

Exercise: *Due by classtime Wednesday April 17*

Exercise 19.0: The star catalog File names:

```
yourName_testCatalog.pro  
yourName_StarCatalogEntry.pro  
yourName_StarCoordinateClass.pro  
yourName_Sexagesimal.pro
```

Don't just view this as a mindless typing exercise. Pay attention to the nature of the procedures and functions and make sure you understand how they will be used in program.

No Whuduzitdo's.

Turn in on github.

```
yourName_testCatalog.pro  
yourName_StarCatalogEntry.pro  
yourName_StarCoordinateClass.pro  
yourName_Sexagesimal.pro  
comall.pro
```

Graded Homework Converting N-body animation to object-oriented programming

Due by midnight Monday, April 22

Homework 17.1: Curve fitting of Wien's Law

Homework 19.1: Object-oriented N-body program

`yourName_3D_NbodyAnimation_OOP_HW19.1.pro`

`yourName_StarClass.pro`

Homework 19.2: Circles for stars

`yourName_draw_circle.pro`.

possibly `yourName_coordinateArray.pro`

EXTRA CREDIT: Each of the following possibilities for extra credit are independent. Do as many as you feel like you want to do. These should only involve changes to the `StarClass` file. They'll run with the same main procedure in `yourName_3D_NbodyAnimation_OOP_HW19.1.pro`.

Homework 19.3: (6 pts) Star color as function of mass

Homework 19.4: (6 pts) Star size based on depth (z-coordinate)

Homework 19.5: (10 pts) Merging stars that collide

Not a homework! (10 pts) Convert your `xinteranimate` animation code to be object-oriented, using the `plot` object. Make a `.avi` movie file.

Turn in on github

`yourName_3D_NbodyAnimation_OOP_HW19.1.pro`

`yourName_StarClass.pro`

`yourName_draw_circle.pro`

`yourName_StarClass_circles.pro`

If you call your `coordinateArray` function in your `draw_circles` procedure, then turn in that file as well so that when I go to compile your files I have everything I need.