In [1]:

```
import numpy as np
x=np.arange(0,100)
y=x*2
z=x**2
```

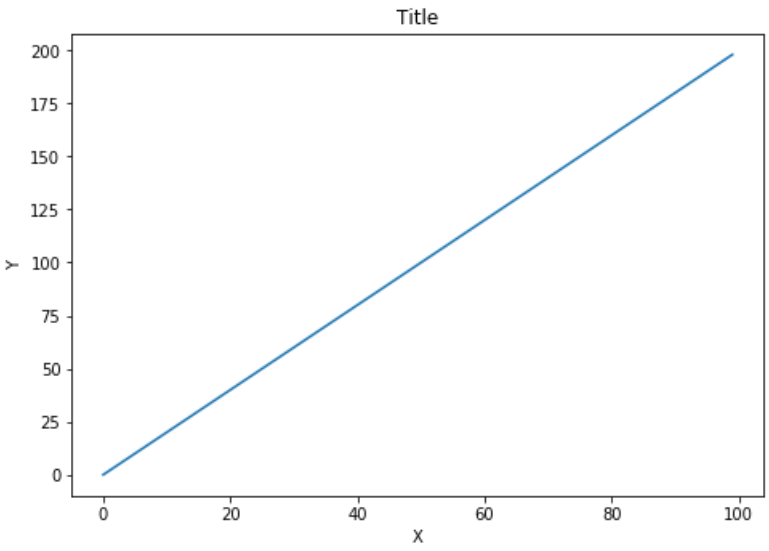
Excercise1

In [2]:

```
import matplotlib.pyplot as plt
%matplotlib inline
fig = plt.figure()
ax=fig.add_axes([0,0,1,1])
ax.plot(x,y)
ax.set_xlabel('X')
ax.set_ylabel('Y')
ax.set_title('Title')
```

Out[2]:

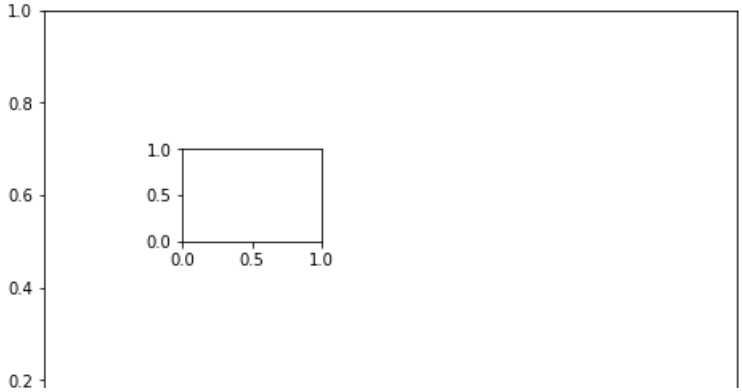
```
Text(0.5,1,'Title')
```

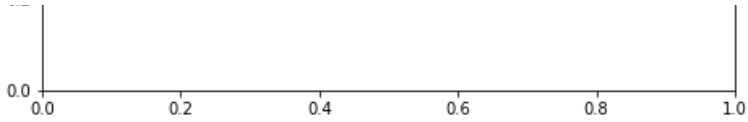


Excercise 2

In [3]:

```
fig = plt.figure()
ax1=fig.add_axes([0,0,1,1])
ax2 =fig.add_axes([0.2,0.5,.2,.2])
```



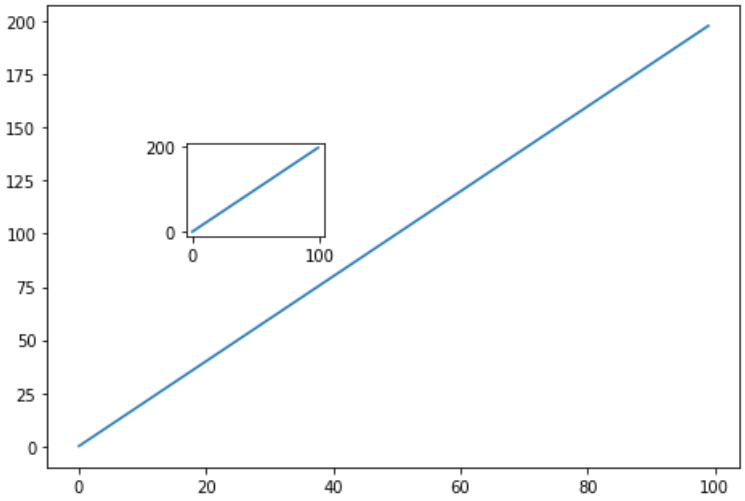


In [4]:

```
fig = plt.figure()
ax1=fig.add_axes([0,0,1,1])
ax2 =fig.add_axes([0.2,0.5,0.2,0.2])
ax1.plot(x,y)
ax2.plot(x,y)
```

Out[4]:

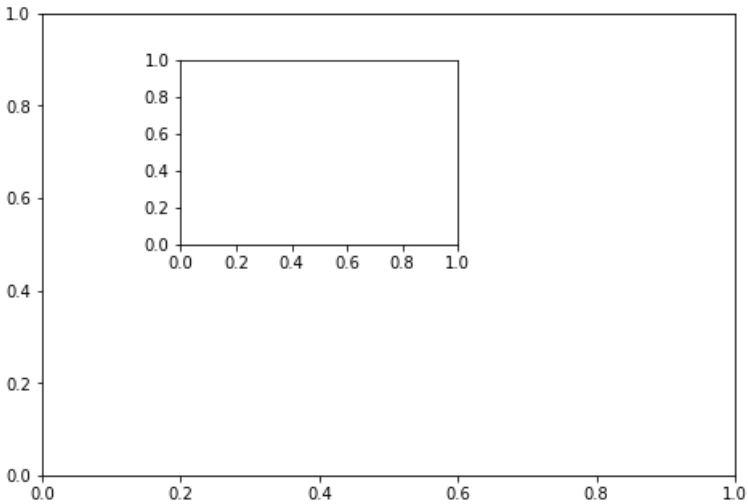
```
[<matplotlib.lines.Line2D at 0x7f9b616dc390>]
```



Excercise 3

In [5]:

```
fig = plt.figure()
ax1=fig.add_axes([0,0,1,1])
ax2 =fig.add_axes([0.2,0.5,.4,.4])
```



In [6]:

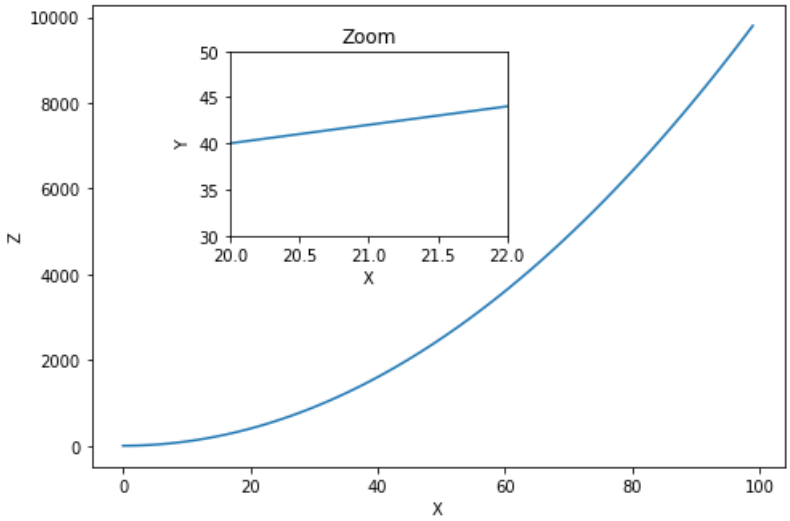
```
ax1.plot(x,z)
ax1.set_xlabel('X')
ax1.set_ylabel('Z')

ax2.plot(x,y)
ax2.set_xlabel('X')
```

```
ax2.set_ylabel('Y')
ax2.set_title("Zoom")
ax2.set_xlim(20,22)
ax2.set_ylim(30,50)

fig
```

Out[6]:



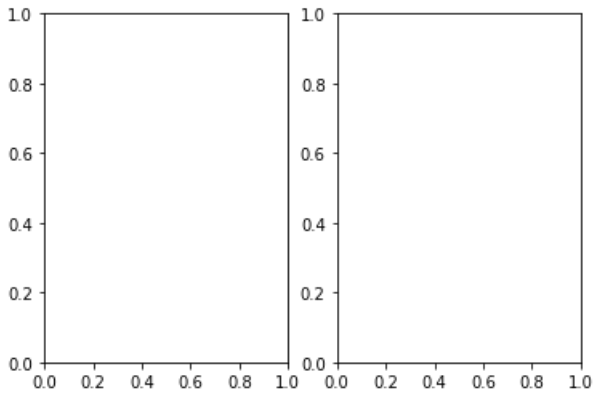
Excercise 4

In [7]:

```
plt.subplots(nrows=1,ncols=2)
```

Out[7]:

```
(<Figure size 432x288 with 2 Axes>,
 array([<matplotlib.axes._subplots.AxesSubplot object at 0x7f9b617eee10>,
        <matplotlib.axes._subplots.AxesSubplot object at 0x7f9b61452e10>],
       dtype=object))
```

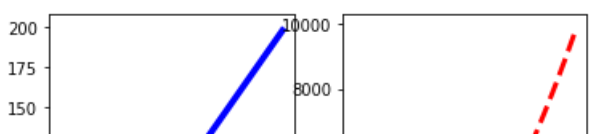


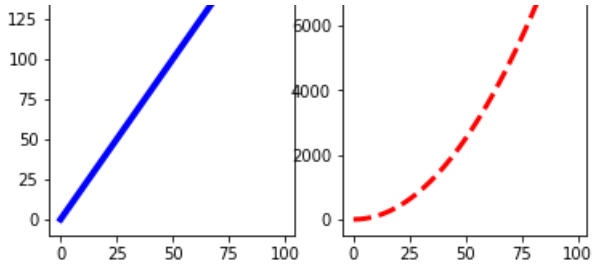
In [8]:

```
fig,axes = plt.subplots(nrows=1,ncols=2)
axes[0].plot(x,y,'b',lw=4)
axes[1].plot(x,z,'r--',lw=3)
```

Out[8]:

```
[<matplotlib.lines.Line2D at 0x7f9b612f1be0>]
```



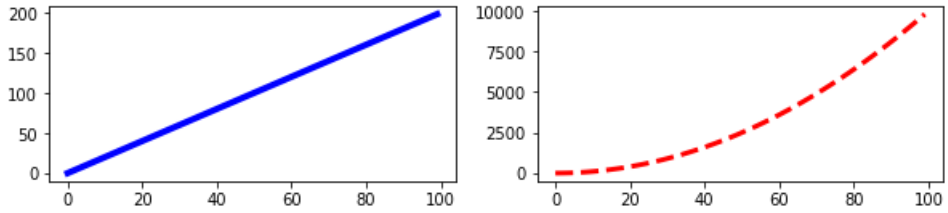


In [9]:

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

Out[9]:

```
[<matplotlib.lines.Line2D at 0x7f9b61223eb8>]
```



In [ ]:

```
```