
Subject: Re: Q:assigning arrays in steps
Posted by [korpela](#) on Mon, 08 May 1995 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

-----BEGIN PGP SIGNED MESSAGE-----

In article <3oikmj\$mru@harbinger.cc.monash.edu.au>,
Brett Hennig <breth@lovelace.maths.monash.edu.au> wrote:

> In Fortran90 you can assign arrays like:
> x(0:10)=y(0:40:4)
> where the last 4 is a step increment.
>
> Can this sort of stuff be done with idl?

You could do it this way.....

```
x(0:10)=y(indgen(11)*4)
```

A more generic way would be to write a function that returns a range

```
x(0:10)=y(range(0,40,4))
```

in fact, here's one now....

```
- -----  
Function range,lo,hi,delta
```

```
if (n_params(0) lt 2) or (n_params(0) gt 3) then begin  
  print,'RANGE-- Incorrect number of parameters'  
  return,-9999.0  
endif  
if (n_params(0) eq 2) then delta=1.0  
number=long((float(hi)-float(lo))/float(delta))+1  
outrange=float(lo)+findgen(number)*float(delta)  
return,outrange  
end  
- -----
```

-----BEGIN PGP SIGNATURE-----

Version: 2.6

```
iQCVAwUBL65zkOBZ/OT/DJLdAQHwtQP/RiHqWcmZVhz20xiNdi82Y80KZyww PhNP  
Vg9Nj3Vqv9sBSS+oL5xdOaESLsgkgnhldIBEGIkC5q5eTuSXz7ZaRWRLngL4 +q6n  
dILsQJ+Aj63QtA8MXT/XFfjoQ4HzxuMP/1rD7S50q57tjdfL3538s3/A8Sa4 c591  
S/0UE6nOcGY=  
=9iTd
```

-----END PGP SIGNATURE-----

--

Eric Korpela | A day without meetings is like
korpela@ssl.berkeley.edu | work.
Click here for more info.

Subject: Re: Q:assigning arrays in steps
Posted by [peter](#) on Mon, 08 May 1995 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Brett Hennig (bretth@lovelace.maths.monash.edu.au) wrote:

: I've been using idl for one whole week now,
: so excuse me if this question is stupid.
: In Fortran90 you can assign arrays like:
: x(0:10)=y(0:40:4)
: where the last 4 is a step increment.

: Can this sort of stuff be done with idl?

x(0:10) = y(4*indgen(11))

More generally, arrays can be addressed using another array, which will extract specified elements. Very powerful!

Peter

Subject: Re: Q:assigning arrays in steps
Posted by [Fergus Gallagher](#) on Wed, 10 May 1995 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Brett Hennig <bretth@lovelace.maths.monash.edu.au> wrote:

> I've been using idl for one whole week now,
> so excuse me if this question is stupid.
> In Fortran90 you can assign arrays like:
> x(0:10)=y(0:40:4)
> where the last 4 is a step increment.
>
> Can this sort of stuff be done with idl?
>

G'day,

Easily (not as elegant as F90, but more flexible).

You can index any elements of an array with another array. In your case:

```
IDL> x(0:10) = y(indgen(11)*4)
```

In 2D, this must be a two stage process, since, for example

```
x(0:10,0:10) <> x(indgen(11),indgen(11))
```

The latter is the vector

```
[x(0,0), x(1,1), x(2,2),....x(10,10)]
```

so you would have to write the assignment as:

```
IDL> tmp = y(indgen(11)*4,*) ; 11xN  
IDL> x(0:10,0:10) = tmp(*,indgen(11)*4); 11x11
```

An additional point: you can insert an array into another (larger) array just by specifying the offset, without the range. For example, the last assignment above could have been written as;

```
IDL> x(0,0) = tmp(....)
```

which obviously generalises to arbitrary offsets.

Fergus

```
=====
| Fergus Gallagher           |
| Remote Sensing Applications Development Unit |
| British National Space Centre           |
| Monks Wood                         |
| Huntingdon PE17 2LS / UK           |
|                                     |
| F.Gallagher@nerc.ac.uk           |
| http://uh.nmt.ac.uk/bnsc/fgg.html     |
=====
```