1. Create a procedure called PLANCK that will have the following characteristics:

- **Input arguments:**
  - A 3-element array with the following characteristics:
    - element zero is the minimum wavelength (in meters)
    - element one is the maximum wavelength (in meters)
    - element two is the number of wavelengths
  - A floating-point value that represents absolute temperature

- **Output arguments**
  - An array of wavelengths (in $\mu$m)
  - An array of black-body monochromatic fluxes for each wavelength (in W m$^{-2}$ $\mu$m$^{-1}$).

The calling order should be `PLANCK, array, T, fluxes, wavelengths`

The monochromatic fluxes are calculated using Planck’s Law, shown below, where the constants are given by $c_1 = 2\pi hc^2$; $c_2 = h\epsilon/k$ ($h$ is Planck’s constant and $k$ is Boltzmann’s constant).

$$F_{BB\lambda} = \frac{c_1}{\lambda^5 \left[ \exp\left(\frac{c_2}{\lambda T}\right) - 1 \right]}.$$  

If you run your procedure with a minimum and maximum wavelength of $10^{-10}$ and $10^{-3}$ meters respectively, with 20,000 wavelengths and a temperature of 300 K, and then plot the flux versus wavelength on a logarithmic x axis, your result should look like the picture below.
2. Write a main program that will call your `PLANCK` procedure four times to create a four-panel plot exactly like that shown below. Use minimum and maximum wavelength of $10^{-10}$ and $10^{-3}$ meters respectively, with 20,000 wavelength points.

Notes:
- In your plot statement, use `xrange = [0.1, 1000]`.
- The only thing that changes in each plot is the temperature. So, you could create an array of temperatures such as $T = [100.0, 300.0, 1000.0, 6000.0]$, and then use a for loop to loop from $i = 0, 3$, passing $T[i]$ to your procedure each iteration.
- The plot statements should be in your main program, not in your procedure. You shouldn’t be changing or editing your procedure at all.