

Re: question about random generator

Source: http://coding.derkeiler.com/Archive/C_CPP/comp.lang.c/2005-07/msg02675.html

- *From:* "Antonio" <anconor@xxxxxxxxx>
 - *Date:* 26 Jul 2005 12:25:05 -0700
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Robert Gamble wrote:

> Antonio wrote:

>> Robert Gamble wrote:

>>> Antonio wrote:

>>>> pete wrote:

>>>>> Does "pseudo-random" mean the same thing as "uniformly distributed" ?

>>>>>

>>>>> Completely OT, but anyway... No, pseudo-random means that it looks like

>>>>> it's random but it really isn't. There is no way to generate trully

>>>>> random numbers with a computer, everything you do is deterministic, but

>>>>> you can generate sequences that look like they're random but that

>>>>> aren't. Hence the term `_pseudo_`-random.

>>>>>

>>>> Yes, we know, you didn't say anything that wasn't completely obvious.

>>>> The C Standard specifies that `rand()` generates pseudo-random numbers,

>>>> the questions is whether a conforming implementation could generate a

>>>> series of normal distributed numbers via the `rand()` function or if the

>>>> term pseudo-random implies that the numbers must be generated with a

>>>> uniform distribution. I was wondering the same thing myself, I think

>>>> the intention is that the numbers be uniform but that may be debatable.

>>>>

>>>> It may be completely obvious to you, and to many people (including

>>>> myself), but it doesn't seem to be obvious to "pete", since he asked.

>>>> What I was trying to explain is that pseudo-random does not imply

>>>> anything about the distribution of the numbers. You may get

>>>> pseudo-random numbers that look like a uniform distribution, or

>>>> pseudo-random numbers that look like a poisson distribution, or a

>>>> gaussian distribution, or anything you want. In fact if you are able to

>>>> generate pseudo-random numbers with any distribution, you can operate

>>>> with them to obtain any other distribution you want.

>>>>

>>>> On the topic of wether the standard requires