

# Parachute Code

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This is my code for an example problem in CEE 303 W22

First I have to import my libraries

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

Now I import my constants

```
In [2]: g = 9.81
m = 68.1
c = 12.5

# to test variable storage
# print(g,m,c)
```

```
In [8]: t = [0,1,2,3,4,5,6,7,8,9,10] # Define a vector of my time stamps
```

```
In [9]: # I can now use my velocity equation and feed my time vector into it.

nstep = np.size(t)-1 # the -1 is used because we have an initial condition already defi
#print(nstep)
```

```
In [10]: v = np.zeros(nstep+1)

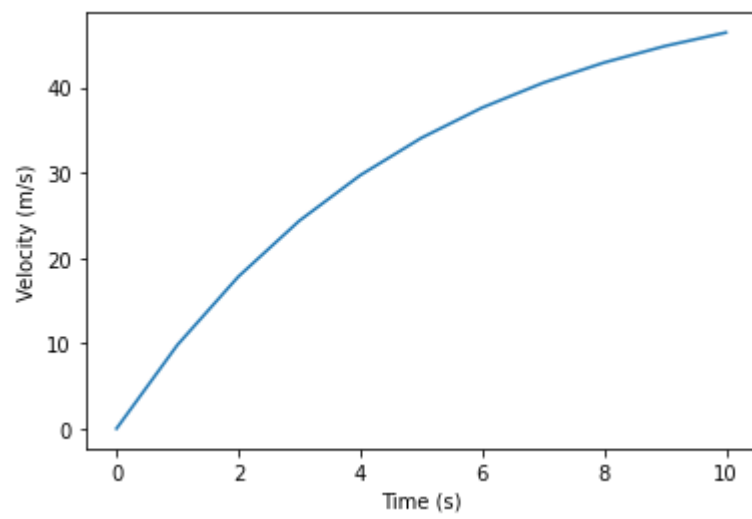
for i in range (0,nstep): # This is a simple for loop within python. The colon is neces
    v[i+1]=v[i]+(g-(c/m)*v[i])*(t[i+1]-t[i])
print(v)
# We end the loop when there is NO MORE INDENTING

[ 0.          9.81        17.81933921  24.35853539  29.69743858  34.05636689
 37.61519823  40.52079326  42.89305588  44.82988116  46.41119519]
```

## Plotting

Using matplotlib to plot our results

```
In [11]: plt.plot(t,v)
plt.xlabel('Time (s)') #Single quotes make a character string
plt.ylabel('Velocity (m/s)')
plt.show()
```



In [ ]: