ECEn 665
Antennas and Propagation for Wireless Communication

Homework #12
Due Feb. 22, 2023 (may be turned in late for half credit)

1. Develop a mutual coupling model for isotropic radiators:
   (a) Write a code to find the element pattern overlap matrix for an array of isotropic radiators using the analytical result in the text.
   (b) Use the relationship between the overlap matrix and the mutual impedance matrix to estimate the array mutual impedance matrix. Scale the impedance matrix so that the diagonal elements are equal to $50\,\Omega$.
   (c) Give the impedance matrix for a four element ULA with half wavelength spacing. Repeat for a four element ULA with $0.3\,\lambda$ spacing.