solution = DSolve[y'[t] == (1-t)(1-y[t]), y[t], t]

$$\left\{ \left\{ y[t] \rightarrow 1 + e^{-t + \frac{t^2}{2}} \ \mathbf{c}_1 \right\} \right\}$$

f[t_] = y[t] /. solution[1]

 $F[t_{}] = Table[f[t] /. c_{1} \rightarrow j, \{j, -5, 5\}]$

 $Plot[{F[t]}, {t, -2, 5}]$

