hw2

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1 CSE 804: Modeling & Visualization

2 HW 2

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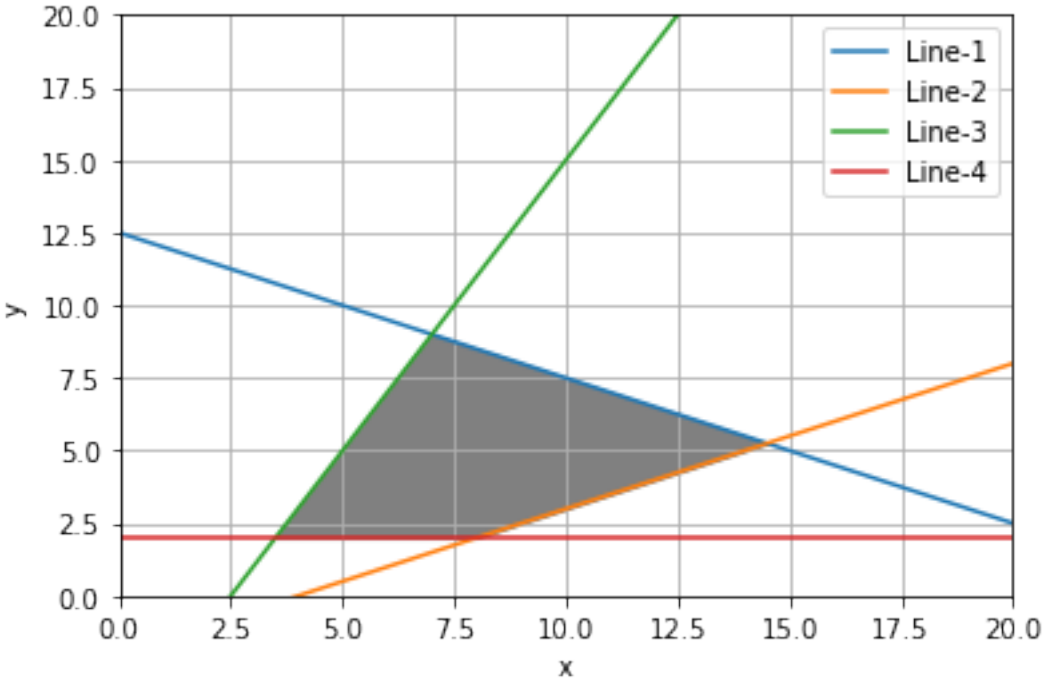
In [1]:
```
import numpy as np
import matplotlib.pyplot as plt
```

In [9]:
```
# 1. Construct lines
x = np.linspace(start=0, stop=20, num=1000)
y1 = (25.0 - x)/2.0
y2 = (2*x - 8.0)/4.0
y3 = 2*x - 5.0
y4 = 2.0*np.ones(len(x))
```

In [39]:
```
# 2. Make plot
plt.plot(x,y1,label='Line-1')
plt.plot(x,y2,label='Line-2')
plt.plot(x,y3,label='Line-3')
plt.plot(x,y4,label='Line-4')
plt.xlabel('x')
plt.ylabel('y')
plt.grid()
plt.legend()
plt.xlim([0,20])
plt.ylim([0,20])

# 3. Fill feasible region
y5 = np.minimum(y1,y3)
y6 = np.maximum(y2,y4)
xlimit = np.logical_and(x>=3.5, x<=14.5)
plt.fill_between(x,y5,y6,where=xlimit, color='grey')
plt.show()
```


Line-1
Line-2
Line-3
Line-4
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
y
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
x