
Subject: Quiz: What is wrong with this code?
Posted by [mirek](#) on Mon, 10 Jul 2006 21:16:57 GMT
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```
struct Rect_ {  
.....  
    Pt    CenterPoint() const          { return Pt((left + right) / 2, (top + bottom) / 2); }  
.....  
};
```

...should compute the central point of Rect...

(...fixed).

Mirek

Subject: Re: Quiz: What is wrong with this code?
Posted by [unodgs](#) on Tue, 11 Jul 2006 07:15:48 GMT
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luzr wrote on Mon, 10 July 2006 17:16

```
struct Rect_ {  
.....  
    Pt    CenterPoint() const          { return Pt((left + right) / 2, (top + bottom) / 2); }  
.....  
};
```

...should compute the central point of Rect...

(...fixed).

Mirek

Interesting.. looks fine to me..

Normaly computation of center point looks like:

$$\text{top} + (\text{bottom} - \text{top}) / 2$$

but it evaluates to:

$$\begin{aligned} \text{top} + \text{bottom} / 2 - \text{top} / 2 &= \\ \text{top} / 2 + \text{bottom} / 2 &= \\ (\text{top} + \text{bottom}) / 2 \end{aligned}$$

Is that bug related to const modifier??

Subject: Re: Quiz: What is wrong with this code?

Posted by [mirek](#) on Tue, 11 Jul 2006 15:25:44 GMT

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unodgs wrote on Tue, 11 July 2006 03:15luzr wrote on Mon, 10 July 2006 17:16

```
struct Rect_ {
```

```
.....
```

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$$\text{top} + \text{bottom} / 2 - \text{top} / 2 =$$
$$\text{top} / 2 + \text{bottom} / 2 =$$
$$(\text{top} + \text{bottom}) / 2$$

Is that bug related to const modifier??

No. The problem is when top and bottom are ints and top + bottom is negative - "evaluates" is no longer true....

Mirek

Subject: Re: Quiz: What is wrong with this code?

Posted by [unodgs](#) on Tue, 11 Jul 2006 21:36:22 GMT

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luzr wrote on Tue, 11 July 2006 11:25

No. The problem is when top and bottom are ints and top + bottom is negative - "evaluates" is no longer true....

Yes, negatives... they didn't come into my mind

Subject: Re: Quiz: What is wrong with this code?

Posted by [pap2k](#) on Wed, 11 Jul 2007 12:12:30 GMT

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Is it fix ?

the folowing sample produce wrong result on my fresh version :

Pointf center =

```
Rectf( Pointf(-1.0,82), Pointf(7,-92)).CenterPoint();
```

Subject: Re: Quiz: What is wrong with this code?

Posted by [pap2k](#) on Wed, 11 Jul 2007 12:22:26 GMT

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I'm stupid man ...

result produce is good ... that's my in mind calculation wich was false.

I'm sory to disturb you.
