

Next State Script

Setup input variables

```
jointAngles=[ 0 0 0 0 0];  
chasisisConfig= [0 0 0];  
wheelAngles=[ 0 0 0 0];  
current = [chasisisConfig, jointAngles, wheelAngles]
```

```
current = 1×12  
         0         0         0         0         0         0         0         0         0         0         0         0
```

```
jointSpeeds= [ 1 0 1 0 0];  
wheelSpeeds = [10 10 10 10]; % also called u  
speeds = [wheelSpeeds, jointSpeeds]
```

```
speeds = 1×9  
        10         10         10         10         1         0         1         0         0
```

```
dt = .001
```

```
dt = 1.0000e-03
```

```
limits = 12
```

```
limits = 12
```

Run NextState 100 times, returning a line of current postions for each iteration

```
for n = 1:999  
    [nextChasis,nextJoint,nextWheel] = NextState(current(n,:),speeds, dt, limits);  
    current(n+1,:)= [nextChasis, nextJoint,nextWheel];  
end  
% add a zero for gripper position  
current= cat(2,current,zeros(1+n,1));  
writematrix(current,'nextStateTest.csv')
```

watch at <https://youtu.be/-peABcrpfjE>