Subject: Looping through structures
Posted by wdolan on Tue, 01 Mar 2016 17:53:17 GMT

View Forum Message <> Reply to Message

So I am analyzing a years worth of data, which I got in the form of structures for each month.

For example

StrucJan has arrays (is tags the correct word?) called, lon, lat, gas_conc (we are measuring gas concentration). And StrucFeb also has the tags lon, lat, and gas_conc. Each month is in the same format.

I've got a bunch of code that does calculations with the January data. But I'm not sure how to loop over it so it does all the same calculations with the February data, and then the march, april, may etc. data (all of which are in the same format with the exact same tags).

Hopefully this makes sense!

Any ideas?

Subject: Re: Looping through structures
Posted by Paul Van Delst[1] on Tue, 01 Mar 2016 18:16:45 GMT

View Forum Message <> Reply to Message

Hello,

On 03/01/16 12:53, Wayana Dolan wrote:
> So I am analyzing a years worth of data, which I got in the form of
> structures for each month.
>
> For example
>
> StrucJan has arrays (is tags the correct word?) called, lon, lat,
> gas_conc (we are measuring gas concentration). And StrucFeb also has
> the tags lon, lat, and gas_conc. Each month is in the same format.
>
> I've got a bunch of code that does calculations with the January
> data. But I'm not sure how to loop over it so it does all the same
> calculations with the February data, and then the march, april, may
> etc. data (all of which are in the same format with the exact same
> tags).
>
> Hopefully this makes sense!

Some methods are below...(not sure anonymous structures are required or not)

IDL> structjan={lat:1.0, lon:2.0, gas_conc:380.0}

```
IDL> structfeb={lat:3.0, lon:4.0, gas_conc:394.0}
IDL> structmar={lat:5.0, lon:6.0, gas_conc:403.0}
```

```
* Array
IDL> structyear = [structjan, structfeb, structmar]

IDL> help, structyear
STRUCTYEAR    STRUCT    = -> <Anonymous> Array[3]

IDL> help, structyear[2].gas_conc
<Expression>   FLOAT    =     403.000
```

```
* Hash
IDL> structyear=hash()
IDL> structyear['jan']=structjan
IDL> structyear['feb']=structfeb
IDL> structyear['mar']=structmar

IDL> help, structyear['mar'].gas_conc
<Expression>   FLOAT    =     403.000
```

```
* List
IDL> structyear=list()
IDL> structyear.add, structjan
IDL> structyear.add, structfeb
IDL> structyear.add, structmar

IDL> help, structyear[2].gas_conc
<Expression>   FLOAT    =     403.000
```

The usefulness of these to you depends mostly (I think) on how your
processing code cycles through the months. E.g. array and year assume
jan-dec is 0-11. Hash assumes a key (doesn't have to be a month string,
can be an integer number too.)

cheers,

paulv