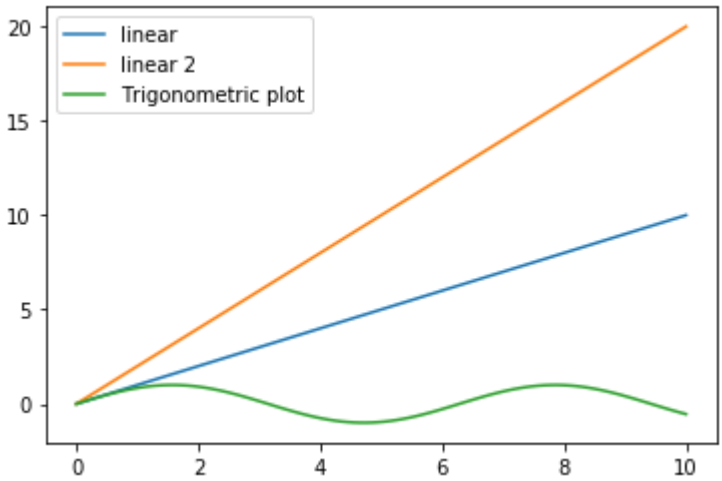
# Matplotlib

## types of plottings:

- Plots
- Line Bar Graph
- Histogram
- Pie charts
- Scatter
- Area Plots

In [3]:
```
##Example
import matplotlib.pyplot as plt
import math
import numpy as np

# Prepare the data
x = np.linspace(0, 10, 100)

# Plot the data
plt.plot(x, x, label='linear')

# layering another data
plt.plot(x,2*x ,label="linear 2")

#layering last data
plt.plot(x,np.array(list(map(lambda x: math.sin(x),x))),label = "Trigonometric plot")
plt.legend()
```

Out[3]: <matplotlib.legend.Legend at 0x253627effc8>



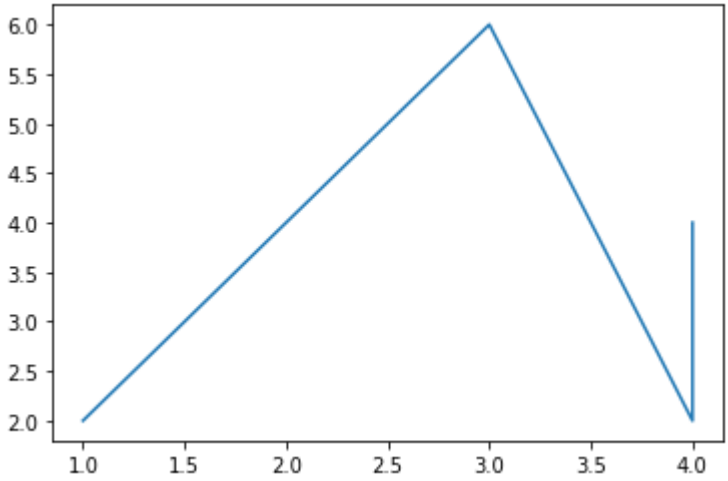

In [1]:
```
##############################################   ENDING EXAMPLE   ########################
```

In [25]:
```
exit()
```

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

In [2]:
```
x= [1,2,3,4,4]
y= [2,4,6,2,4]
plt.plot(x,y)
```

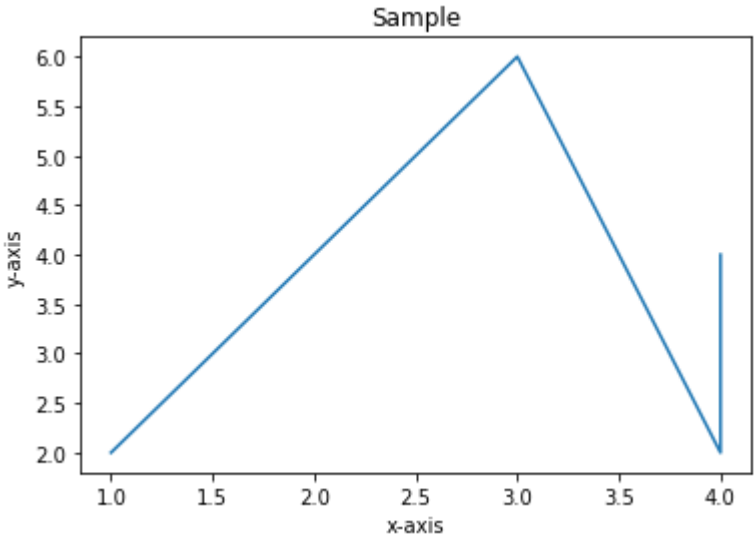
Out[2]:
```
[<matplotlib.lines.Line2D at 0x2bfef194988>]
```




In [3]:
```
exit()
```

In [2]:
```
import matplotlib.pyplot as plt
import matplotlib

x= [1,2,3,4,4]
y= [2,4,6,2,4]
plt.title('Sample')
plt.xlabel("x-axis")
plt.ylabel("y-axis")
plt.plot(x,y)
```

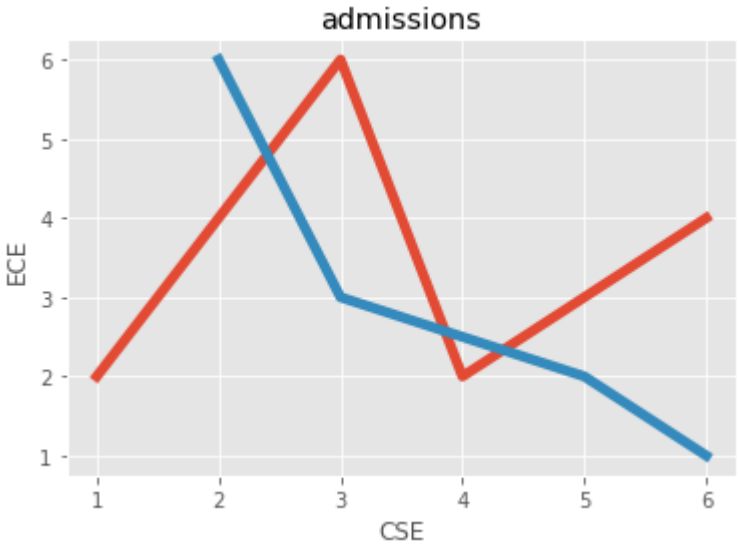
Out[2]:
```
[<matplotlib.lines.Line2D at 0x2223ad58148>]
```




In [3]:
```
exit()
```

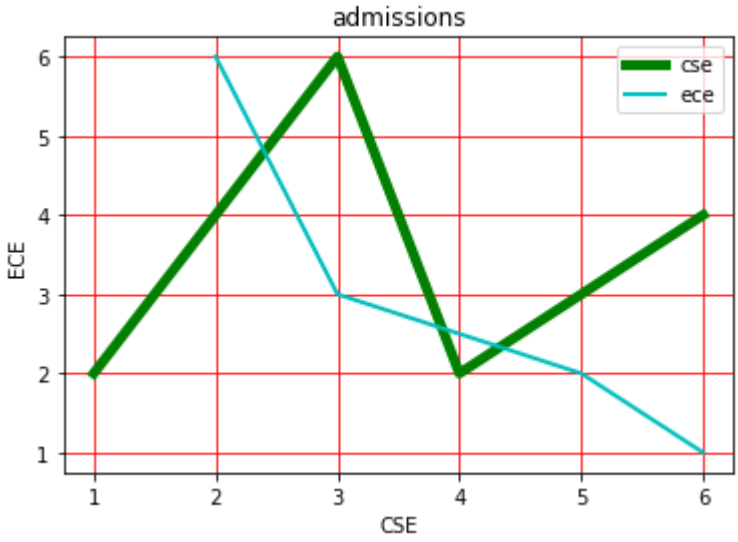
In [2]:
```
import matplotlib.pyplot as plt
from matplotlib import style

x= [1,2,3,4,6]
y= [2,4,6,2,4]
style.use("ggplot")  ## other attributes are "grayscale" , "bmh","fast",'classic' ,"_cl
x1= [6,5,3,2]
y1= [1,2,3,6]
plt.plot(x,y,linewidth = 5)
plt.plot(x1,y1,linewidth = 5)
plt.title("admissions")
plt.xlabel("CSE")
plt.ylabel("ECE")
```

Out[2]: Text(0, 0.5, 'ECE')



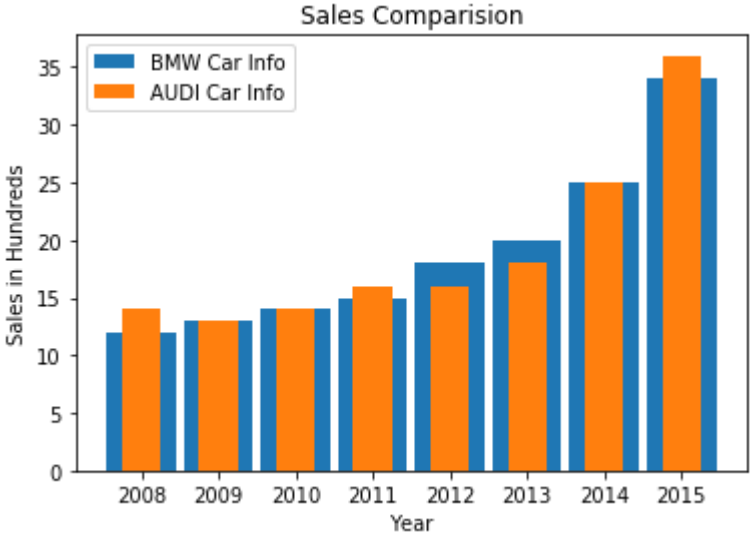

In [3]:
```
exit()
```

In [8]:
```
import matplotlib.pyplot as plt
from matplotlib import style

x= [1,2,3,4,6]
y= [2,4,6,2,4]
style.use("fast")  ## other attributes are "grayscale" , "bmh","fast",'classic' ,"_clas
x1= [6,5,3,2]
y1= [1,2,3,6]
plt.plot(x,y,linewidth = 5,label = "cse",color="g")
plt.plot(x1,y1,linewidth = 2,label = "ece" ,color="c")
plt.legend()                  ## adds an information bar at any blank place found by the
plt.title("admissions")
plt.xlabel("CSE")
plt.ylabel("ECE")
plt.grid(color="r") ## grid adds gridlines to help data reading efficiently ## attribut
```

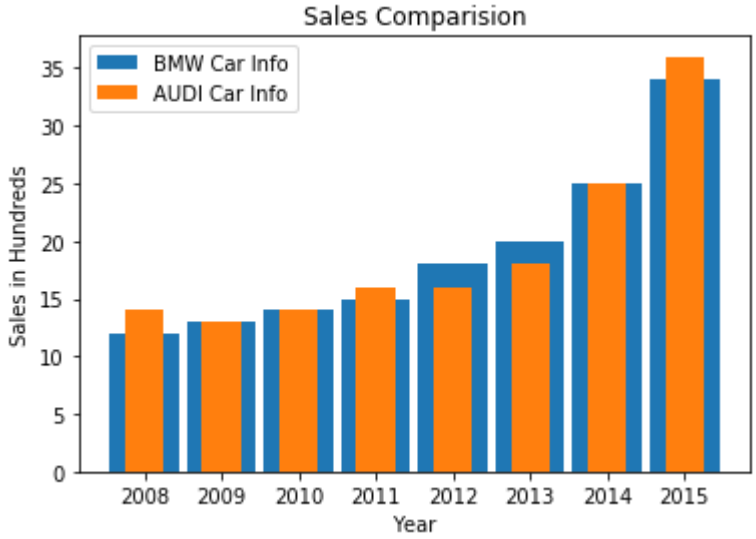



In [4]:
```
exit()
```

In [15]:
```
import matplotlib.pyplot as plt
from matplotlib import style

plt.bar([2008,2009,2010,2011,2012,2013,2014,2015],[12, 13, 14, 15, 18, 20, 25, 34],labe
plt.bar([2008,2009,2010,2011,2012,2013,2014,2015],[14, 13, 14, 16, 16, 18, 25, 36],labe
plt.legend()
plt.title("Sales Comparision")
plt.xlabel("Year")
plt.ylabel("Sales in Hundreds")
plt.show()
exit()
```



In [3]:
```
import matplotlib.pyplot as plt
from matplotlib import style

plt.bar([2008,2009,2010,2011,2012,2013,2014,2015],[12, 13, 14, 15, 18, 20, 25, 34],labe
plt.bar([2008,2009,2010,2011,2012,2013,2014,2015],[14, 13, 14, 16, 16, 18, 25, 36],labe
plt.legend()
plt.title("Sales Comparision")

plt.xlabel("Year")
plt.ylabel("Sales in Hundreds")
plt.show()


exit()
```




In [ ]:

In [ ]: