1. A plate of thickness 2L having the uniform initial temperature T_i is plunged into a bath at the constant temperature T_∞ with a finite convective heat transfer coefficient h. Find the temperature distribution in the slab using FTCS explicit scheme and compare the results with analytical solution (Heisler charts).

   (a) The centre temperature variation at different time for different Biot numbers. Biot number varies from 0.2, 1, 5 and 10. The Fourier number varies from 0.1 to 10 or 20.

   (b) The temperature profile at x/L = 0.5 for different Biot numbers (0.2, 1, 5, and 10) at different Fourier numbers (Fo = 2 and 4)