1. Write a function (proj01_01.m) that returns an image of a black and white checker/chess board (an 8 x 8 grid of alternating black and white squares). The image should be of size 256 x 256 and of type uint8. (You might find the built-in `repmat` function useful.)

2. The following code produces an interesting plot (try it!):

   ```matlab
   t = (-180:180)*pi/180;
   x = cos(8*t).*cos(t);
   y = cos(4*t).*sin(t);
   plot(x, y);
   ```

   Write a function (proj01_02.m) that returns an image that is a reproduction of the plot. The image should be have a resolution of 512 x 512 and should consist of a blue line on a green background. Hint: Convert the x and y values in the code above to appropriate indexes into an image matrix. The x and y values above are in the range -1 to 1. Scale them so that they are in the range 1 to 512.