The pgfkeysearch Package
A Search Extension for pgfkeys
Version 1.3

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Abstract

The command `\pgfkeysvalueof`, unlike the `\pgfkeys` command, doesn't use the *`.unknown`* handler, and raises an error if the key isn't defined in a given path. Therefore, it doesn't offers the option to search for a key in other paths.

That's exactly the aim of this, to recursively search for the key in a collection (clist) of paths.

Contents

1 Searching for a key

`\pgfkeysearchvalueof`
`\pgfkeysearch`

update: 2024/01/11

`\pgfkeysearchvalueof` {⟨path-list⟩} {⟨key⟩} {⟨macro⟩}
`\pgfkeysearch` {⟨path-list⟩} {⟨key⟩} {⟨macro⟩}

⟨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 is 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 ⟨macro⟩.

Note: `\pgfkeysearch` and `\pgfkeysearchvalueof` are aliases to each other.
Note: These commands aren't expandable, that's the reason to store the key value in a macro and not just place the found value in the input stream.

Note: If ⟨key⟩ isn't found, ⟨macro⟩ won't be assigned any value.

`\pgfkeysearchvalueof`*TF*
`\pgfkeysearch`*TF*

update: 2024/01/11

`\pgfkeysearchvalueof`*TF* {⟨path-list⟩} {⟨key⟩} {⟨macro⟩} {⟨if-found⟩} {⟨if-not⟩}
`\pgfkeysearch`*TF* {⟨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). These branch versions will also execute either ⟨if-found⟩ or ⟨if-not⟩.

Note: `\pgfkeysearchvalueof`*TF* and `\pgfkeysearch`*TF* are aliases to each other.
Note: These commands aren't expandable, that's the reason to store the key value in a macro and not just place the found value in the input stream.

Note: If ⟨key⟩ isn't found, ⟨macro⟩ won't be assigned any value.

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

1.1 Example

Given the following pgfkeys:

```
\pgfkeys{%
   /tikz/A/.cd,
   keyA/.initial={keyA at /tikz/A},
   keyB/.initial={keyB at /tikz/A},
   %
   B/.cd,
   keyA/.initial={keyA at /tikz/A/B},
   keyC/.initial={keyC at /tikz/A/B},
   %
   C/.cd,
   keyX/.initial={keyX at /tikz/A/B/C}
 }
```

Key values can be retrieved as:

```
\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}
```

and finally used as:

```
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
```

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

2 Expl3 Base Commands

`\pgfkeysearch_keysearch:nnNTF`

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`\pgfkeysearch_keysearch:nnNTF {⟨single-path⟩} {⟨key⟩} {⟨macro⟩} {⟨if-found⟩} {⟨if-not⟩}`

⟨key⟩ is the desired key and ⟨macro⟩ is the macro/command that will receive (store) the key value, if one is found.

For instance, given a ⟨single-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 ⟨macro⟩.

This `\pgfkeysearch_keysearch:nnNTF` is slightly faster than the more generic multi-path version.

Note: If ⟨key⟩ isn't found, ⟨macro⟩ won't be assigned any value.
Note: The old signature `\pgfkeysearch_keysearch:nnnTF` is deprecated, it still "works" but will raise a warning.

`\pgfkeysearch_multipath_keysearch:nnNTF`

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

Given a comma separated ⟨path-list⟩, this will call `\pgfkeysearch_keysearch:nnNTF` for each path in ⟨path-list⟩.

Note: If ⟨key⟩ isn't found, ⟨macro⟩ won't be assigned any value.
Note: `\pgfkeysearchvalueof`, `\pgfkeysearch`, `\pgfkeysearchvalueofTF` and `\pgfkeysearchTF` are just wrappers to `\pgfkeysearch_multipath_keysearch:nnNTF`.
Note: The old signature `\pgfkeysearch_multipath_keysearch:nnnTF` is deprecated, it still "works" but will raise a warning.