

# Initial Value Problem

In [2]:

```
import numpy as np
from scipy.integrate import odeint
import matplotlib.pyplot as plt
```

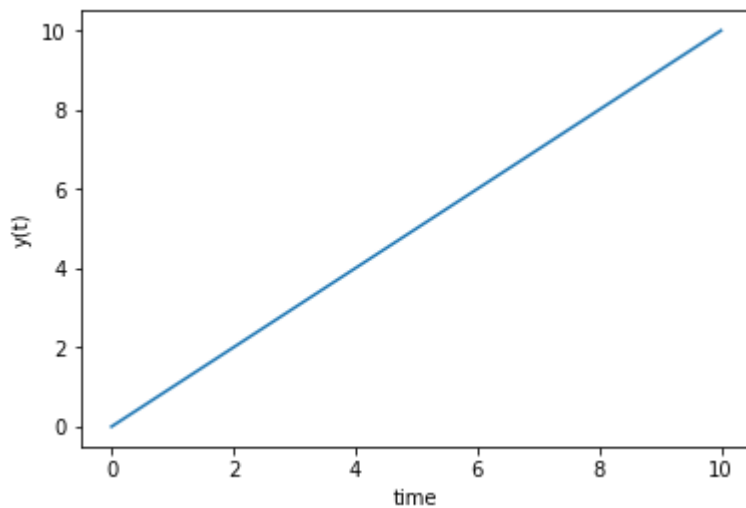
In [3]:

```
def model(y,t):
    dydt = 1
    return dydt

#initial condition
y0 = 0

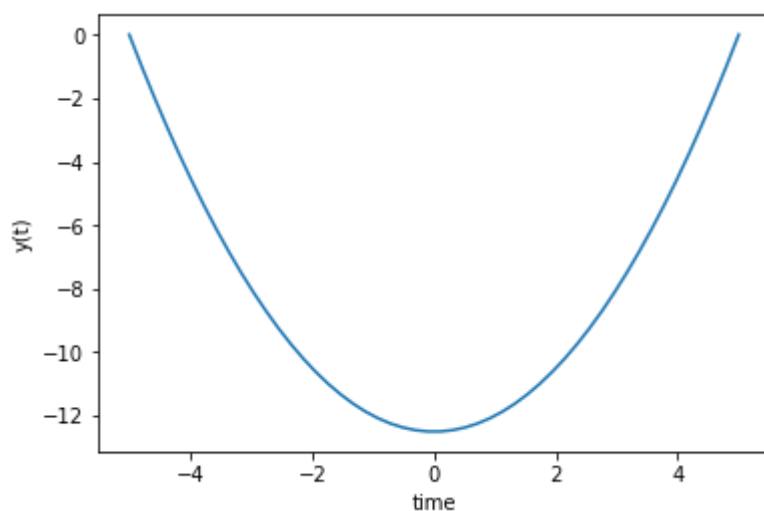
#time points
t = np.linspace(0,10)
#solve ODE
y = odeint(model,y0,t)

#plot results
plt.plot(t,y)
plt.xlabel('time')
plt.ylabel('y(t)')
plt.show()
```



In [5]:

```
def model(y,t):  
    dydt = t  
    return dydt  
  
#initial condition  
y0 = 0  
  
#time points  
t = np.linspace(-5,5)  
#solve ODE  
y = odeint(model,y0,t)  
  
#plot results  
plt.plot(t,y)  
plt.xlabel('time')  
plt.ylabel('y(t)')  
plt.show()
```



In [ ]: