In [1]:
```
mport numpy as np
=np.arange(0,100)
=x*2
=x**2
```

# Excercise 1

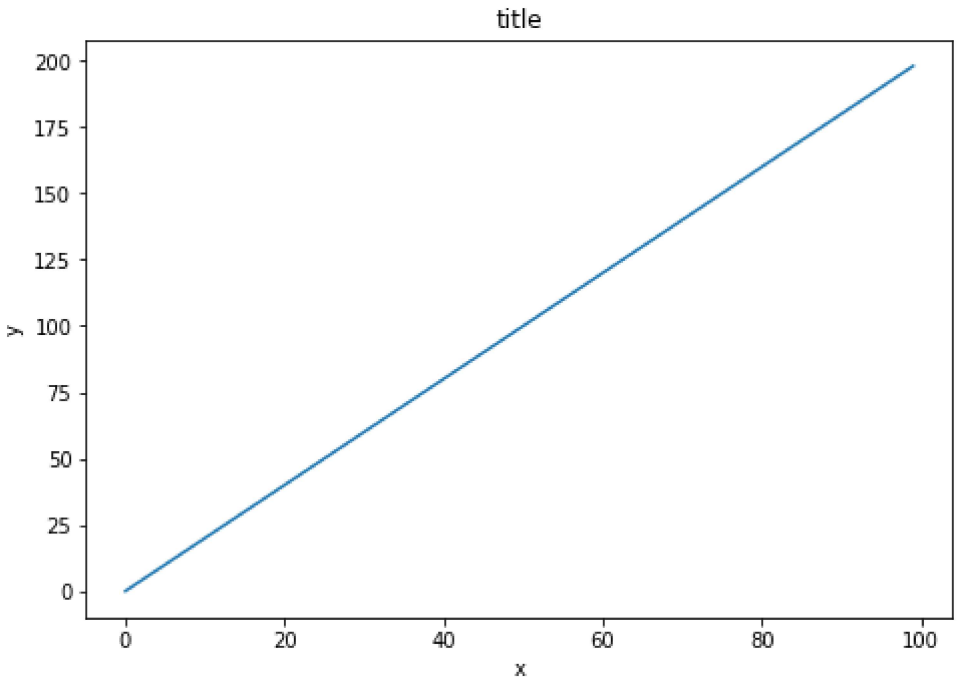
Create a figure object called fig using plt.figure()

Use add_axes to add an axis to the figure canvas at [0,0,1,1]

Plot (x,y) on that axes and set the labels and titles

In [2]:
```
mport matplotlib.pyplot as plt
matplotlib inline
ig = plt.figure()
x=fig.add_axes([0,0,1,1])
x.plot(x,y)
x.set_xlabel('x')
x.set_ylabel('y')
x.set_title('title')
```

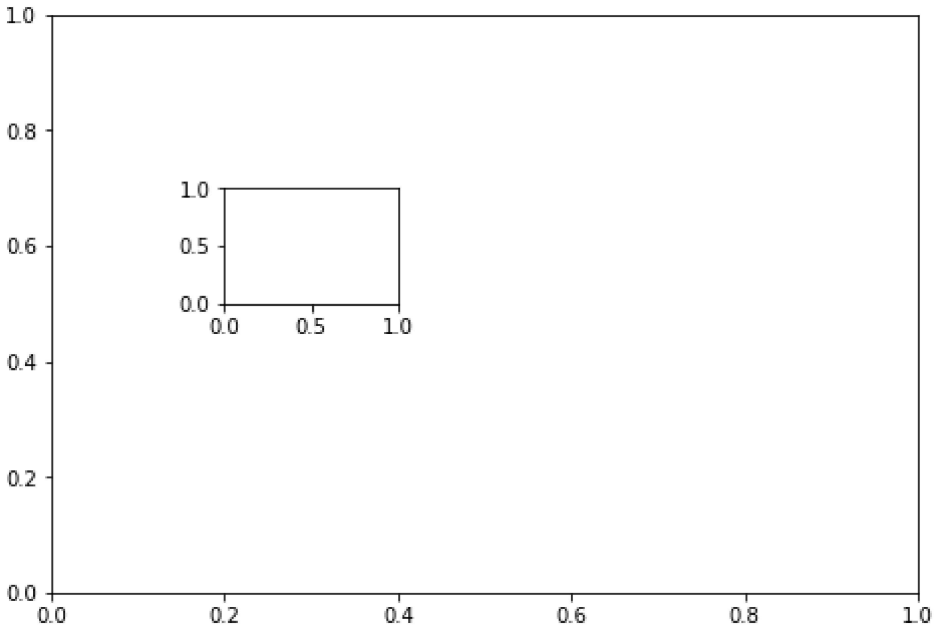
Out[2]: Text(0.5,1,'title')




# Excercise 2

Create a figure object and put two axes on it, ax1 and ax2. Located at [0,0,1,1] and [0.2,0.5,.2,.2] respectively

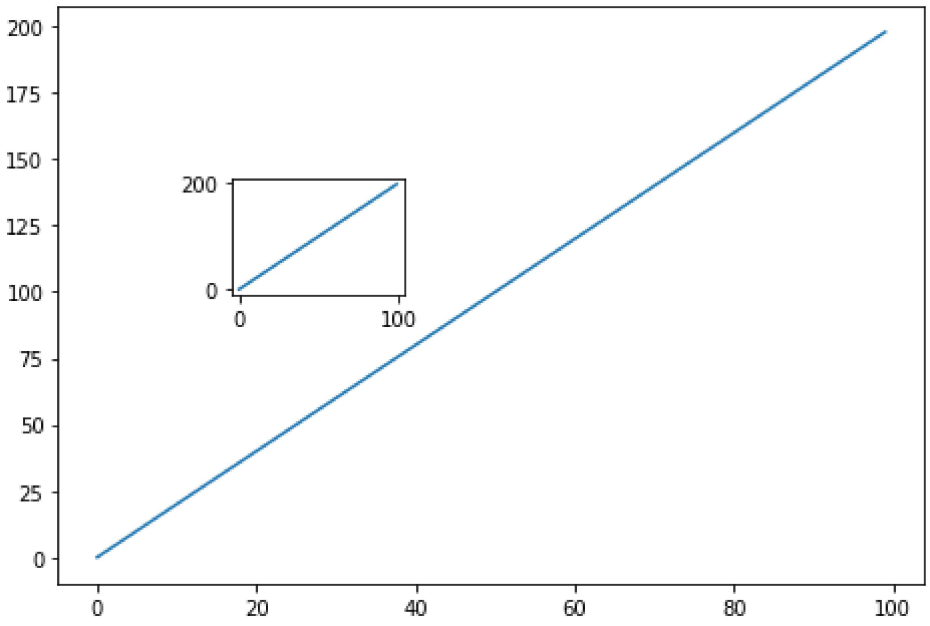
In [3]:
```
ig = plt.figure()
x1=fig.add_axes([0,0,1,1])
x2 =fig.add_axes([0.2,0.5,.2,.2])
```




# Now plot(x,y) on both axes. And call your figure object to show it.

In [4]:
```
ig = plt.figure()
x1=fig.add_axes([0,0,1,1])
x2 =fig.add_axes([0.2,0.5,0.2,0.2])
x1.plot(x,y)
x2.plot(x,y)
```

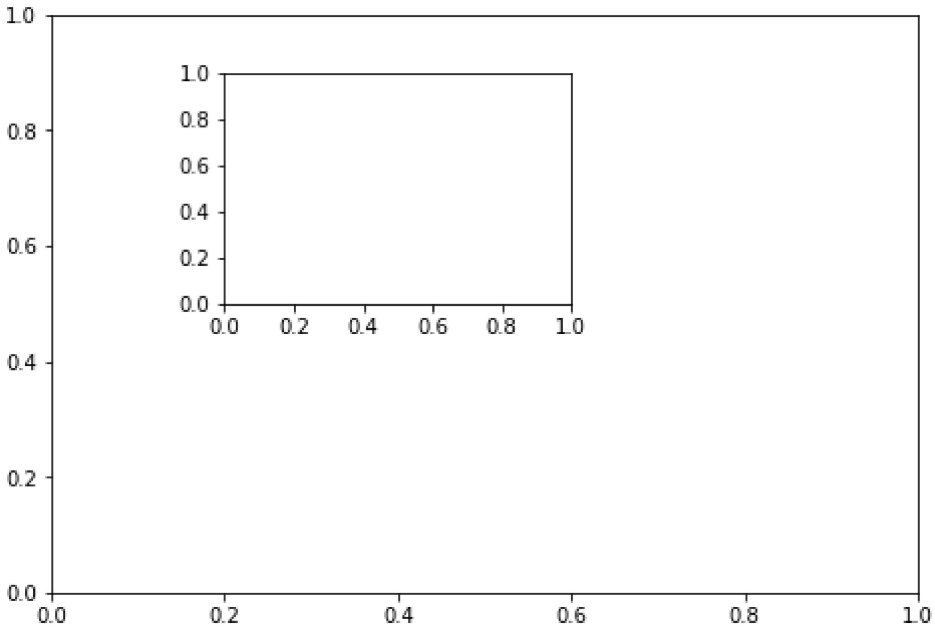
Out[4]: [<matplotlib.lines.Line2D at 0x2406eeebf98>]




# Excercise 3

Create the plot by adding two axes to a figure obeject at [0,0,1,1] and ]0.2,0.5,.4,.4]

In [5]:
```
ig = plt.figure()
x1=fig.add_axes([0,0,1,1])
x2 =fig.add_axes([0.2,0.5,.4,.4])
```



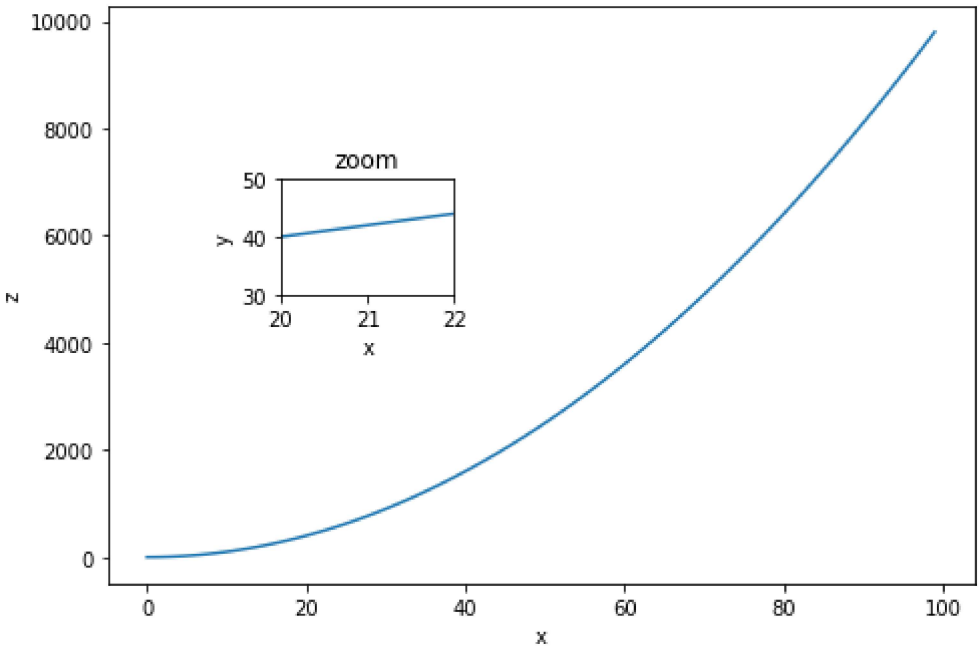

# Now use x,y and z arrays to recreate the plot below. Notice the xlimits and ylimits on the inserted plot:

In [6]:
```
ig=plt.figure()
x1=fig.add_axes([0,0,1,1])
x2=fig.add_axes([0.2,0.5,0.2,0.2])

x1.plot(x,z)
x1.set_xlabel("x")
x1.set_ylabel("z")

x2.plot(x,y)
x2.set_xlabel('x')
x2.set_ylabel('y')
x2.set_title('zoom')
x2.set_xlim(20,22)
x2.set_ylim(30,50)
```

Out[6]: (30, 50)

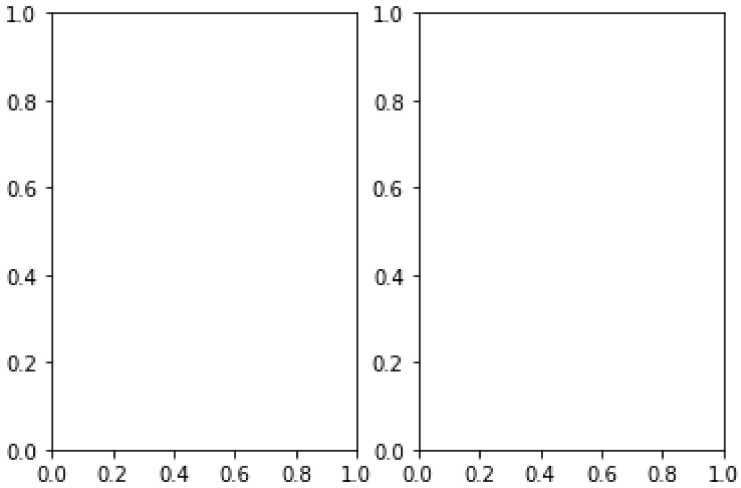



# Excercise 4

Use plt.subplots(nrows=1, ncols=2) to create the plot below.

In [7]:
```
lt.subplots(nrows=1,ncols=2)
```

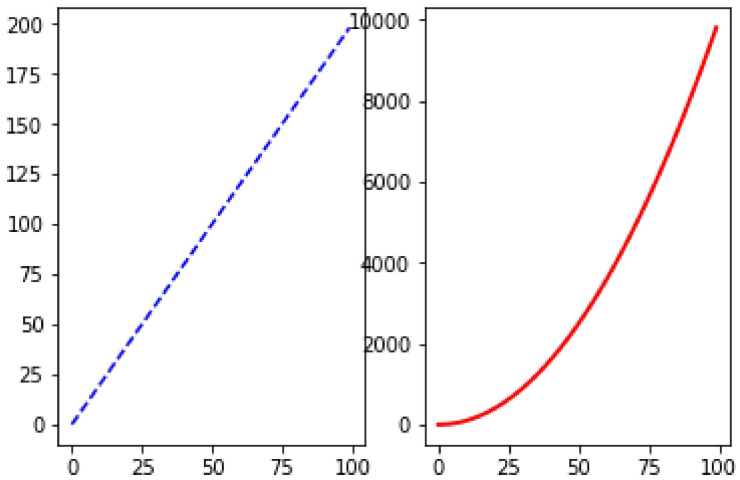
Out[7]:
```
<Figure size 432x288 with 2 Axes>,
array([<matplotlib.axes._subplots.AxesSubplot object at 0x000002406F05C9E8>,
       <matplotlib.axes._subplots.AxesSubplot object at 0x000002406F097978
],
      dtype=object))
```




# Now plot (x,y) and (x,z) on the axes. Play around with the linewidth and stylea

In [8]:
```
ig,ax1=plt.subplots(nrows=1,ncols=2)
x1[0].plot(x,y,'b',ls='--')
x1[1].plot(x,z,color='red',lw=2)
```

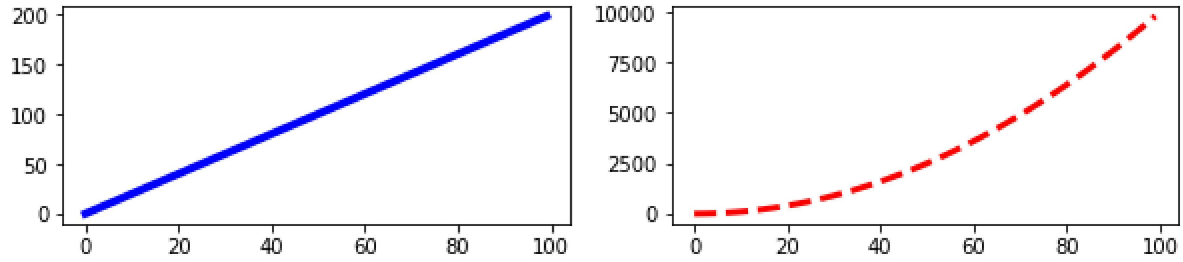
Out[8]:
```
[<matplotlib.lines.Line2D at 0x2406f159a58>]
```



# Resize the plot by adding the figsize() argument in plt.subplots() are copying and passing the previous code

In [9]:
```
ig,axes = plt.subplots(nrows=1,ncols=2,figsize=(10,2))
xes[0].plot(x,y,'b',lw=4)
xes[1].plot(x,z,'r--',lw=3)
```

Out[9]: [<matplotlib.lines.Line2D at 0x2406f208e10>]




In [ ]: