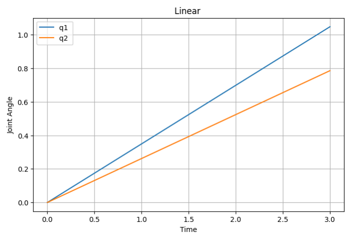
```python
import numpy as np
import matplotlib.pyplot as plt
```

```python
T = 3.0
dt = 0.1
t = np.arange(0, T+dt, dt)
q1i, q2i = 0.0, 0.0
q1f, q2f = np.pi/3, np.pi/4
```

```python
q1_linear = q1i + (q1f - q1i) * (t / T)
q2_linear = q2i + (q2f - q2i) * (t / T)
```

```python
plt.figure(figsize=(8,5))
plt.plot(t, q1_linear, label='q1 ')
plt.plot(t, q2_linear, label='q2 ')
plt.xlabel('Time')
plt.ylabel('Joint Angle')
plt.title('Linear ')
plt.legend()
plt.grid(True)
plt.show()
```

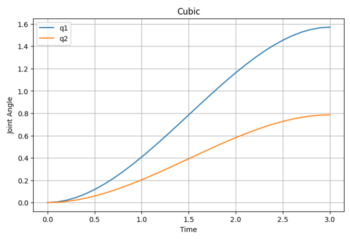


```python
def cubic_trajectory(q_start, q_end, T, t):
    a0 = q_start
    a1 = 0
    a2 = 3*(q_end - q_start)/(T**2)
    a3 = -2*(q_end - q_start)/(T**3)

    q = a0 + a1*t + a2*t**2 + a3*t**3
    return q
```

```python
q1_cubic = cubic_trajectory(q1_start, q1_end, T, t)
q2_cubic = cubic_trajectory(q2_start, q2_end, T, t)
```

```python
plt.figure(figsize=(8,5))
plt.plot(t, q1_cubic, label='q1')
plt.plot(t, q2_cubic, label='q2')
plt.xlabel('Time')
plt.ylabel('Joint Angle')
plt.title('Cubic')
plt.legend()
plt.grid(True)
plt.show()
```



```
linear trajectory was derived simply using the equation of a
straight line. For cubic we used dqi/dt=0 at t=0 and t=T and qi(0)
=0 and qi(T)=Qi. The difference is that in cubic trajectory the
velocity of the end point is zero during the initial and final
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