Final Project - Photometry

Some tips for developing the code for the final project.

Start small. Specifically, start with a small image with exactly one star in it. Here's how you can make such an image:

```
x = findgen(10) # replicate(1,10)
y = replicate(1,10) # findgen(10)
r = ( (x-4.5)^2 + (y-4.5)^2 )^0.5
g = exp(-r^2/(2.*2.^2))
```

The array `g` will then be a Gaussian centered at coordinates `x,y=[4.5,4.5]`. Use this image as the test image for centroiding (you should be able to get out 4.5, 4.5 as the centroid).

Also, make sure you can come up with a mask for this source. Experiment with different mask levels. e.g., try `g gt 0.5`, `g gt 0.1`, etc.

In order to show the mask, you can use the `image` tool:

```
fig = image(g)
fig.set_data,(g gt 0.1)
fig.max_value = 1
```

That last bit, `fig.max_value=1`, is to make sure the image shows up. Normally, if you make an image from an array of integers or bytes, it will make the max value 256, so if you display an image that's all 1's and 0's (which is what your mask is), it will look all black.