

Calculate the temperature distribution in the rectangular plate with unit length with the following methods:

- 1) Point Gauss-Seidel
- 2) Line Gauss-Seidel
- 3) Alternating Direct Implicit

For all methods, the step size are specified as:

$$\Delta x = 0.2$$

$$\Delta y = 0.2$$

$$ErrMax = 0.01$$

$$\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = 0$$