

```
In [1]: import numpy as np
import pandas as pd
from pulp import *
```

```
In [2]: prob=LpProblem('transportation',LpMinimize)
```

```
In [3]: x11=LpVariable('x11',0)
x12=LpVariable('x12',0)
x13=LpVariable('x13',0)
x14=LpVariable('x14',0)
x21=LpVariable('x21',0)
x22=LpVariable('x22',0)
x23=LpVariable('x23',0)
x24=LpVariable('x24',0)
x31=LpVariable('x31',0)
x32=LpVariable('x32',0)
x33=LpVariable('x33',0)
x34=LpVariable('x34',0)
```

```
In [4]: prob += 3*x11+2*x12+7*x13+6*x14+7*x21+5*x22+2*x23+3*x24+2*x31+5*x32+4*x33+5*x34
```

```
In [5]: prob += x11+x21+x31==6000
prob += x12+x22+x32==4000
prob += x13+x23+x33==2000
prob += x14+x24+x34==1500
prob += x11+x12+x13+x14<=5000
prob += x21+x22+x23+x24<=6000
prob += x31+x32+x33+x34<=2500
```

```
In [6]: prob.solve()
```

```
Out[6]: 1
```

```
In [7]: print(LpStatus[prob.status])
```

Optimal

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In [8]: for v in prob.variables():  
        print(v.name,v.varValue)
```

```
x11 3500.0  
x12 1500.0  
x13 0.0  
x14 0.0  
x21 0.0  
x22 2500.0  
x23 2000.0  
x24 1500.0  
x31 2500.0  
x32 0.0  
x33 0.0  
x34 0.0
```

```
In [9]: print('optimal value is',value(prob.objective))
```

```
optimal value is 39500.0
```

```
In [ ]:
```