

```
1  from gurobipy import *
2
3  # define data coefficients
4  n = 7
5  p = [6, 5, 8, 9, 6, 7, 3]
6  w = [2, 3, 6, 7, 5, 9, 4]
7  c = 9
8
9  # create empty model
10 m = Model()
11
12 # add decision variables
13 # <VARIABLES ADDED HERE>
14 x = m.addVars(n, vtype=GRB.BINARY, name='x')
15
16 # set objective function
17 # <OBJECTIVE SET HERE>
18 m.setObjective(x.prod(p), GRB.MAXIMIZE)
19
20 # add constraint
21 # <CONSTRAINT ADDED HERE>
22 m.addConstr(x.prod(w)<=c, name='knapsack')
23
24 # solve model
25 m.optimize()
26
27 # display solution
28 if m.SolCount > 0:
29     m.printAttr('X')
30
31 # export model
32 m.write('knapsack.lp')
33
34
```