**This is a Matlab program that calculates the Photoacoustic field at various frequencies generated by a source using the Born-series methods (known as the Traditional Born Series and Convergent Born Series) in two dimensions. The source is assumed to be a circular disc. The program needs the following inputs to run.**

Inputs-

Size of the computational domain, Nx=Ny=?

Grid size, dx=dy=?

Center of the computational domain, typically, Nmid=0.5\*Nx+1

Width of the PML in terms of grid points, PML=?

Position of the detector in terms of grid points, Ndetect=?

Number of frequency points at which amplitudes of the PA field will be calculated, NFFT=?

Error tolerance, derror=?

Speed of sound in the ambient medium, vf=?

Speed of sound in the source region, vs=?

Radius of the source, a=? (assuming it is a circular disc)

Maximum number of iterations, MaxIT=?

Output-

Shirfn- It is a 2D matrix that retains the pressure field after the steady state is reached (assuming the method converges within 2000 iterations). The program stops after 2000 iterations.