

**CS 451**  
**Activity 12 - Solution**

$$\max z = 5000x_1 + 3000x_2$$

$$\begin{array}{ll} \text{s.t.} & x_1 + x_2 \leq 7 & (\# \text{ of cables Constraint}) \\ & 10x_1 + 4x_2 \leq 40 & (\text{labor Constraint}) \\ & 10x_2 \geq 30 & (\text{company regulation Constraint}) \\ & x_1 \geq 0, x_2 \geq 0 \end{array}$$