

Project Selection (25 points)

Julie likes to take pictures, and would like to start a photo shop. She will need to rent some equipment initially. She got several potential clients, but each job would require a different set of equipment (to rent). The following table indicates which job requires which equipment ("+" if job needs equipment), the rental costs and the revenue that jobs generate. If she has \$600 available to rent equipment and start the business, what should she rent and which jobs to accept to maximize her profit?

<i>Jobs</i>	<i>Equipment</i>				<i>Revenue</i> (\$)
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	
<i>J1</i>	+	+			400
<i>J2</i>	+		+	+	600 - xy
<i>J3</i>		+	+	+	500
<i>J4</i>		+		+	400
<i>Cost</i> (\$)	100 + xy	200	300	100	

Build a model and the corresponding AMPL files to find the profit optimizing plan.