13/10/2019

Course: MTL712

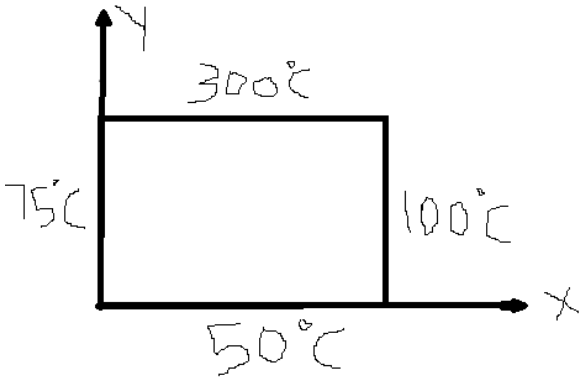
Assignment-5:

Implement finite difference method scheme/program for solving Laplace partial differential equation ($\nabla^2 T = 0$) with Diritchlet boundary conditions and using following approaches:

1. Gauss Seidel Method
2. Alternative direction Implicit

Use following example for demonstration and comparison of computation time:

Consider a plate of 2.4m x 3.0 m that is subjected to boundary condition as shown in below figure. Find the temperature (T(x, y)) distribution inside this plate (on grid points). You can consider a square grid of different sizes. Moreover create a surface plot of the temperature distribution.



Note that:

1. Proper documentation should be used in the codes
2. You have to submit a program. Name of the file should be: "**Ass5_EntryNu**"
3. There will be evaluation of this assignment during some practical session, you will be informed before.
4. Total Marks for this assignment = 4.
5. No cheating allowed.

13/10/2019