Subject: How to manipulate vectors by the index
Posted by Edson Filho on Wed, 23 Nov 2016 21:35:27 GMT
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Hey guys, I'm a beginner here in Idl and at the moment, I have to create a program and I'm trying to organize the vectors by the index. I mean, the way I was doing it before, I was overlapping the values, so I want to change it. Here is the problem:

The program is about astrophysics and I got describe the behavior of some stars using monte carlo simulation. Here is the way I Declare my vector. The first collumn reffers to time, and the other one is the number of stars.

```
VarM2=fltarr((nt+nt2),E02)
  VarM3=fltarr((nt+nt2),E03)
  VarM4=fltarr((nt+nt2),E04)
  VarM5=fltarr((nt+nt2),E05)
  VarM8=fltarr((nt+nt2),E08)
  VarM10=fltarr((nt+nt2),E10)
```

But now I want them to look like following a sequence, instead going from 0 to E02 (A number of stars), goes form 0 to X (All number of stars) so I tried this :

```
 For B=0,((nt+nt2)-1)do begin
  For I=0,E02-1 do VarM2[B,I]=[B,0]
  For I=E02,(E02+E03-1)do VarM3[B,I]=[B,0]
  For I=E02+E03,(E02+E03+E04-1) do VarM4[B,I]=[B,0]
  For I=E02+E03+E04,(E02+E03+E04+E05-1)do VarM5[B,I]=[B,0]
  For I=E02+E03+E04+E05,(E02+E03+E04+E05+E08-1) do VarM8[B,I]=[B,0]
  For I=E02+E03+E04+E05+E08,(E02+E03+E04+E05+E08+E10-1) do VarM10[B,I]=[B,0]
  Endfor
```

The idea here is like:
Let's say E02 is 5, and E03 is 10, then VarM2 goes from 0 to 5, then VarM3 goes from 5 to 10

And then I got the error:

Attempt to subscript VARM3 with I is out of range.

Then I tried another way, kind of resuming everything in one vector

I declare this vetor with the size NP (Np here means the total number of stars) and (nt+nt2) reffers to time, just like above

```
VarM=fltarr((nt+nt2),Np)
VarM=[VarM2,VarM3,VarM4,VarM5,VarM8,VarM10]
```

Then Idl says :
Unable to concatenate variables because the dimensions do not agree: VARM3.

Does anyone know how to solve this? I would be glad if someone could help me!

Subject: Re: How to manipulate vectors by the index
Posted by Helder Marchetto on Thu, 24 Nov 2016 07:51:52 GMT
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On Wednesday, November 23, 2016 at 10:35:30 PM UTC+1, Edson Filho wrote:
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> For I=E02+E03,(E02+E03+E04-1) do VarM4[B,I]=[B,0]
> For I=E02+E03+E04,(E02+E03+E04+E05-1)do VarM5[B,I]=[B,0]
> For I=E02+E03+E04+E05,(E02+E03+E04+E05+E08-1) do VarM8[B,I]=[B,0]
> For I=E02+E03+E04+E05+E08,(E02+E03+E04+E05+E08+E10-1) do VarM10[B,I]=[B,0]
> Endfor
>
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> Let's say E02 is 5, and E03 is 10, then VarM2 goes from 0 to 5, then VarM3 goes from 5 to 10
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>
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> Does anyone know how to solve this? I would be glad if someone could help me!

Hi,
I think your second solution was pretty close:

> VarM=fltarr((nt+nt2),Np)
> VarM=[VarM2,VarM3,VarM4,VarM5,VarM8,VarM10]

Try this instead:

```
; this you can skip -> VarM=fltarr((nt+nt2),Np)
VarM=[[VarM2],[VarM3],[VarM4],[VarM5],[VarM8],[VarM10]]
```

It works for me:

```
IDL> nt = 2
IDL> nt2 = 3
IDL> e02 = 4
IDL> e03 = 5
IDL> e04 = 6
IDL> totalStars = e02+e03+e04
IDL> VarM2=fltarr((nt+nt2),E02)
IDL> VarM3=fltarr((nt+nt2),E03)
IDL> VarM4=fltarr((nt+nt2),E04)
IDL> print, 'total stars ', totalStars
IDL> print, 'total time ', nt+nt2
IDL> varM = [[VarM2],[VarM3],[VarM4]]
IDL> help, varM
total stars      15
total time       5
VARM             FLOAT     = Array[5, 15]
```

cheers,
Helder

Subject: Re: How to manipulate vectors by the index
Posted by Edson Filho on Fri, 25 Nov 2016 17:12:30 GMT
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It worked!

Thank you so much Helder! It really helped me a lot. Didn't even though to look into the brackets.