**MP-1 PRACTICAL-4**

1. Demonstrate a python program for special cases in Simplex method

**QUESTION**:  
Maximize Z=3 x1 + 5 x2

Subject To:

3 x1 + 2 x2 =18

X1 <= 4

2 x2 <= 12

X1 >=0

X2 >= 0

Solve LP using simplex method using Python

**Code:**

**import numpy as np**

**import scipy as sp**

**c = [-3, -5]**

**A = [[1, 0], [0, 2], [3, 2]]**

**b = [4, 12, 18]**

**x0\_bounds = (0, None)**

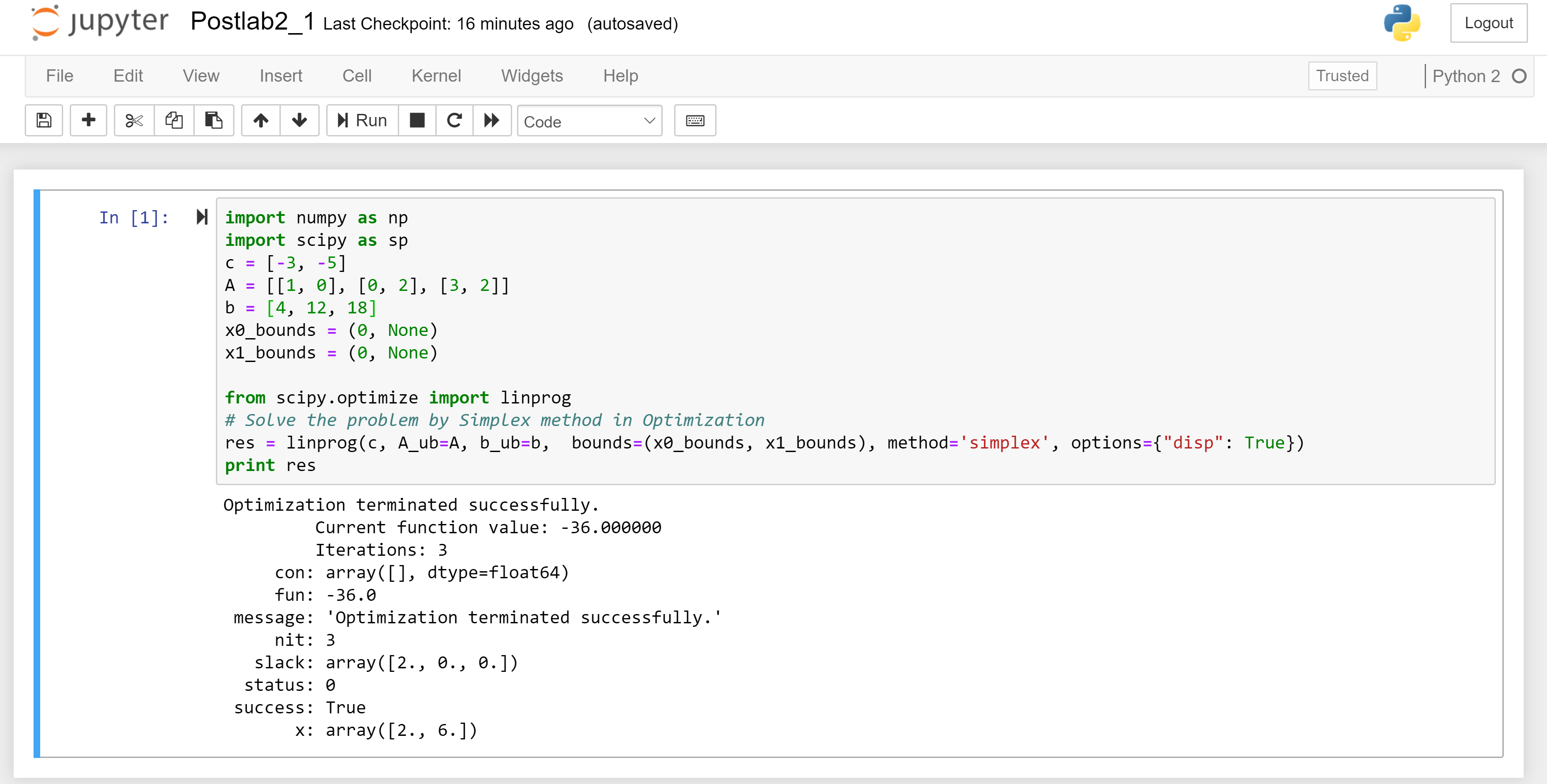
**x1\_bounds = (0, None)**

**from scipy.optimize import linprog**

**# Solve the problem by Simplex method in Optimization**

**res = linprog(c, A\_ub=A, b\_ub=b, bounds=(x0\_bounds, x1\_bounds), method='simplex', options={"disp": True})**

**print res**

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