

The **restapi** package

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1 Introduction

A package to describe a REST API for documentation.

2 Usage

GET Request with parameter

```
\begin{apiRoute}{get}/{/api/storage/{id}}{get specific
  storage with id}
  \begin{routeParameter}
    \routeParamItem{id}{id of storage}
  \end{routeParameter}
  \begin{routeResponse}{application/json}
    \begin{routeResponseItem}{200}{ok}
      \begin{routeResponseItemBody}
{
  "id": 867654678,
  "name" : "Apfelmus",
  "count" : 25
}
      \end{routeResponseItemBody}
    \end{routeResponseItem}
    \begin{routeResponseItem}{404}{error :
      storage not found}
      \begin{routeResponseItemBody}
{
  "message": "storage with id '11' not found!"
}
      \end{routeResponseItemBody}
    \end{routeResponseItem}
  \end{routeResponse}
\end{apiRoute}
```

GET Request without parameter

```
\begin{apiRoute}{get}{/api/storage/}{get a list of all
  storage's}
  \begin{routeParameter}
    \noRouteParamter{no parameter}
  \end{routeParameter}
  \begin{routeResponse}{application/json}
    \begin{routeResponseItem}{200}{ok}
      \begin{routeResponseItemBody}
[
  {
    "id": 867654678,
    "name" : "Apfelmus",
    "count" : 25
  },
  {
    "id": 342523,
    "name" : "Birnenmus",
    "count" : 1
  },
  ...
]
      \end{routeResponseItemBody}
    \end{routeResponseItem}
  \end{routeResponse}
\end{apiRoute}
```

GET Request without parameter and response

```
\begin{apiRoute}{get}{/api/storage/}{}
  \begin{routeParameter}
    \noRouteParamter{no parameter}
  \end{routeParameter}
  \begin{routeResponse}{application/json}
    \noRouteResponse{no response}
  \end{routeResponse}
\end{apiRoute}
```

POST Request

```
\begin{apiRoute}{post}{/api/storage/}{create a new storage}
  \begin{routeParameter}
    \noRouteParamter{no parameter}
  \end{routeParameter}
\end{apiRoute}
```

```

\begin{routeRequest}{application/json}
  \begin{routeRequestBody}
{
  "name" : "Apfelmus",
  "count" : 25
}
  \end{routeRequestBody}
\end{routeRequest}
\begin{routeResponse}{application/json}
  \begin{routeResponseItem}{200}{ok}
    \begin{routeResponseItemBody}
{
  "id": 867654678,
  "name" : "Apfelmus",
  "count" : 25
}
    \end{routeResponseItemBody}
  \end{routeResponseItem}
\end{routeResponse}
\end{apiRoute}

```

PUT Request

```

\begin{apiRoute}{put}{/api/storage/{id}}{change a
  existing storage with id}
  \begin{routeParameter}
    \routeParamItem{id}{id of storage}
  \end{routeParameter}
  \begin{routeRequest}{application/json}
    \begin{routeRequestBody}
{
  "id": 867654678,
  "name" : "Apfelmus",
  "count" : 255
}
    \end{routeRequestBody}
  \end{routeRequest}
  \begin{routeResponse}{application/json}
    \begin{routeResponseItem}{200}{ok}
      \begin{routeResponseItemBody}
{
  "id": 867654678,
  "name" : "Apfelmus",
  "count" : 255
}
    \end{routeResponseItemBody}
  \end{routeResponseItem}
\end{routeResponse}
\end{apiRoute}

```

```

\end{routeResponseItemBody}
\end{routeResponseItem}
\begin{routeResponseItem}{404}{error :
    storage not found}
\begin{routeResponseItemBody}
{
    "message": "storage with id '11' not found!"
}
\end{routeResponseItemBody}
\end{routeResponseItem}
\end{routeResponse}
\end{apiRoute}

```

DELETE Request

```

\begin{apiRoute}{delete}{/api/storage/{id}}{remove a
    storage with id}
\begin{routeParameter}
\routeParamItem{id}{id of storage}
\end{routeParameter}
\begin{routeResponse}{application/json}
\begin{routeResponseItem}{200}{ok}

\end{routeResponseItem}
\begin{routeResponseItem}{404}{error :
    storage not found}
\begin{routeResponseItemBody}
{
    "message": "storage with id '11' not found!"
}
\end{routeResponseItemBody}
\end{routeResponseItem}
\end{routeResponse}
\end{apiRoute}

```

2.1 Usercallable macros and environments

<code>\getGetColor</code>	Return the main color for routes with get method.
<code>\getGetBorderColor</code>	Return the border color for routes with get method.
<code>\getGetLightColor</code>	Return the background color for routes with get method.
<code>\getPostColor</code>	Return the main color for routes with post method.
<code>\getPostBorderColor</code>	Return the border color for routes with post method.
<code>\getPostLightColor</code>	Return the background color for routes with post method.
<code>\getPutColor</code>	Return the main color for routes with put method.
<code>\getPutBorderColor</code>	Return the border color for routes with put method.

<code>\getPutLightColor</code>	Return the background color for routes with put method.
<code>\getDeleteColor</code>	Return the main color for routes with delete method.
<code>\getDeleteBorderColor</code>	Return the border color for routes with delete method.
<code>\getDeleteLightColor</code>	Return the background color for routes with delete method.
<code>\noBreakRoute</code>	Set <code>\routeBreakValue</code> true.
<code>\breakRoute</code>	Set <code>\routeBreakValue</code> false.
<code>apiRoute</code>	Describe an endpoint with path, method and description. Contains other environments with further information.
<code>routeRequest</code>	Describe the content type of the request. Contains the request body.
<code>routeParameter</code>	Describe the path parameter. Contains a list of <code>\routeParamItem</code> commands. If no parameters exist you can use the command <code>\noRouteParamter</code> .
<code>\routeParamItem</code>	Describe a parameter with name and description.
<code>\noRouteParamter</code>	Show a text e.g. 'no parameter'.
<code>routeResponse</code>	Describe the content type of the response. Contains a list of <code>routeResponseItem</code> environments or the command <code>\noRouteResponse</code> .
<code>\noRouteResponse</code>	Show a text e.g. 'no response'.
<code>routeResponseItem</code>	Describe the the http status code with description. Contains the response body.

2.2 Helper macros

<code>\routeBreakValue</code>	Return true or false to enable/disable noBreak of a route.
<code>\methodColor</code>	Return the main color of the current route.
<code>\methodLightColor</code>	Return the background color of the current route.
<code>\methodBorderColor</code>	Return the border color of the current route.
<code>\methodJson</code>	Set the with lstset color scheme for the listings of the current route.

3 Implementation

this is my first package

(c) Dennis Klein

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```

1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{restapi}[2020/02/18 REST API package]
3 \RequirePackage[T1]{fontenc}
4 \RequirePackage{tabularx,colortbl}
5 \RequirePackage{transparent}
6 \RequirePackage{xcolor}
7 \RequirePackage{color}
8 \RequirePackage{xifthen, xstring}
9 \RequirePackage{tikz}
10 \RequirePackage[framemethod=tikz]{mdframed}
11 \RequirePackage{array}
12 \RequirePackage{verbatim}

```

```

13 \RequirePackage{listings}
14 \definecolor{getBlue}{HTML}{1391FF}
15 \definecolor{getBlueBorder}{HTML}{61affe}
16 \definecolor{getLightBlue}{HTML}{ECF6FF}

\getGetColor
17 \newcommand{\getGetColor}{getBlue}

\getGetBorderColor
18 \newcommand{\getGetBorderColor}{getBlueBorder}

\getGetLightColor
19 \newcommand{\getGetLightColor}{getLightBlue}

20 \definecolor{postGreen}{HTML}{009D77}
21 \definecolor{postGreenBorder}{HTML}{49CC97}
22 \definecolor{postLightGreen}{HTML}{EBF7F4}

\getPostColor
23 \newcommand{\getPostColor}{postGreen}

\getPostBorderColor
24 \newcommand{\getPostBorderColor}{postGreenBorder}

\getPostLightColor
25 \newcommand{\getPostLightColor}{postLightGreen}

26 \definecolor{putOrange}{HTML}{E97500}
27 \definecolor{putOrangeBorder}{HTML}{fca130}
28 \definecolor{putLightOrange}{HTML}{FEF4EB}

\getPutColor
29 \newcommand{\getPutColor}{putOrange}

\getPutBorderColor
30 \newcommand{\getPutBorderColor}{putOrangeBorder}

\getPutLightColor
31 \newcommand{\getPutLightColor}{putLightOrange}

32 \definecolor{deleteRed}{HTML}{CF3030}
33 \definecolor{deleteRedBorder}{HTML}{f93e3e}
34 \definecolor{deleteLightRed}{HTML}{FBEEEE}

\getDeleteColor
35 \newcommand{\getDeleteColor}{deleteRed}

\getDeleteBorderColor
36 \newcommand{\getDeleteBorderColor}{deleteRedBorder}

```

\getDeleteLightColor

```
37 \newcommand{\getDeleteLightColor}{deleteLightRed}

38 \colorlet{punct}{black}
39 \definecolor{background}{HTML}{EEEEEE}
40 \colorlet{delimGet}{\getGetColor}
41 \colorlet{numbGet}{\delimGet}
42 \colorlet{delimPost}{\getPostColor}
43 \colorlet{numbPost}{\delimPost}
44 \colorlet{delimPut}{\getPutColor}
45 \colorlet{numbPut}{\delimPut}
46 \colorlet{delimDelete}{\getDeleteColor}
47 \colorlet{numbDelete}{\delimDelete}
48 \lstdefinlanguage{jsonGet}{
49 basicstyle=\small\ttfamily\color{black},
50 numberstyle=\small\color{black},
51 keywordstyle=\color{black},
52 commentstyle=\color{black},
53 stringstyle=\color{black},
54 frame=L,
55 framesep=8pt,
56 framerule=2pt,
57 xleftmargin=50pt,
58 xrightmargin=0pt,
59 rulesep=0pt,
60 backgroundcolor=\color{white},
61 numbersep=8pt,
62 tabsize=4,
63 showstringspaces=false,
64 breaklines=true,
65 literate=
66 *{0}{{{\color{numbGet}0}}}{1}
67 {1}{{{\color{numbGet}1}}}{1}
68 {2}{{{\color{numbGet}2}}}{1}
69 {3}{{{\color{numbGet}3}}}{1}
70 {4}{{{\color{numbGet}4}}}{1}
71 {5}{{{\color{numbGet}5}}}{1}
72 {6}{{{\color{numbGet}6}}}{1}
73 {7}{{{\color{numbGet}7}}}{1}
74 {8}{{{\color{numbGet}8}}}{1}
75 {9}{{{\color{numbGet}9}}}{1}
76 {:}{{{\color{punct}{:}}}}{1}
77 {,}{{{\color{punct}{,}}}}{1}
78 {\}{{{\color{delimGet}{\}}}}{1}
79 {\}{{{\color{delimGet}{\}}}}{1}
80 {[}{{{\color{delimGet}{[}}}}{1}
81 {]}{{{\color{delimGet}{]}}}}{1},
82 }
83 \lstdefinlanguage{jsonPost}{
84 basicstyle=\small\ttfamily\color{black},
```

```

85 numberstyle=\small\color{black},
86 keywordstyle=\color{black},
87 commentstyle=\color{black},
88 stringstyle=\color{black},
89 frame=L,
90 framesep=8pt,
91 framerule=2pt,
92 xleftmargin=50pt,
93 xrightmargin=0pt,
94 rulesep=0pt,
95 backgroundcolor=\color{white},
96 numbersep=8pt,
97 tabsize=4,
98 showstringspaces=false,
99 breaklines=true,
100 literate=
101 *{0}{{{ \color{numbPost}0}}}{1}
102 {1}{{{ \color{numbPost}1}}}{1}
103 {2}{{{ \color{numbPost}2}}}{1}
104 {3}{{{ \color{numbPost}3}}}{1}
105 {4}{{{ \color{numbPost}4}}}{1}
106 {5}{{{ \color{numbPost}5}}}{1}
107 {6}{{{ \color{numbPost}6}}}{1}
108 {7}{{{ \color{numbPost}7}}}{1}
109 {8}{{{ \color{numbPost}8}}}{1}
110 {9}{{{ \color{numbPost}9}}}{1}
111 {:}{{{ \color{punct}{:}}}}{1}
112 {,}{{{ \color{punct}{,}}}}{1}
113 {\}{{{ \color{delimPost}{\}}}}{1}
114 {\}{{{ \color{delimPost}{\}}}}{1}
115 {[}{{{ \color{delimPost}{[}}}}{1}
116 {]}{{{ \color{delimPost}{]}}}}{1},
117 }
118 \lstdefinlanguage{jsonPut}{
119 basicstyle=\small\ttfamily\color{black},
120 numberstyle=\small\color{black},
121 keywordstyle=\color{black},
122 commentstyle=\color{black},
123 stringstyle=\color{black},
124 frame=L,
125 framesep=8pt,
126 framerule=2pt,
127 xleftmargin=50pt,
128 xrightmargin=0pt,
129 rulesep=0pt,
130 backgroundcolor=\color{white},
131 numbersep=8pt,
132 tabsize=4,
133 showstringspaces=false,
134 breaklines=true,

```



```

135 literate=
136 *{0}{{{ \color{numbPut}0}}}{1}
137 {1}{{{ \color{numbPut}1}}}{1}
138 {2}{{{ \color{numbPut}2}}}{1}
139 {3}{{{ \color{numbPut}3}}}{1}
140 {4}{{{ \color{numbPut}4}}}{1}
141 {5}{{{ \color{numbPut}5}}}{1}
142 {6}{{{ \color{numbPut}6}}}{1}
143 {7}{{{ \color{numbPut}7}}}{1}
144 {8}{{{ \color{numbPut}8}}}{1}
145 {9}{{{ \color{numbPut}9}}}{1}
146 {:}{{{ \color{punct}{:}}}}{1}
147 {,}{{{ \color{punct}{,}}}}{1}
148 {\}{{{ \color{delimPut}{\}}}}{1}
149 {\}{{{ \color{delimPut}{\}}}}{1}
150 {[}{{{ \color{delimPut}{[}}}}{1}
151 {]}{{{ \color{delimPut}{]}}}}{1},
152 }
153 \lstdefinlanguage{jsonDelete}{
154 basicstyle=\small\ttfamily\color{black},
155 numberstyle=\small\color{black},
156 keywordstyle=\color{black},
157 commentstyle=\color{black},
158 stringstyle=\color{black},
159 frame=L,
160 framesep=8pt,
161 framerule=2pt,
162 xleftmargin=50pt,
163 xrightmargin=0pt,
164 rulesep=0pt,
165 backgroundcolor=\color{white},
166 numbersep=8pt,
167 tabsize=4,
168 showstringspaces=false,
169 breaklines=true,
170 literate=
171 *{0}{{{ \color{numbDelete}0}}}{1}
172 {1}{{{ \color{numbDelete}1}}}{1}
173 {2}{{{ \color{numbDelete}2}}}{1}
174 {3}{{{ \color{numbDelete}3}}}{1}
175 {4}{{{ \color{numbDelete}4}}}{1}
176 {5}{{{ \color{numbDelete}5}}}{1}
177 {6}{{{ \color{numbDelete}6}}}{1}
178 {7}{{{ \color{numbDelete}7}}}{1}
179 {8}{{{ \color{numbDelete}8}}}{1}
180 {9}{{{ \color{numbDelete}9}}}{1}
181 {:}{{{ \color{punct}{:}}}}{1}
182 {,}{{{ \color{punct}{,}}}}{1}
183 {\}{{{ \color{delimDelete}{\}}}}{1}
184 {\}{{{ \color{delimDelete}{\}}}}{1}

```

```

185 {[[]]{\color{delimDelete}{[]}}}{1}
186 {[[]]{\color{delimDelete}{[]}}}{1},
187 }
188 \mdfdefinestyle{mystyle}{
189   linecolor=\methodBorderColor,
190   backgroundcolor=\methodLightColor,
191   skipabove=0pt,
192   linewidth=1.5pt,
193   skipbelow=0pt,
194   innertopmargin=0pt,
195   innerbottommargin=-3pt,
196   innerrightmargin=0pt,
197   innerleftmargin=0pt,
198   leftmargin=0pt,
199   rightmargin=0pt,
200   nobreak=true
201 }

\routeBreakValue
202 \newcommand{\routeBreakValue}{true}

\noBreakRoute
203 \newcommand{\noBreakRoute}

204 {
205   \renewcommand{\routeBreakValue}{true}
206 }

\breakRoute
207 \newcommand{\breakRoute}

208 {
209   \renewcommand{\routeBreakValue}{false}
210 }

\methodColor
211 \newcommand{\methodColor}{getBlue}

\methodLightColor
212 \newcommand{\methodLightColor}{getLightBlue}

\methodBorderColor
213 \newcommand{\methodBorderColor}{getBlueBorder}

\methodJson
214 \newcommand{\methodJson}

```

```

215 {
216 \lstset{language=jsonGet,rulecolor=\color{\methodColor}}
217 }
218 \begin{comment}
219 \newcommand{\apiCorner}{notround}
220
221 \newcommand{\apiCornerRound}
222 {
223 \renewcommand{\apiCorner}{round}
224 }
225
226 \newcommand{\apiCornerNotRound}
227 {
228 \renewcommand{\apiCorner}{notround}
229 }
230 \end{comment}

```

apiRoute

```

231 \newenvironment{apiRoute}[3]
232 {
233 \newcommand{\method}{#1}
234 \newcommand{\urlPath}{#2}
235 \newcommand{\routeDescription}{#3}
236
237 \ifthenelse{\equal{\method}{get}}
238 {
239 \renewcommand{\methodColor}{\getGetColor}
240 \renewcommand{\methodLightColor}{\getGetLightColor}
241 \renewcommand{\methodBorderColor}{\getGetBorderColor}
242 \renewcommand{\methodJson}
243 {
244 \colorlet{delimGet}{\methodColor}
245 \colorlet{numbGet}{delimGet}
246 \lstset{language=jsonGet,rulecolor=\color{\methodColor}}
247 }
248 }
249 {}
250
251 \ifthenelse{\equal{\method}{post}}
252 {
253 \renewcommand{\methodColor}{\getPostColor}
254 \renewcommand{\methodLightColor}{\getPostLightColor}
255 \renewcommand{\methodBorderColor}{\getPostBorderColor}
256 \renewcommand{\methodJson}
257 {
258 \colorlet{delimPost}{\methodColor}
259 \colorlet{numbPost}{delimPost}
260 \lstset{language=jsonPost,rulecolor=\color{\methodColor}}
261 }
262 }

```

```

263 {}
264
265 \ifthenelse{\equal{\method}{put}}{
266 {
267 \renewcommand{\methodColor}{\getPutColor}
268 \renewcommand{\methodLightColor}{\getPutLightColor}
269 \renewcommand{\methodBorderColor}{\getPutBorderColor}
270 \renewcommand{\methodJson}
271 {
272 \colorlet{delimPut}{\methodColor}
273 \colorlet{numbPut}{delimPut}
274 \lstset{language=jsonPut,rulecolor=\color{\methodColor}}
275 }
276 }
277 {}
278 \ifthenelse{\equal{\method}{delete}}{
279 {
280 \renewcommand{\methodColor}{\getDeleteColor}
281 \renewcommand{\methodLightColor}{\getDeleteLightColor}
282 \renewcommand{\methodBorderColor}{\getDeleteBorderColor}
283 \renewcommand{\methodJson}
284 {
285 \colorlet{delimDelete}{\methodColor}
286 \colorlet{numbDelete}{delimDelete}
287 \lstset{language=jsonDelete,rulecolor=\color{\methodColor}}
288 }
289 }
290 {}
291
292 \ifthenelse{\equal{\routeDescription}{}}{
293 {
294 \newcommand{\printDescription}{}
295 }
296 {
297 \newcommand{\printDescription}
298 {
299 \rowcolor{\methodLightColor}
300 & \textit{\routeDescription} \\
301 }
302
303 }
304
305
306 \begin{group}
307 \setlength{\parindent}{0em}
308 \begin{mdframed}[style=mystyle,nobreak=\routeBreakValue]
309 \begin{tabularx}{\textwidth}{p{1.6cm} X}
310 \rowcolor{\methodLightColor}
311
312 \cellcolor{\methodColor}

```

```

313 \centering
314 \textcolor{white}{\textbf{\textsc{\method}}}\
315 & \textbf{\urlPath} \\\
316
317 \printDescription
318
319 \rowcolor{\methodLightColor} & \\\
320 \end{tabularx}
321 }

322 {
323 \end{mdframed}
324 \endgroup
325 }

```

routeRequest

```

326 \newenvironment{routeRequest}[1]
327 {
328 \arrayrulecolor{\methodColor}
329
330 \begin{tabularx}{\textwidth}{X l}
331 \rowcolor{\methodLightColor!20}
332 \textbf{Body} & #1 \\\hline
333 \end{tabularx}
334 \vspace{1ex}
335 }

336 {
337 \bigskip
338 }
339 \lstnewenvironment{routeRequestBody}
340 {
341 \methodJson
342 }
343 {}

```

routeParameter

```

344 \newenvironment{routeParameter}
345 {
346 \newcommand{\routeParamItem}[2]
347 {
348 \rowcolor{\methodLightColor} ##1 & ##2 \\\
349 }
350 \newcommand{\noRouteParamter}[1]
351 {
352 \small{\textit{##1}}
353 }
354 %\vspace{-0.61em}
355
356 \arrayrulecolor{\methodColor}

```

```

357
358 \begin{tabularx}{\textwidth}{X}
359 \rowcolor{\methodLightColor!20}
360 \textbf{Parameter} \\\hline
361 \end{tabularx}
362
363 \tabularx{\textwidth}{1 X}
364 }

365 {
366 \endtabularx
367 }

routeResponse
368 \newenvironment{routeResponse}[1]
369 {
370 \newcommand{\noRouteResponse}[1]
371 {
372 \begin{tabularx}{\textwidth}{X}
373 \rowcolor{\methodLightColor}
374 \small{\textit{##1}} \\\
375 \end{tabularx}
376 }
377
378 \arrayrulecolor{\methodColor}
379 \begin{tabularx}{\textwidth}{X 1}
380 \rowcolor{\methodLightColor!20}
381 \textbf{Response} & #1 \\\hline
382 \end{tabularx}
383 }
384 {}

routeResponseItem
385 \newenvironment{routeResponseItem}[2]
386 {
387 \begin{tabularx}{\textwidth}{1 X}
388 \textbf{#1} & #2 \\\
389 \end{tabularx}
390 }

391 {
392 \medskip
393 }
394 \lstnewenvironment{routeResponseItemBody}
395 {
396 \vspace{-1.4em}
397 \methodJson
398 }
399 {}
400 \endinput

```

End of file 'restapi.sty'.