

Comments on Assignment #2, Requests for future homeworks.

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- 1) A brief and concise description of relevant equations is required with the homework.
- 2) Computer generated work is better than hand written. But if you submit hand written work, please be NEAT and write on only one side of the paper.
- 3) Although you may arrange equations in any order that you deem fit for your programming, it is easier to follow your work if you present these equations in standard form for your write-up. For example

$$k \frac{(T_{i-1,j} - 2T_{i,j} + T_{i+1,j})}{\Delta x^2} + k \frac{(T_{i,j-1} - 2T_{i,j} + T_{i,j+1})}{\Delta y^2} + q = 0$$

is in a standard form and is more preferable than

$$\frac{k\Delta y}{\Delta x} T_{i-1,j} + \frac{k\Delta y}{\Delta x} T_{i+1,j} + \frac{k\Delta x}{\Delta y} T_{i,j-1} - 2\left(\frac{k\Delta x}{\Delta y} + \frac{k\Delta y}{\Delta x}\right) T_{i,j} + \frac{k\Delta x}{\Delta y} T_{i,j+1} + q\Delta x\Delta y = 0$$

even though they are identical mathematically.

- 4) Make sure that you have provided all that was asked for in the problem statement.
- 5) Please label your axis and provide legends for your plots.
- 6) In general, analytical solutions are valid over the entire domain and should be plotted as solid lines. Conversely, computational results that are received from discretizing governing equations are valid only at those discrete points and should be plotted as points only.
- 7) Adding good comments to your code will not only make it easier for someone else to follow, it will help you out: six months from now when you look back at your code you will not remember what it was you were thinking when you wrote it.
- 8) If you use someone else's code, you should give credit at the beginning of the program.