Subject: Looking for more ideas on code ...
Posted by jeyadev on Mon, 30 Sep 2002 20:26:50 GMT
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I have a question about how best (style and function, if possible!) to write code for a function that has limits that have to be treated in a special way. Consider the function

f(x) = sin(x)/x

as an example. Now, if x is always a scalar, then on just tests to see if it is zero, and then handle that special case using a if .. then .. else construct. But, what if x can also be scalar? I have the following code that works:

```
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function sinc, y


if(n_elements(y) eq 1) then begin                ; y is a scalar
  if(y eq 0.0) then profile = 1.0 else begin
    profile = sin(y)/y
  endelse
 endif else begin                              ; y is a vector
  zeros = where(y eq 0.0, ind)
  if(ind gt 0) then y(zeros) = 1.0e-10       ; set zeroes to a small quantity
  profile = sin(y)/y
endelse

profile = profile*profile/a0


return, profile

end

-----------------------------------------
```

I guess the one can always set

```
  profile(zeros) = 1.0
```

to handle the more general cases. But, the real question is there a better way than

```
  zeros = where(y eq 0.0, ind)
  if(ind gt 0) then y(zeros) = "special values"
```

```
   notzeros = where(y ne 0.0, ind)
   if(ind gt 0) then y(notzeros) = "general definition"
```

I do understand that one should not compare reals, etc., but I will clean up the numerics later.

thanks
sj

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