## CS 451 Activity 11 - Solution

 $S_{\text{t+1}} = .9S_{\text{t}} + .2C_{\text{t}}$  and  $C_{\text{t+1}} = .1S_{\text{t}} + .8C_{\text{t}}.$  Using matrix notation we obtain

$$\begin{bmatrix} S_{t+1} \\ C_{t+1} \end{bmatrix} = \begin{bmatrix} .9 & .2 \\ .1 & .8 \end{bmatrix} \begin{bmatrix} S_t \\ C_t \end{bmatrix}$$