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STAT 1127
HOMEWORK 4

GITHUB LINK:

In [1]:
```
import numpy as np
```

In [2]:
```
numbers = np.array([[1,2,3,4], [5,6,7,8],[9,10,11,12]])
```

In [3]:
```
numbers
```

Out[3]:
```
array([[ 1,  2,  3,  4],
       [ 5,  6,  7,  8],
       [ 9, 10, 11, 12]])
```

In [4]:
```
numbers * 2
```

Out[4]:
```
array([[ 2,  4,  6,  8],
       [10, 12, 14, 16],
       [18, 20, 22, 24]])
```

In [5]:
```
numbers.size
```

Out[5]:
```
12
```

In [6]:
```
numbers.shape
```

Out[6]:
```
(3, 4)
```

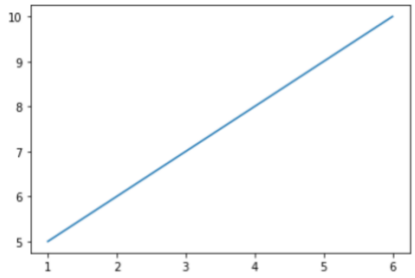
In [7]:
```
numbers = np.array([[1,2,3,4], [5,6,7,8],[9,10,11,12]])
```

In [8]:
```
for row in numbers:
    for col in row:
        print(col,end=' ')
    print()
```
```
1 2 3 4
5 6 7 8
9 10 11 12
```

In [9]:
```
for row in numbers:
    for col in row:
        print(col, end=' ')
```
```
1 2 3 4 5 6 7 8 9 10 11 12
```
In [10]:
```
import matplotlib
```

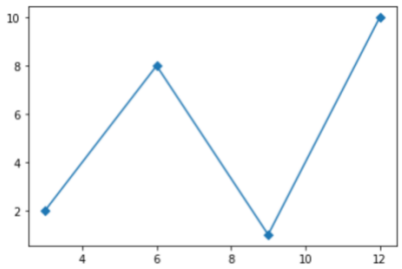
In [11]:
```
import matplotlib.pyplot as plt
```

In [12]:
```
xpoints = np.array([1,6])
ypoints = np.array([5,10])
```

In [13]:
```
plt.plot(xpoints, ypoints)
plt.show()
```


In [14]:
```
xpoints= np.array([3,6,9,12])
ypoints= np.array([2,8,1,10])
```

In [15]:
```
plt.plot(xpoints,ypoints,marker='D')
plt.show()
```



In [16]:
```
xpoints= np.array([0,1,2,3,4,5])
ypoints= np.array([2,4,6,14,10,12])
plt.plot(xpoints,ypoints, 'o:r', linestyle = 'dashed', marker = 'D', ms=10, mfc='g', mec = 'g')
```

Out[16]:
[<matplotlib.lines.Line2D at 0x7fa5b7e2b8b0>]