The rest-api package

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1 Introduction

A package to discribe 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}
                \noRouteParameter{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}
                \noRouteParameter{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}
                \noRouteParameter{no parameter}
        \end{routeParameter}
```

```
        \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}
                    \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

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

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

2.2 Helper macros

`\routeBreakValue`	Return true or false to enable/disable noBreak of a route.
`\methodColor`	Return the main color of the current route.
`\methodLightColor`	Return the background color of the current route.
`\methodBorderColor`	Return the border color of the current route.
`\methodJson`	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 \lstdefinelanguage{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 \lstdefinelanguage{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 \lstdefinelanguage{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 \lstdefinelanguage{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 \global\let\saved@CT@arc@\CT@arc@
234 \newcommand{\method}{#1}
235 \newcommand{\urlPath}{#2}
236 \newcommand{\routeDescription}{#3}
237
238 \ifthenelse{\equal{\method}{get}}
239 {
240 \renewcommand{\methodColor}{\getGetColor}
241 \renewcommand{\methodLightColor}{\getGetLightColor}
242 \renewcommand{\methodBorderColor}{\getGetBorderColor}
243 \renewcommand{\methodJson}
244 {
245 \colorlet{delimGet}{\methodColor}
246 \colorlet{numbGet}{delimGet}
247 \lstset{language=jsonGet,rulecolor=\color{\methodColor}}
248 }
249 }
250 {}
251
252 \ifthenelse{\equal{\method}{post}}
253 {
254 \renewcommand{\methodColor}{\getPostColor}
255 \renewcommand{\methodLightColor}{\getPostLightColor}
256 \renewcommand{\methodBorderColor}{\getPostBorderColor}
257 \renewcommand{\methodJson}
258 {
259 \colorlet{delimPost}{\methodColor}
260 \colorlet{numbPost}{delimPost}
261 \lstset{language=jsonPost,rulecolor=\color{\methodColor}}
262 }
```

11

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

```
313 \cellcolor{\methodColor}
314 \centering
315 \textcolor{white}{\textbf{\textsc{\method}}}
316 & \textbf{\urlPath} \\
317
318 \printDescription
319
320 \rowcolor{\methodLightColor} & \\
321 \end{tabularx}
322 }

323 {
324 \end{mdframed}
325 \endgroup
326 \global\let\CT@arc@\saved@CT@arc@
327 }
```

routeRequest

```
328 \newenvironment{routeRequest}[1]
329 {
330 \arrayrulecolor{\methodColor}
331
332 \begin{tabularx}{\textwidth}{X l}
333 \rowcolor{\methodLightColor!20}
334 \textbf{Body} & #1 \\ \hline
335 \end{tabularx}
336 \vspace{1ex}
337 }

338 {
339 \bigskip
340 }
341 \lstnewenvironment{routeRequestBody}
342 {
343 \methodJson
344 }
345 {}
```

routeParameter

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

```
357
358 \arrayrulecolor{\methodColor}
359
360 \begin{tabularx}{\textwidth}{X}
361 \rowcolor{\methodLightColor!20}
362 \textbf{Parameter} \\ \hline
363 \end{tabularx}
364
365 \tabularx{\textwidth}{l X}
366 }

367 {
368 \endtabularx
369 }
```

routeResponse

```
370 \newenvironment{routeResponse}[1]
371 {
372 \newcommand{\noRouteResponse}[1]
373 {
374 \begin{tabularx}{\textwidth}{X}
375 \rowcolor{\methodLightColor}
376 \small{\textit{##1}} \\
377 \end{tabularx}
378 }
379
380 \arrayrulecolor{\methodColor}
381 \begin{tabularx}{\textwidth}{X l}
382 \rowcolor{\methodLightColor!20}
383 \textbf{Response} & #1 \\ \hline
384 \end{tabularx}
385 }

386 {}
```

routeResponseItem

```
387 \newenvironment{routeResponseItem}[2]
388 {
389 \begin{tabularx}{\textwidth}{l X}
390 \textbf{#1} & #2 \\
391 \end{tabularx}
392 }

393 {
394 \medskip
395 }
396 \lstnewenvironment{routeResponseItemBody}
397 {
398 \vspace{-1.4em}
399 \methodJson
```

```
400 }
401 {}
402 \endinput
```

End of file 'rest-api.sty'.