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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
```