H.No:17K41A05H3

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**Assignment On Linear Optimization**:

Mathematical Equations:

->Decision Variables:

x,y

->Objective Function:

Max Z=50x+120y

->Constraints:

1)7000x+2000y<=7,00,000

2)10x+30y<=1200

3)x+y<=110

->Boundaries:

x>=0,y>=0

**Python code:**

from scipy.optimize import linprog

obj=[-50,-120]

lhs\_ineq=[[7000,2000],[10,30],[1,1]]

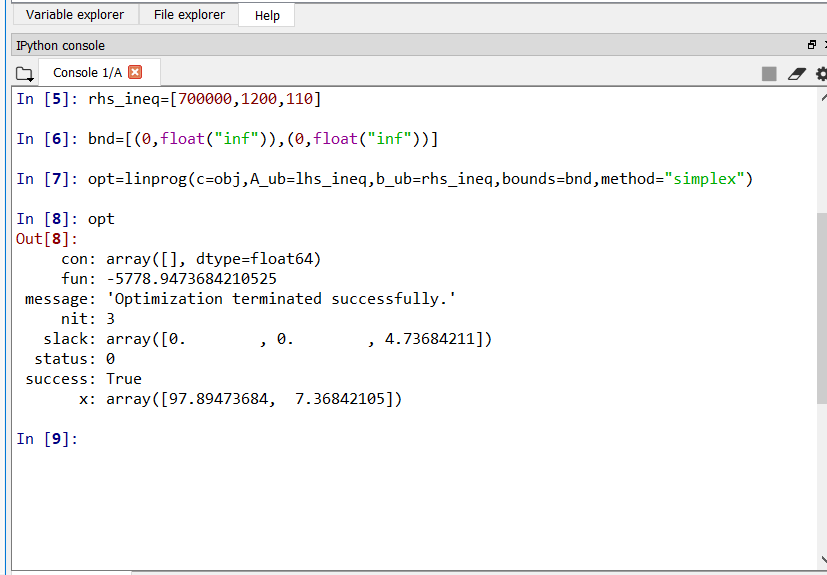
rhs\_ineq=[700000,1200,110]

bnd=[(0,float("inf")),(0,float("inf"))]

opt=linprog(c=obj,A\_ub=lhs\_ineq,b\_ub=rhs\_ineq,bounds=bnd,method="simplex")

opt

**Output:**

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