242 \SOUL@eventuallyexhyphen\null
243 }%
244 \else\ifx\SOUL@@\par
245 \def\SOUL@n*\par{\par\leavevmode\SOUL@scan}%
246 \else\if\noexpand\SOUL@@\SOUL@spc
247 \SOUL@doword
248 \SOUL@eventuallyexhyphen\null
249 \ifSOUL@ignorespaces
250 \else
251 \SOUL@everySPACE{}%
252 \fi
253 \def\SOUL@n* {\SOUL@scan}%
254 \else\ifx\SOUL@@\%
255 \SOUL@doword
256 \SOUL@eventuallyexhyphen\null
257 \SOUL@everySPACE{\unskip\nobreak\hfil\break}%
258 \SOUL@ignoreSPACEtrue
259 \else\ifx\SOUL@@~%
260 \SOUL@doword
261 \SOUL@eventuallyexhyphen\null
262 \SOUL@everySPACE{\nobreak}%
263 \else\ifx\SOUL@@\slash
264 \SOUL@doword
265 \SOUL@eventuallyexhyphen{/}%
266 \SOUL@exhyphen{/}%
267 \else\ifx\SOUL@@\mbox
268 \def\SOUL@n*{\SOUL@addprotect}%
269 \else\ifx\SOUL@@\hbox
270 \def\SOUL@n*{\SOUL@addprotect}%
271 \else\ifx\SOUL@@\soulomit
272 \def\SOUL@n*\soulomit##1{%
273 \SOUL@doword
274 {\spaceskip\SOUL@spaceskip##1}%
275 \SOUL@scan
276 }%
277 \else\ifx\SOUL@@\break

```

[illegible]

```

293 \def\SOUL@n##1{\SOUL@scan}%
294 \if\noexpand\SOUL@@\SOUL@spc
295 \else
296   \SOUL@ignorespacesfalse
297 \fi
298 \ifnum\SOUL@minus=\thr@@
299   \SOUL@flushminus
300 \else\ifnum\SOUL@comma=\tw@
301   \SOUL@flushcomma
302 \else\ifnum\SOUL@apo=\tw@
303   \SOUL@flushapo
304 \else\ifnum\SOUL@grave=\tw@
305   \SOUL@flushgrave
306 \fi\fi\fi\fi
307 \ifx\SOUL@@-\else\SOUL@flushminus\fi
308 \ifx\SOUL@,\else\SOUL@flushcomma\fi
309 \ifx\SOUL@'\else\SOUL@flushapo\fi
310 \ifx\SOUL@'\else\SOUL@flushgrave\fi
311 \ifx\SOUL@@-%
312   \advance\SOUL@minus\@ne
313 \else\ifx\SOUL@,%
314   \advance\SOUL@comma\@ne
315 \else\ifx\SOUL@'\%
316   \advance\SOUL@apo\@ne
317 \else\ifx\SOUL@'\%
318   \advance\SOUL@grave\@ne
319 \else
320   \SOUL@flushminus
321   \SOUL@flushcomma
322   \SOUL@flushapo
323   \SOUL@flushgrave
324   \ifx\SOUL@@\SOUL@stop
325     \def\SOUL@n*{%
326       \SOUL@doword
327       \SOUL@eventuallyexhyphen\null
328     }%
329   \else\ifx\SOUL@@\par
330     \def\SOUL@n*\par{\par\leavevmode\SOUL@scan}%
331   \else\if\noexpand\SOUL@@\SOUL@spc
332     \SOUL@doword
333     \SOUL@eventuallyexhyphen\null
334     \ifSOUL@ignorespaces
335       \else
336         \SOUL@everyspace{}%
337       \fi
338     \def\SOUL@n* {\SOUL@scan}%

```





```

395 \Soul@defsanitizedstring{UTFviii}{UTFviii@}
396 \Soul@defsanitizedstring{octets}{@octets}
397 \Soul@defsanitizedstring{two}{two}
398 \Soul@defsanitizedstring{three}{three}
399 \Soul@defsanitizedstring{four}{four}
400 \Soul@defsanitizedstring{macrocolon}{macro:}
401 \Soul@defsanitizedstring{csnameu}{csname u8-}
402 \Soul@defsanitizedstring{undeferr}{utf@viii@undeferr}
403 \def\Soul@stringendash{^^e2^^80^^93}
404 \def\Soul@stringemdash{^^e2^^80^^94}
405 \def\Soul@stringnobreakspace{^^c2^^a0}
406 \edef\Soul@charhash{\string #}
407 \edef\Soul@chartwo{\string 2}
408 \edef\Soul@charthree{\string 3}
409 \def\Soul@empty{}

```

## 2.6.2 Support for utf8.def

\Soul@analyzeutfviii

```

410 \begingroup
411   \edef\x{\endgroup
412     \def\noexpand\Soul@analyzeutfviii{%
413       \noexpand\expandafter\noexpand\Soul@checkutfviii
414       \noexpand\meaning\noexpand\Soul@@
415       \Soul@stringUTFviii\Soul@stringoctets
416       \noexpand@nil
417     }%
418     \def\noexpand\Soul@checkutfviii
419       ##1\Soul@stringUTFviii##2\Soul@stringoctets##3\noexpand@nil
420   }%
421   \x{%
422     \def\Soul@temp{#2}%
423     \chardef\Soul@octets=%
424       \ifx\Soul@temp\Soul@stringtwo
425         \tw@
426       \else\ifx\Soul@temp\Soul@stringthree
427         \thr@@
428       \else\ifx\Soul@temp\Soul@stringfour
429         4 %
430       \else
431         \z@
432       \fi\fi\fi
433   }

```

## 2.6.3 Support for utf8x.def

\Soul@analyzeutfviiix

```

434 \begingroup
435   \edef\x{\endgroup
436     \def\noexpand\Soul@analyzeutfviiix{%
437       \noexpand\expandafter\noexpand\Soul@checkutfviiix
438       \noexpand\meaning\noexpand\Soul@@
439       \Soul@stringmacrocolon\Soul@charhash1{}{}{}{}%
440       \Soul@stringcsnameu\Soul@stringundeferr
441       \noexpand@nil
442     }%

```

\Soul@checkutfviiix

```

443   \def\noexpand\Soul@checkutfviiix
444     ##1\Soul@stringmacrocolon\Soul@charhash1##2##3##4##5##6%
445     \Soul@stringcsnameu##7\Soul@stringundeferr##8\noexpand@nil
446   }%
447   \x{%

```

```

448 \def\Soul@temp{#7}%
449 \ifx\Soul@temp\Soul@empty
450   \chardef\Soul@octets=\z@
451 \else
452   \def\Soul@temp{#5}%
453   \ifx\Soul@temp\Soul@charthree
454     \chardef\Soul@octets=4 %
455   \else
456     \def\Soul@temp{#3}%
457     \ifx\Soul@temp\Soul@chartwo
458       \chardef\Soul@octets=\thr@@
459     \else
460       \chardef\Soul@octets=\tw@
461     \fi
462   \fi
463 \fi
464 }

```

## 2.7 Actions for UTF-8 sequences

\Soul@addtwooctets

```

465 \def\Soul@addtwooctets#1#2{%
466   \def\Soul@temp{#1#2}%
467   \@onelevel@sanitize\Soul@temp
468   \ifx\Soul@temp\Soul@stringnobreakspace
469     \Soul@doword
470     \Soul@eventuallyexhyphen\null
471     \Soul@everySPACE{\nobreak}%
472     \let\Soul@next\Soul@scan
473   \else
474     \def\Soul@next{%
475       \Soul@addtoken{\noexpand#1\noexpand#2}}%
476   + \Soul@addtoken{\etex@unexpanded{#1#2}}}%
477   }%
478   \fi
479   \Soul@next
480 }

```

\Soul@addthreooctets

```

481 \def\Soul@addthreooctets#1#2#3{%
482   \def\Soul@temp{#1#2#3}%
483   \@onelevel@sanitize\Soul@temp
484   \ifx\Soul@temp\Soul@stringendash
485     \Soul@doword
486     \Soul@eventuallyexhyphen{-}%
487     \Soul@exhyphen{--}%
488     \let\Soul@next\Soul@scan
489   \else
490     \ifx\Soul@temp\Soul@stringemdash
491       \Soul@doword
492       \Soul@eventuallyexhyphen{-}%
493       \Soul@exhyphen{---}%
494       \let\Soul@next\Soul@scan
495     \else
496       \def\Soul@next{%
497         \Soul@addtoken{\noexpand#1\noexpand#2\noexpand#3}}%
498   + \Soul@addtoken{\etex@unexpanded{#1#2#3}}}%
499     }%
500     \fi
501   \fi
502   \Soul@next
503 }

```

`\SOUL@addfouroctets`

```
504 \def\SOUL@addfouroctets#1#2#3#4{%
505 ! \SOUL@addtoken{\noexpand#1\noexpand#2\noexpand#3\noexpand#4}}%
506 + \SOUL@addtoken{\etex@unexpanded{#1#2#3#4}}}%
507 }
```

### 2.7.1 Redefinition of `\SOUL@splittoken`

`\SOUL@splittoken` Macro `\SOUL@splittoken` separates the first token or token group from a word and redefines the word to contain the remaining tokens. However if the remaining tokens are a token group, then the curly braces will be removed and the token group is splitted by the next call of `\SOUL@splittoken`. The redefinition avoids the removal of curly braces around the remaining tokens.

```
508 \SOUL@redefine\SOUL@splittoken#1#2\SOUL@stop{%
509   \global\SOUL@token={#1}%
510   \global\SOUL@word={#2}%
511 }#1{%
512   \global\SOUL@token={#1}%
513   \SOUL@remainingtoken\relax
514 }
```

`\SOUL@remainingtoken`

```
515 \long\def\@gobble#1{}
516 \def\SOUL@remainingtoken#1\SOUL@stop{%
517   \global\SOUL@word=\expandafter{\@gobble#1}%
518 }
```

## 2.8 Patches

The fixed `\SOUL@splittoken` allows to remove the double sets of curly braces in other macros of package `soul-ori`. The benefit is that implicate kernings are more often detected and fixes a bug in package `soul-ori`. The disadvantage is incompatibility. The width of the resulting strings may change.

`\SOUL@flushcomma`

```
519 \SOUL@redefine\SOUL@flushcomma{%
520   \ifcase\SOUL@comma
521     \or
522       \edef\x{\SOUL@word={\the\SOUL@word,}}\x
523     \or
524       \edef\x{\SOUL@word={\the\SOUL@word{,,}}}\x
525     \fi
526     \SOUL@comma\z@
527 }{%
528   \ifcase\SOUL@comma
529     \or
530       \edef\x{\SOUL@word={\the\SOUL@word,}}\x
531     \or
532       \edef\x{\SOUL@word={\the\SOUL@word{,,}}}\x
533     \fi
534     \SOUL@comma\z@
535 }
```

`\SOUL@flushapo`

```
536 \SOUL@redefine\SOUL@flushapo{%
537   \ifcase\SOUL@apo
538     \or
539       \edef\x{\SOUL@word={\the\SOUL@word'}}\x
540     \or
541       \edef\x{\SOUL@word={\the\SOUL@word{' '}}}\x
542     \fi
```

```

543 \SOUL@apo\z@
544 }{%
545 \ifcase\SOUL@apo
546 \or
547 \edef\x{\SOUL@word={\the\SOUL@word'}}\x
548 \or
549 \edef\x{\SOUL@word={\the\SOUL@word{' '}}}\x
550 \fi
551 \SOUL@apo\z@
552 }

```

\SOUL@flushgrave

```

553 \SOUL@redefine\SOUL@flushgrave{%
554 \ifcase\SOUL@grave
555 \or
556 \edef\x{\SOUL@word={\the\SOUL@word'}}\x
557 \or
558 \edef\x{\SOUL@word={\the\SOUL@word{{' '}}}}\x
559 \fi
560 \SOUL@grave\z@
561 }{%
562 \ifcase\SOUL@grave
563 \or
564 \edef\x{\SOUL@word={\the\SOUL@word'}}\x
565 \or
566 \edef\x{\SOUL@word={\the\SOUL@word{' '}}}\x
567 \fi
568 \SOUL@grave\z@
569 }

```

\SOUL@addgroup

```

570 \SOUL@redefine\SOUL@addgroup#1#2{%
571 {%
572 \let\protect\noexpand
573 \edef\x{%
574 \global\SOUL@word={%
575 \the\SOUL@word
576 {\noexpand#1#2}}%
577 }%
578 }%
579 \x
580 }%
581 \SOUL@scan
582 }#1#2{%
583 \begingroup
584 \let\protect\noexpand
585 \edef\x{\endgroup
586 \SOUL@word={%
587 \the\SOUL@word
588 {\noexpand#1#2}}%
589 + {\etex@unexpanded{#1#2}}}%
590 }%
591 }%
592 \x
593 \SOUL@scan
594 }

```

\SOUL@addmath

```

595 \SOUL@redefine\SOUL@addmath$#1${%
596 {%
597 \let\protect\noexpand
598 \edef\x{%

```

```

599     \global\SOUL@word={%
600         \the\SOUL@word
601         {\hbox{ $#1$ }}}%
602     }%
603 }%
604 \x
605 }%
606 \SOUL@scan
607 }$#1${%
608     \begingroup
609     \let\protect\noexpand
610     \edef\x{\endgroup
611         \SOUL@word={%
612             \the\SOUL@word
613             {\hbox{ $#1$ }}}%
614         + {\etex@unexpanded{\hbox{ $#1$ }}}%
615         }%
616     }%
617 \x
618 \SOUL@scan
619 }

```

\SOUL@addprotect

```

620 \SOUL@redefine\SOUL@addprotect#1#2{%
621     {%
622         \let\protect\noexpand
623         \edef\x{%
624             \global\SOUL@word={%
625                 \the\SOUL@word
626                 {\hbox{ #2 }}}%
627             }%
628         }%
629         \x
630     }%
631 \SOUL@scan
632 }#1#2{%
633     \begingroup
634     \let\protect\noexpand
635     \edef\x{\endgroup
636         \SOUL@word={%
637             \the\SOUL@word
638             {\hbox{ #2 }}}%
639         + {\etex@unexpanded{\hbox{ #2 }}}%
640         }%
641     }%
642 \x
643 \SOUL@scan
644 }

```

\SOUL@addtoken

```

645 + \SOUL@redefine\SOUL@addtoken#1{%
646 +     \edef\x{%
647 +         \SOUL@word={%
648 +             \the\SOUL@word
649 +             \noexpand#1%
650 +         }%
651 +     }%
652 +     \x
653 +     \SOUL@scan
654 + }#1{%
655 +     \edef\x{%
656 +         \SOUL@word={%
657 +             \the\SOUL@word

```

```

658 +      \etex@unexpanded{#1}%
659 +    }%
660 +  }%
661 +  \x
662 +  \SOUL@scan
663 + }%

664 \SOUL@AtEnd%
665 \end{package}

```

## 3 Installation

### 3.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

[CTAN:macros/latex/contrib/soul/soul.dtx](#) The source file.

[CTAN:macros/latex/contrib/soul/soul-ori.dtx](#) The source file.

[CTAN:macros/latex/contrib/soul/soul.pdf](#) Documentation.

### 3.2 Package installation

Install the package with the package manager of your TeXsystem. If you want to do it manually:

**Unpacking.** Run `tex` or `LATEX` on the `.ins` file

```
tex soul.ins
```

**TDS.** Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```

soul.sty      → tex/generic/soul/soul.sty
soul-ori.sty  → tex/generic/soul/soul-ori.sty
soulutf8.sty  → tex/latex/soul/soulutf8.sty
soul.pdf      → doc/generic/soul/soul.pdf
soul-ori.pdf  → doc/generic/soul/soul-ori.pdf
soul.dtx      → source/generic/soul/soul.dtx
soulori.dtx   → source/generic/soul/soul-ori.dtx

```

If you have a `docstrip.cfg` that configures and enables `docstrip`'s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

### 3.3 Refresh file name databases

If your TeX distribution (TeX Live, MiKTeX, ...) relies on file name databases, you must refresh these. For example, TeX Live users run `texhash` or `mktexlsr`.

## 4 References

- [1] Melchior Franz: *The soul package*; 2003/11/17;  
[CTAN:pkg/soul](#).
- [2] Dominique P. G. Unruh: *ucs.sty – Unicode Support*; 2004/10/17;  
[CTAN:pkg/unicode](#).

---

<sup>1</sup>[CTAN:pkg/soul](#)

- [3] Frank Mittelbach, Chris Rowley: *Providing some UTF-8 support via inputenc*;  
2006/03/30;  
[CTAN:macros/latex/base/utf8ienc.dtx](#).

## 5 History

[2007/09/09 v1.0]

- First version.

[2016/05/16 v1.1]

- Documentation updates.

[2019/12/15 v1.2]

- Documentation updates.

[2023-02-18 v3.0]

- merged soulutf8 and the original soul into one package.

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