Defining Objective Function

In [11]:
```
lp += lpSum([cost[j] * foodVars[j] for j in foods]), 'Total Cost Incurred'
```

Defining Constraints

In [12]:
```
for i in range(0, 11):
    lp += lpSum([nutrients[i][j] * foodVars[j] for j in foods]) >= Min[i], 'Minimum nutrient
    lp += lpSum([nutrients[i][j] * foodVars[j] for j in foods]) <= Max[i], 'Maximum nutrient
```

Output:

In [13]:
```
lp.solve()
print('Optimal solution:')
for var in lp.variables():
    if var.varValue > 0:
        if str(var).find('Selected_food'):
            print(str(var.varValue) + ' units of ' + str(var).replace('foods_',''))
print('Total cost incurred for food = $%.2f' % value(lp.objective))
```

```
Optimal solution:
52.64371 units of Celery,_Raw
0.25960653 units of Frozen_Broccoli
63.988506 units of Lettuce,Iceberg,Raw
2.2929389 units of Oranges
0.14184397 units of Poached_Eggs
13.869322 units of Popcorn,Air_Popped
Total cost incurred for food = $4.34
```