cin.getline sets the begin of a string a '\0'

I run this piece of code on Visual C++ 2010

```
char c[10];
cin.get(&c[0],5);
cin.get(&c[2],4);
cout << c << endl;
```

and if I feed "123456789" to `cin` , the `cout` clause will print "12567", which is the result I expected.

But if I write:

```
char c[10];
cin.getline(&c[0],5);
cin.getline(&c[2],4);
cout<< c <<endl;
```

and feed the same string, it will only show me "12", where c=={'1','2','\0','4','\0'}

According to the documentation, the difference between cin.get and cin.getline is that cin.get does not discard the delim character as cin.getline does, so I don't know why this happens. Can anyone give me hints?

c++ iostream getline cin

asked Mar 20 '12 at 22:46

ziyuang
1,196 2 13 34

4 You must never ever use I/O functions without checking their return value. – Kerrek SB Mar 20 '12 at 22:49

1 What does the eofbit, badbit, etc. look like? – 01100110 Mar 20 '12 at 22:53

@user1200129 yes I checked the three bits and the "fail bit" is true but I don't know why. – ziyuang Mar 20 '12 at 23:17

You didn't think this worth mentioning? It means your results are completely meaningless, and that you already knew that. – Lightness Races in Orbit Mar 21 '12 at 0:02

@LightnessRacesinOrbit My negligence. – ziyuang Mar 21 '12 at 0:51

1 Answer

What is happening is that if `basic_iostream::getline()` reaches the limit of characters to be read (the `streamsize` argument minus 1), it stops reading then places a null character after the data it has read so far. It also sets the `failbit` on the stream.

So assuming that the stream has `"123456789"` ready to read, when you call `cin.get(&c[0],5)` the array will get `{'1','2','3','4','\0'}` placed into elements `0` through `4` . And the `failbit` is set on the stream.

Now when you call `cin.get(&c[2],4)` , the `failbit` is set on the stream, so nothing is read. The `getline()` call does nothing but place the terminating null into the array at index `2` (even if nothing is read from the stream, `getline()` will place the null character - even if the non--read is because of the `failbit`). So the array now looks like:

```
{'1','2','\0','4','\0'}
```

The documentation you link to mentions this:

> If the function stops reading because this size is reached, the failbit internal flag is set.

But `getline()` does a lot, so it's easy to miss that detail.

edited Mar 21 '12 at 0:02

Lightness Races in Orbit
180k 30 260 496

answered Mar 20 '12 at 22:55

Michael Burr
215k 28 310 538

Thank you @MichaelBurr I understand the logic now. The `streamsize` argument has the default meaning of the size of the buffer. Once it is reached, nothing should be read anymore and the programmer must first handle that situation. – ziyuang Mar 21 '12 at 0:50