Implicit Discrete Advection Equation

Consider the one-dimensional advection equation given by

$$\frac{\partial u}{\partial t} = -c\frac{\partial u}{\partial x}.$$

(a) By computing the spatial derivative at the advanced time step t_{l+1}, derive the implicit discrete advection equation.

(b) Analyze its stability.

✓ **Completed** **Go to next item**