

Quick Tip: The Secret Life of Spaces and Tabs in SAS Program Editors

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Quick Tip Overview

Default settings in the SAS® Enhanced Editor make you lose your purposeful indentations.

You don't know this is happening.



Actionable Insight: Have every team member change the Enhanced Editor **“Insert spaces for tabs”** setting to **ON!**

My nice program (SAS Enhanced Editor)

```
spaces_tabs_my_nice_program.sas

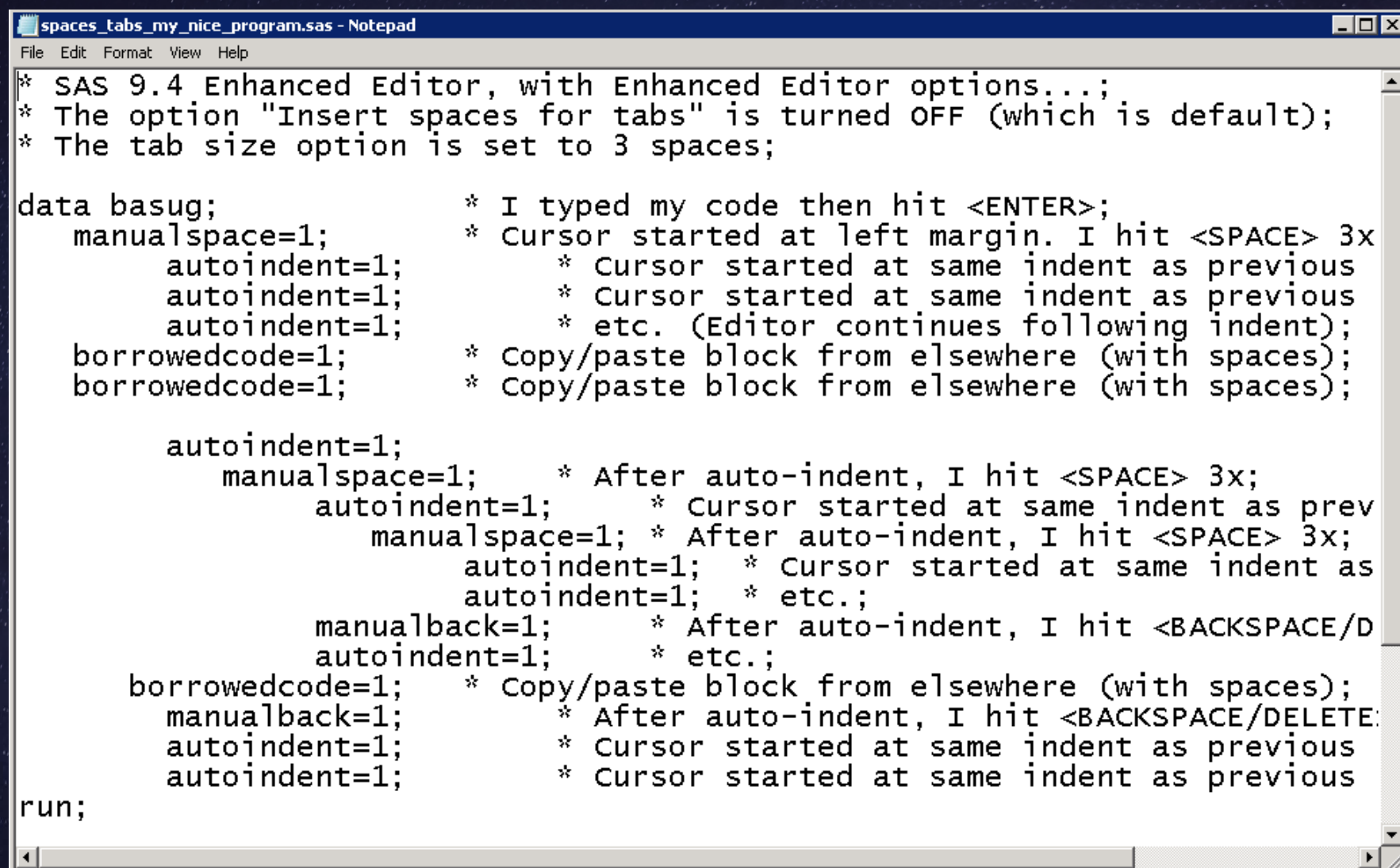
* SAS 9.4 Enhanced Editor, with Enhanced Editor options...;
* The option "Insert spaces for tabs" is turned OFF (which is default);
* The tab size option is set to 3 spaces;

data basug;
    manualsace=1;
    autoindent=1;
    autoindent=1;
    autoindent=1;
    borrowedcode=1;
    borrowedcode=1;

    autoindent=1;
        manualsace=1;
        autoindent=1;
            manualsace=1;
            autoindent=1;
            autoindent=1;
        manualback=1;
        autoindent=1;
        borrowedcode=1;
    manualback=1;
    autoindent=1;
    autoindent=1;

run;
```

My nice program (Notepad)



```
spaces_tabs_my_nice_program.sas - Notepad
File Edit Format View Help
* SAS 9.4 Enhanced Editor, with Enhanced Editor options...;
* The option "Insert spaces for tabs" is turned OFF (which is default);
* The tab size option is set to 3 spaces;

data basug;
    manualspace=1;
    autoindent=1;
    autoindent=1;
    autoindent=1;
    borrowedcode=1;
    borrowedcode=1;

    autoindent=1;
    manualspace=1;
    autoindent=1;
    manualspace=1;
    autoindent=1;
    autoindent=1;
    manualback=1;
    autoindent=1;
    borrowedcode=1;
    manualback=1;
    autoindent=1;
    autoindent=1;

run;
```

* I typed my code then hit <ENTER>;

* Cursor started at left margin. I hit <SPACE> 3x

* Cursor started at same indent as previous

* Cursor started at same indent as previous

* etc. (Editor continues following indent);

* Copy/paste block from elsewhere (with spaces);

* Copy/paste block from elsewhere (with spaces);

* After auto-indent, I hit <SPACE> 3x;

* Cursor started at same indent as prev

* After auto-indent, I hit <SPACE> 3x;

* Cursor started at same indent as

* etc.;

* After auto-indent, I hit <BACKSPACE/D

* etc.;

* Copy/paste block from elsewhere (with spaces);

* After auto-indent, I hit <BACKSPACE/DELETE

* Cursor started at same indent as previous

* Cursor started at same indent as previous

What happened?

- The indentation looks as intended
 - in the SAS Enhanced Editor when the programmer is writing the code,
 - in the same editor so long as the tab stop setting is maintained, and
 - in another editor if the tab stops happen to match what the programmer used to line up visually (2 spaces, 3 spaces, 4 spaces per tab, etc.).
- The indentation will look jagged and irregular
 - if you (or a team member) uses different tab stops in the SAS Enhanced Editor or
 - if you (or a team member) opens the file in any other text editor with different tab stops.

Why?

- The program indentation is created with a *mixture of tabs and spaces*.
- You can get a mixture of tabs and spaces *even if you never touch the tab key!*

My nice program (UltraEdit)

```

spaces_tabs_my_nice_program.sas x
0 10 20 30 40 50 60 70
1 * SAS 9.4 Enhanced Editor, with Enhanced Editor options...;
2 * The option "Insert spaces for tabs" is turned OFF (which is default);
3 * The tab size option is set to 3 spaces;
4
5 data basug; ..... * I typed my code then hit <ENTER>;
6 ...manualspace=1; ..... * I hit <SPACE> 3x;
7 » autoindent=1; ..... as previous line;
8 » ..... as previous line;
9 » autoindent=1; ..... ng indent);
10 ...borrowedcode=1; ..... re (with spaces);
11 ...borrowedcode=1; ..... * Copy/paste block from elsewhere (with spaces);
12
13 » autoindent=1;
14 » ...manualspace=1; ..... * After auto-indent, I hit <SPACE> 3x;
15 » » autoindent=1; ..... * Cursor started at same indent as previous line;
16 » » ...manualspace=1; * After auto-indent, I hit <SPACE> 3x;
17 » » » autoindent=1; * Cursor started at same indent as previous line;
18 » » » autoindent=1; * etc.;
19 » » manualback=1; ..... * After auto-indent, I hit <BACKSPACE/DELETE> 1x;
20 » » autoindent=1; ..... * etc.;
21 ..... borrowedcode=1; ..... * Copy/paste block from elsewhere (with spaces);
22 » manualback=1; ..... * After auto-indent, I hit <BACKSPACE/DELETE> 1x;
23 » autoindent=1; ..... * Cursor started at same indent as previous line;
24 » autoindent=1; ..... * Cursor started at same indent as previous line;
25 run;

```

But I never touched the <TAB> key!

My nice program (SAS Enhanced Editor)

On <ENTER>, the Enhanced Editor inserts <TAB> to match the indentation

```
data basug;
  manualspace=1;
  autoindent=1;
  autoindent=1;
  autoindent=1;
  borrowedcode=1;
  borrowedcode=1;

  autoindent=1;
    manualspace=1;
    autoindent=1;
      manualspace=1;
      autoindent=1;
      autoindent=1;
    manualback=1;
    autoindent=1;
    borrowedcode=1;
  manualback=1;
  autoindent=1;
  autoindent=1;

run;
```

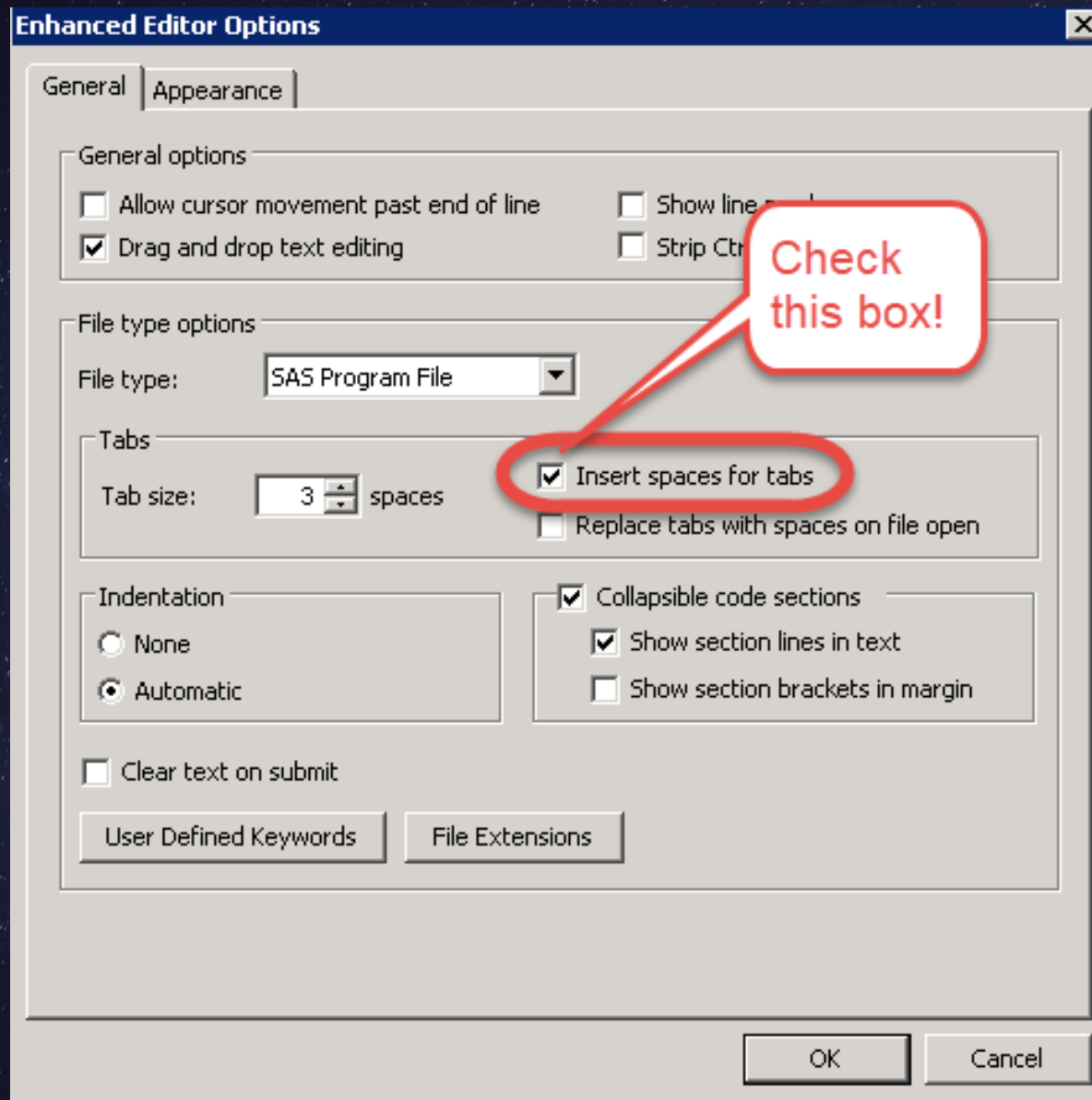
```
with Enhanced Editor options...;
"for tabs" is turned OFF (which is default);
to 3 spaces;

* I typed my code then hit <ENTER>;
* Cursor started at left margin. I hit <SPACE> 3x;
* Cursor started at same indent as previous line;
* Cursor started a
* etc. (Editor con
* Copy/paste block
* Copy/paste block

* After auto-indent, I hit <SPACE> 3x;
* Cursor started at same indent as previous line;
* After auto-indent, I hit <SPACE> 3x;
* Cursor started at same indent as previous line;
* etc.;
* After auto-indent, I hit <BACKSPACE/DELETE> 1x;
* etc.;
* Copy/paste block from elsewhere (with spaces);
* After auto-indent, I hit <BACKSPACE/DELETE> 1x;
* Cursor started at same indent as previous line;
* Cursor started at same indent as previous line;
```

The blue lines have an auto-inserted <TAB> plus three manually-typed spaces.

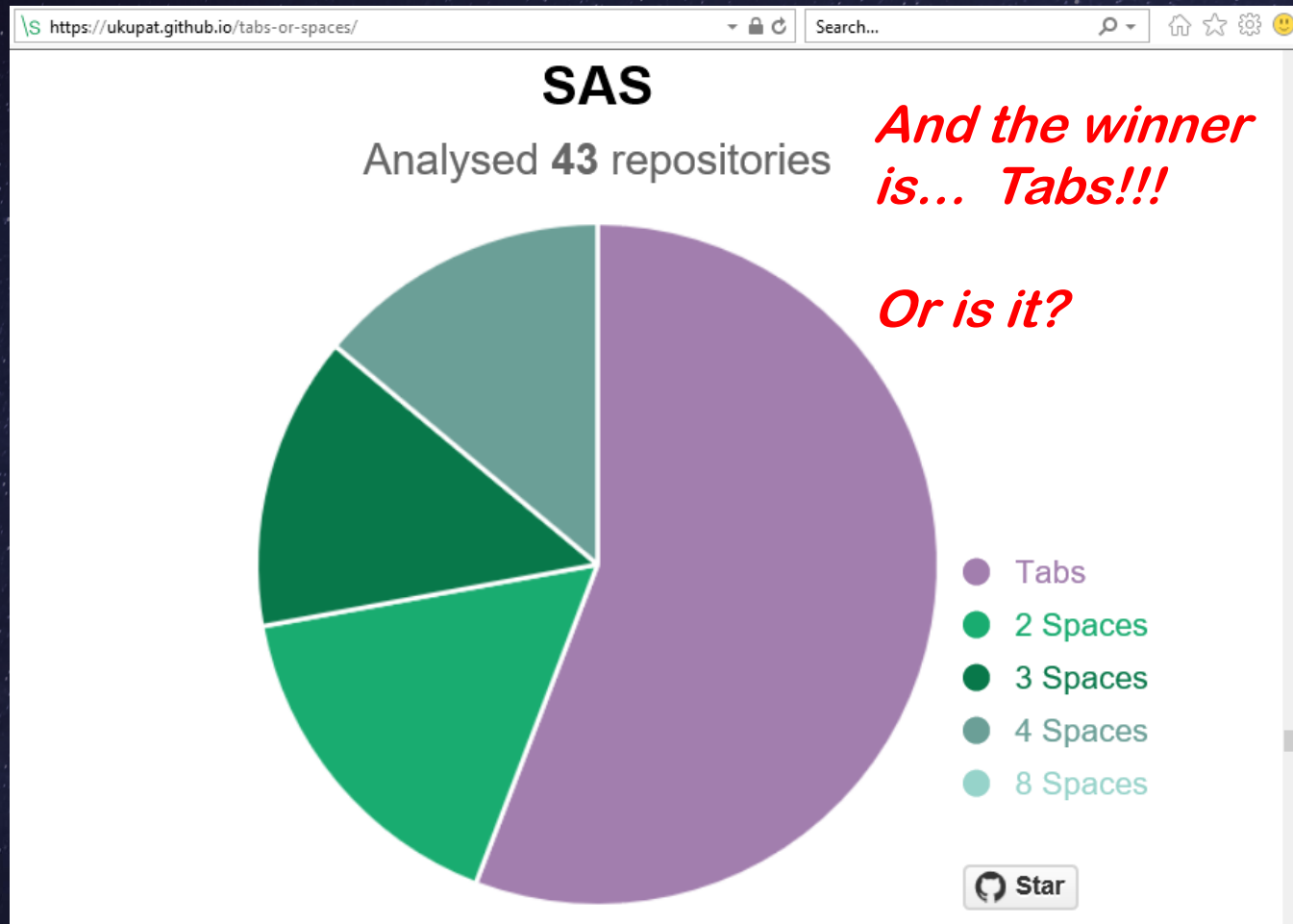
The solution



Or upgrade...

This tab-insertion “feature” of the SAS Enhanced Editor seems to be fixed in (at least) the most recent versions of SAS Studio and SAS Enterprise Guide.

Spaces vs. tabs on Github



Purposeful choice to *use (only) tabs*

or

mixed spaces and tabs due to the default editor behavior?

Thanks to BASUG's **Allan Bowe** for pointing me to this!

NOTES

Bowe, A. (2017, March 2) Tabs v Spaces – which is more popular in SAS? Retrieved June 20, 2019, from <https://www.rawsas.com/tabs-v-spaces/>

\t or \s – The Top Starred repositories in Github have been analysed to understand which are the most common whitespace types in different programming languages. Retrieved June 20, 2019, from <https://ukupat.github.io/tabs-or-spaces/>

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