Supply Chain Analytics (42380)
Exercise: Supplier selection

A company sources three components needed in their products, and they need to decide on new contracts with suppliers for the next year. The forecasting department provided the following projection of monthly demand for these components:

Component	Monthly demand (units)
1	7500
2	12000
3	3000

There are six suppliers available to choose from. They differ mainly with respect to the prices they quote and their available capacity, as given in the following tables:

	Quote (cost per unit purchased)			
Supplier	Component 1	Component 2	Component 3	Capacity
A	83	274	143	4500
B	122	299	122	5000
C	100	204	109	3000
D	77	217	106	3500
E	138	261	108	4000
F	133	254	112	4000

The supplier's capacities are given as the total number of components they can supply per month, independent of which of the three components are supplied.

Formulate a linear program to determine which components (and how much) to buy from each supplier so that cost is minimized and all demand is met. Solve the problem in Julia and output the solution to a file.

Note: The supplier cost data is available in the file `supplier_costs.csv`. Use the following code to read this data into Julia:

```
c = CSV.read("supplier_costs.csv";header=0);
```