
Subject: Tip: how to mix object gui with command line
Posted by [Karri Kaksonen](#) on Mon, 20 Dec 1999 08:00:00 GMT
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Hi,

I just thought of dropping a line about a discovery I made.
This may be old news for all old timers but as it was new for me I thought of sharing this idea.

When you build an application as an object like:
`o=obj_new('MyApplication')`

and you start up the graphical user interface with buttons etc.
`o->draw`

then I suddenly notice that there is something weird going on
and want to have a look at my data from the command line.

In a widget-program I would have to quit the program and start
debugging. But in an object program I can leave the program
running and just fetch the data.

The key is in coding in methods for accessing private stuff like:

```
function MyApplication::getdata
    return *self->data
end
```

then I can just click on the IDL> command line and write:
`a=o->getdata()`
and continue to work on it on the command line.

--

Merry X-mas,

Karri Kaksonen
Picker Nordstar

Subject: Re: Tip: how to mix object gui with command line
Posted by [Terry Smith](#) on Thu, 23 Dec 1999 08:00:00 GMT
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In article <MPG.12c81f5e6aecc9239899c7@news.frii.com>, davidf@dfanning.com
(David Fanning) wrote:

> Karri Kaksonen (karri.kaksonen@picker.fi) writes:
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>> and continue to work on it on the command line.
>
> I think you meant "RETURN, *self.data".
>
> But in any case, this is certainly possible to do. I would
> be just a bit careful with it, however, since it is quite easy
> to completely defeat the whole purpose of objects, which
> is to encapsulate the data and the methods that work on
> the data inside the object, out of the view of the rest
> of the world.
>
> For example, you can easily write a GetDataPointer method:
>
> FUNCTION JUNKER::GetDataPointer
> RETURN, self.data
> END
>
> Now the outside world can muck around with the data *inside*
> the object. Oh, dear! Keep in mind that just because something
> is *possible* doesn't mean it's always a good idea. :-)

>
> Cheers,
>
> David
>

I think that you've fallen victim to the seductive lure of hyper-encapsulation; the same lure which kept RSI from implementing public class data. In most OO languages, it is recognized that certain members of the class variable set should be available for public consumption. In good programs, these are usually flags, often simply Boolean, rather than complex data structures whose modification would more simply/reliably be handled by a special-purpose method... they are things which are pivotal to the external functioning of a class, and are not at risk of reworking.

The trivial "GetProperty" and "SetProperty" methods associated with most classes are an example of what we are forced to do to overcome this limitation. They often do nothing but return a single class variable:

```
pro foo::GetProperty, X=x
  if arg_present(x) then x=self.x
  return
end
```

So instead of saying simply obj.x (as if it were a structure), I have to say obj->GetProperty, X=x, which doesn't fit well into compound structures like:

```
res=obj1.X+obj2.Y+obj3.Z
```

Now, of course, enforcing encapsulation will prevent users from abusing public class variables, defeating the advantages they might have had otherwise, but shouldn't we be given the choice, at least from an efficiency point of view.

Just my two cents.

JD

Subject: Re: Tip: how to mix object gui with command line
Posted by [Mirko Vukovic](#) on Thu, 23 Dec 1999 08:00:00 GMT
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In article <MPG.12c81f5e6aecc9239899c7@news.frii.com>,
davidf@dfanning.com (David Fanning) wrote:
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>
> David

```

>

> --

I have an obj object that is inherited by pretty much any object that is not meant to be inherited. This object has the Debug method that consists of a single ``stop" statement. Calling it stops the execution with self ready to be examined.

Mirko

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