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Beginner Question: Problem with scanf and strings. Help!

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Thread: **Beginner Question: Problem with scanf and strings. Help!**

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08-11-2009

#1

lucidrave ◊

Registered User

Join Date: Jul 2009

Posts: 28

Beginner Question: Problem with scanf and strings. Help!

First off how does scanf know that this: `%[^\n]` is supposed to be formatted for a String? Shouldn't %s need to be in there? According to the syntax it's not supposed to be.

Anyway, my real question is when I run this program (below) it lets me type in my first name, but then when I press Return it skips over letting me enter my last name and

shows this:

Code:

```
1 What is your FIRST name: Bryan
2 What is your LAST name: Your FULL name is Bryan and :
```

Code:

```
1 #include <stdio.h>
2 #include <string.h>
3
4 int main (int argc, const char * argv[]) {
5
6     char    firstname[31];
7     char    lastname[31];
8     char    fullname[63];
```

```

9
10     printf( "What is your FIRST name: " );
11     scanf( "%[^\\n]", firstname );      // accepts eve
12
13     printf( "What is your LAST name: " );
14     scanf( "%[^\\n]", lastname );      // accepts eve
15
16     strcpy( fullname, firstname );
17     strcat( fullname, " " );
18     strcat( fullname, lastname );
19
20     printf( "Your FULL name is %s and it is %d long."
21
22     return 0;
23 }

```

08-11-2009

#2

Dino

Jack of many languages



Join Date: Nov 2007
 Location: Katy, Texas
 Posts: 2,309

See this link for information about scanf(): [scanf \[C++ Reference\]](#)

In short, the characters between the brackets, `^\\n`, tells scanf() to suck in everything EXCEPT a newline character. The NEWLINE character is left in the input buffer.

When the next scanf() is issued, it reads everything up to the NEWLINE, which is nothing, and returns immediately.

If you use the bracket notation, you'll next an extra line of code to remove the NEWLINE from the input buffer.

Mac and Windows cross platform programmer. Ruby lover.

Quote of the Day

12/20: Mario F.: I never was, am not, and never will be, one to shut up in the face of something I think is fundamentally wrong.

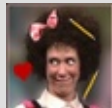
Amen brother!

08-11-2009

#3

MK27

spurious conceit



Join Date: Jul 2008
 Location: segmentation fault
 Posts: 8,300

```
scanf( "%[^\\n]", firstname ); // accepts everything until it sees a \\n
```

Yep. Now check your docs for this angle:

```
scanf( "%[^\\n]*%c", firstname );
```

Or, you could just use %s, and then, as Dino is trying to say, remove the '\\n' from your string if desired.

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08-11-2009

#4

lucidrave

Registered User

Join Date: Jul 2009

Posts: 28

? ok, i tried adding this (still doesn't work)

I figured using a fflush(stdin); would clear the buffer but it doesn't seem to make a difference... I'm clueless how to get this working as expected

Code:

```

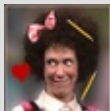
1  #include <stdio.h>
2  #include <string.h>
3
4  int main (int argc, const char * argv[]) {
5
6      char    firstname[31];
7      char    lastname[31];
8      char    fullname[63];
9
10     printf( "\nWhat is your FIRST name: " );
11     scanf( "%[^\\n]", firstname );
12     fflush(stdin); // this does
13
14     printf( "\nWhat is your LAST name: " );
15     scanf( "%[^\\n]", lastname );
16
17     strcpy( fullname, firstname );
18     strcat( fullname, " " );
19     strcat( fullname, lastname );
20
21     printf( "\nYour FULL name is %s and is %d character" );
22
23     return 0;
24 }
```

08-11-2009

#5

MK27

spurious conceit



Join Date: Jul 2008

Location: segmentation fault

Posts: 8,300

Originally Posted by lucidrave

I figured using a fflush(stdin); would clear the buffer

Never use fflush(stdin) -- it is not defined by the C standard:

*[#2] If stream points to an output stream or an update stream **in which the most recent operation was not input**, the fflush function causes any unwritten data for that stream to be delivered to the host environment to be written to the file; otherwise, **the behavior is undefined**.*

Read my previous post; the "*" flag means ignore. In the context of your scanf line, that %c will be the newline.

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08-11-2009

#6

lucidrave ◊

Registered User

Join Date: Jul 2009

Posts: 28

thanks

ohh ok... so it means ignore any characters after it sees the new line?

(in this code anyway)

08-11-2009

#7

MK27 ◊

spurious conceit



Join Date: Jul 2008

Location: segmentation fault

Posts: 8,300

Originally Posted by **lucidrave**

*ohh ok... so it means ignore any characters after it sees the new line?
(in this code anyway)*

No, it means ignore the newline, which is a single character ('\n'). So if you typed:

mk27\n

(the newline being because of the enter key), and you capture everything up to but not including the newline with %[^\n], '\n' is left in the buffer. %*c captures one more character and throws it away; because of the context, in this case that character would have to be the newline (get it?).

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08-11-2009

#8

lucidrave ◊

Registered User

Join Date: Jul 2009

Posts: 28

I guess what's confusing me is I thought %[^\n] was to ignore the new line, but then %*c also ignores the new line. isn't that redundant?

if %[^\n] doesn't work by itself should I not use it?

Also is the * part of %*c acting as a "wildcard"? It's a bit confusing know what purpose it serves since it could be multiply (which wouldn't make any sense in this case) or referencing a pointer.

Originally Posted by **MK27**

No, it means ignore the newline, which is a single character ('\n'). So if you typed:

mk27\n

*(the newline being because of the enter key), and you capture everything up to but not including the newline with %[^\n], '\n' is left in the buffer. %*c captures one more character and throws it away; because of the context, in this case that character would have to be the newline (get it?).*

08-11-2009

#9

tabstop

and the Hat of Guessing



Join Date: Nov 2007

Posts: 14,185

Originally Posted by **lucidrave**

*I guess what's confusing me is I thought %[^\n] was to ignore the new line, but then %*c also ignores the new line. isn't that redundant?*

As mentioned, %[^\n] means "get everything that isn't a newline". If you do that, well, the newline is still there since you got everything that wasn't a newline. You need to now do something with that newline, instead of what you seem to be doing which is "ignore it and hope that it goes away".

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