A Search Extension for pgfkeys
Version 1.1

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Abstract

The command \pgfkeysvalueof, unlike other \pgfkeys commands, doesn't have a *.unknown* handler, or offers the option to search for a key. That's exactly the aim of this, by having a way to find a key in a given path (or collection of paths).

1 Searching for a key

\pgfkeysearchvalueof \pgfkeysearchvalueof {⟨path-list⟩} {⟨key⟩} {⟨macro⟩}
\pgfkeysearchvalueofTF \pgfkeysearchvalueofTF {⟨path-list⟩} {⟨key⟩} {⟨macro⟩} {⟨if-found⟩} {⟨if-not⟩}

⟨path-list⟩ is a comma separated list (clist) of paths (can be a single one). ⟨key⟩ is the desired key and ⟨macro⟩ is the macro/command that will receive (store) the key value (if one was found). For instance, given a path /A/B/C/D it will look first at /A/B/C/D/⟨key⟩, them /A/B/C/⟨key⟩, and so on, until /A/⟨key⟩, stopping at the first hit, returning the value found in the ⟨macro⟩. The branch version will also execute either ⟨if-found⟩ or ⟨if-not⟩.

> ***Note:*** Those commands aren't expandable, that's the reason to have them storing the key value in a macro and not just 'placing the value in the input stream'.

LaTeX Code:

```
\pgfkeys{/tikz/A/.cd,
 keyA/.initial={A keyA},
 keyB/.initial={A keyB},
 B/.cd,
 keyA/.initial={B keyA},
 keyC/.initial={B keyC},
 C/.cd,
 keyX/.initial={C keyX} }
\pgfkeysearchvalueof{/tikz/A/B/C}{keyA}{\VALkeyA}
\pgfkeysearchvalueof{/tikz/A/B/C}{keyB}{\VALkeyB}
\pgfkeysearchvalueof{/tikz/A/B/C}{keyC}{\VALkeyC}
\pgfkeysearchvalueof{/tikz/A/B/C}{keyX}{\VALkeyX}

I got for keyA: \textbf{\VALkeyA} \par
I got for keyB: \textbf{\VALkeyB} \par
I got for keyC: \textbf{\VALkeyC} \par
I got for keyX: \textbf{\VALkeyX} \par
```

LaTeX Result:

I got for keyA: **B keyA**
I got for keyB: **A keyB**
I got for keyC: **B keyC**
I got for keyX: **C keyX**

2 Expl3 Base Command

\pgfkeysearch_multipath_keysearch:nnnTF \pgfkeysearch_multipath_keysearch:nnnTF {⟨path-list⟩} {⟨key⟩} {⟨macro⟩} {⟨if-found⟩} {⟨if-not⟩}

That's the *Expl3* version of it (for package writers). In fact, the \pgfkeysearchvalueof is just a wrapper to this one.

*https://github.com/alceu-frigeri/pgfkeysearch