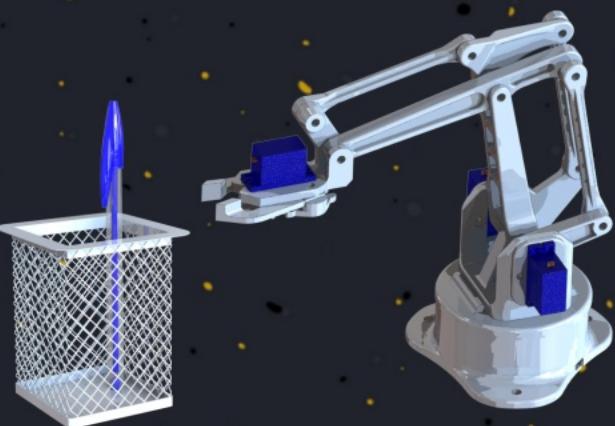
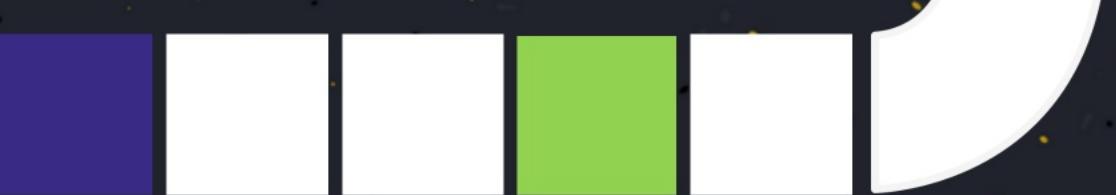
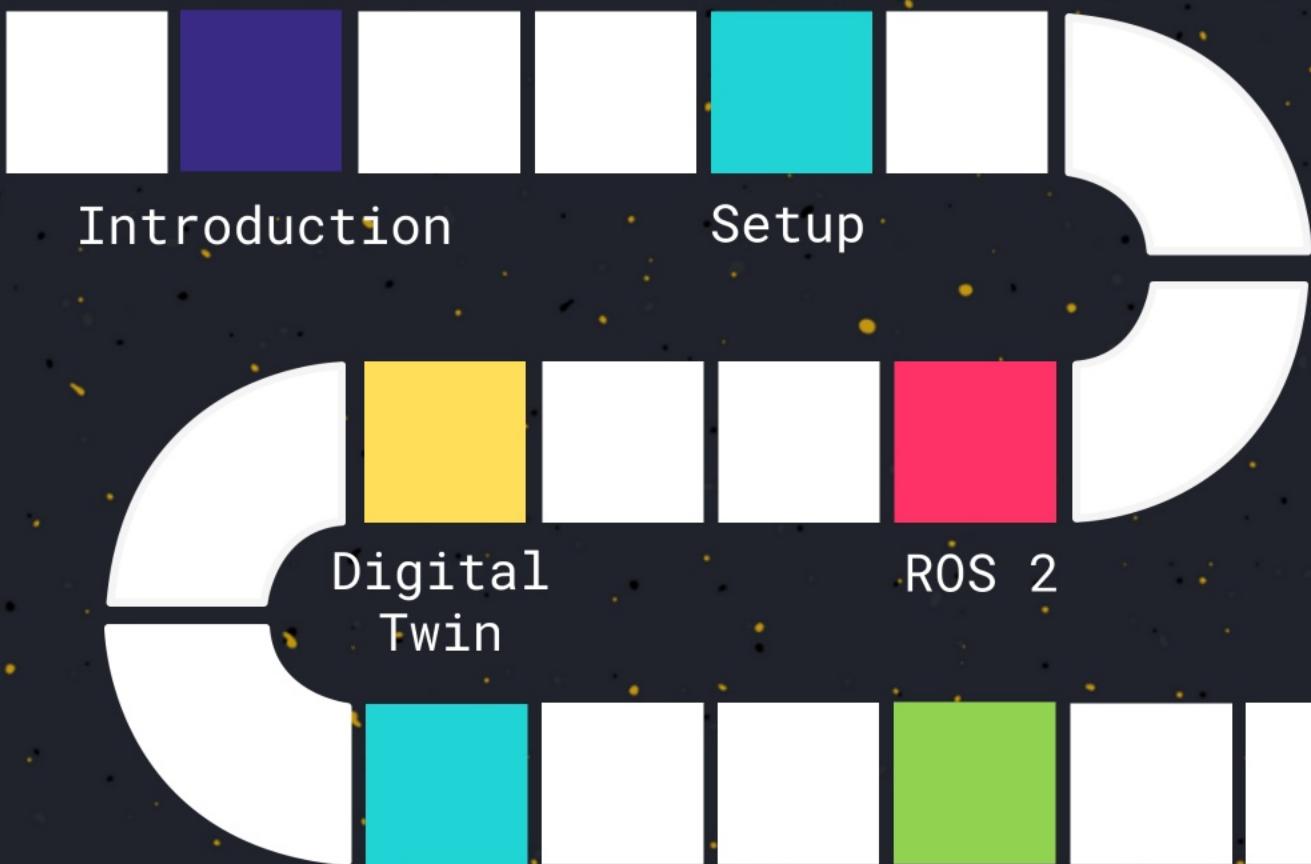
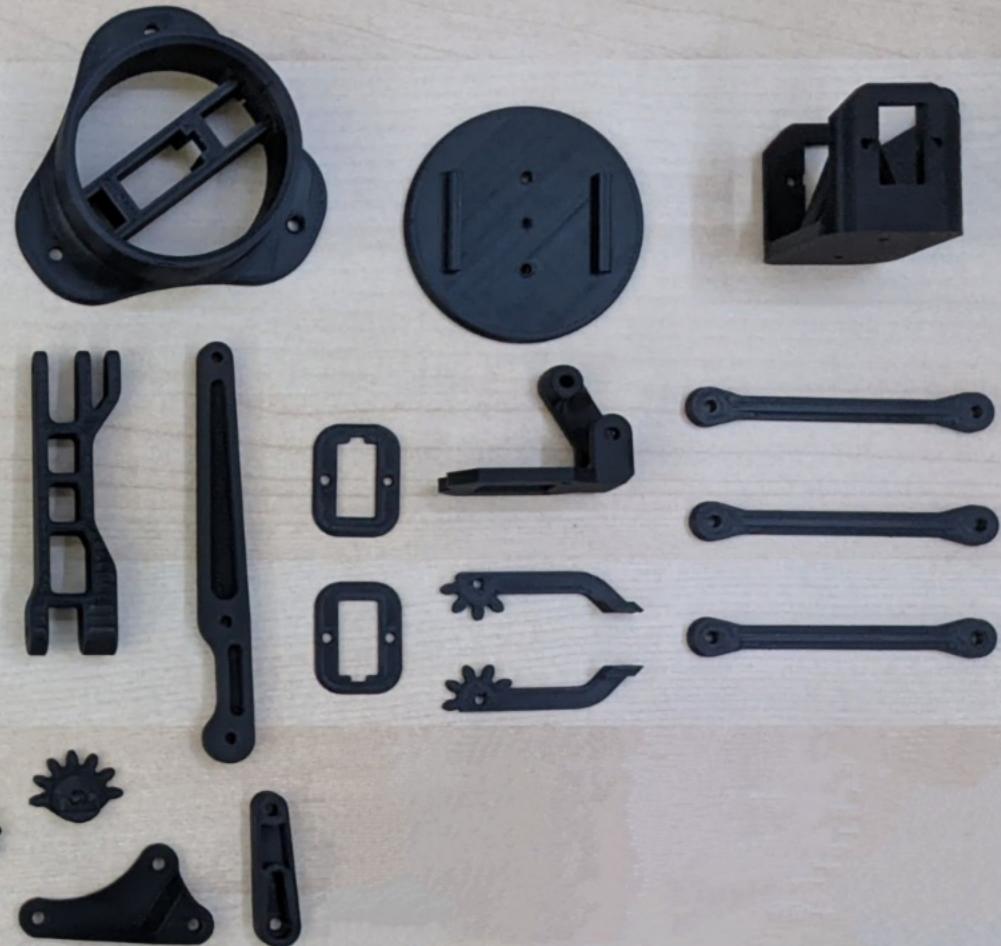
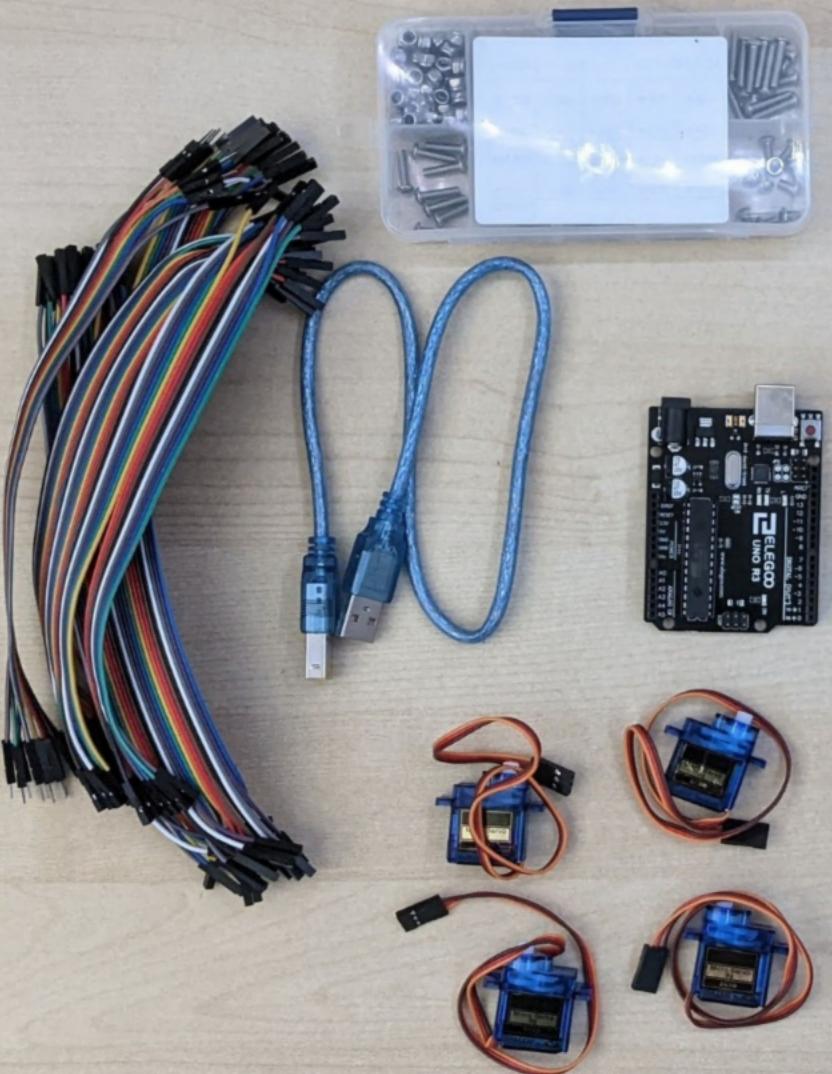


# Arduinobot

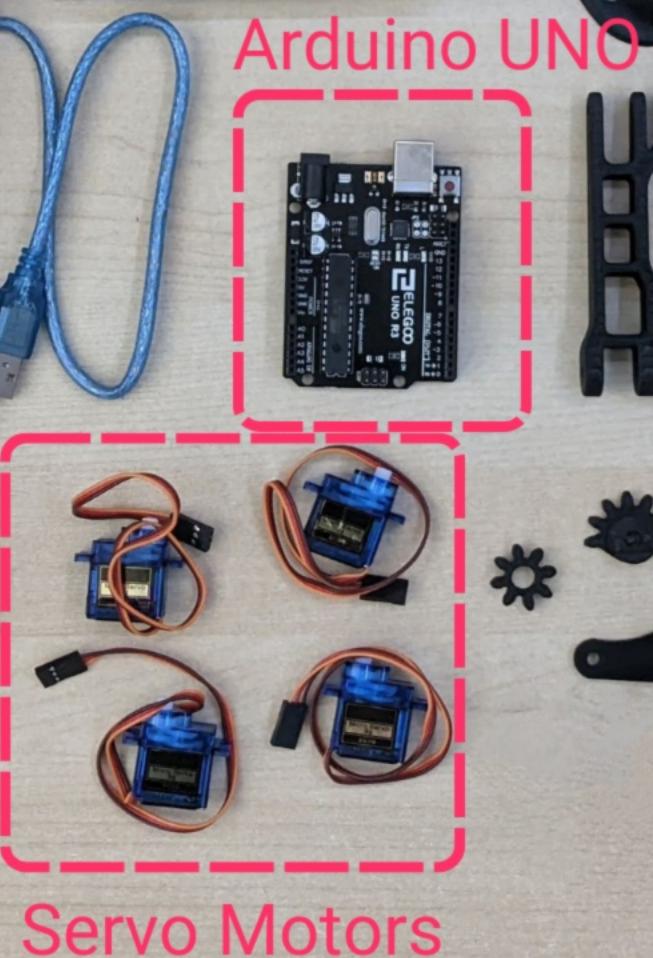
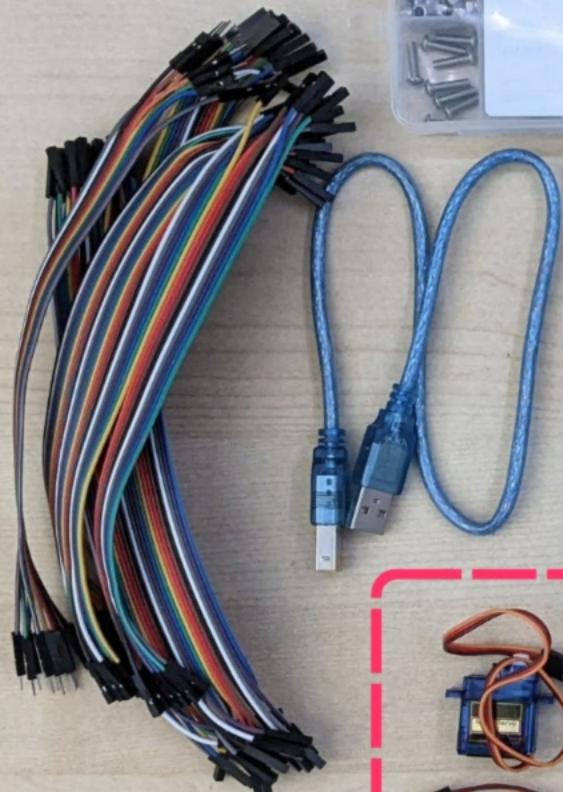






Arduino UNO





Jumper Cable



Arduino UNO



Servo Motors

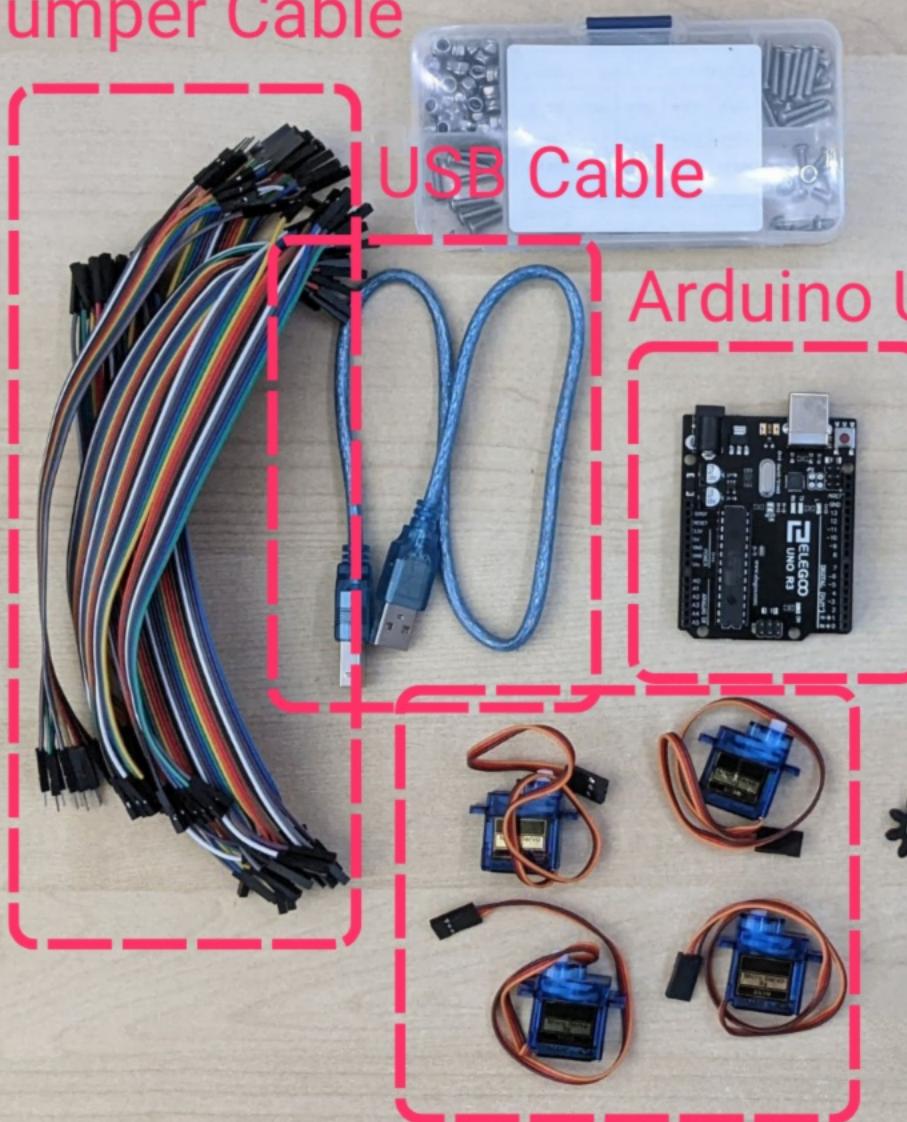


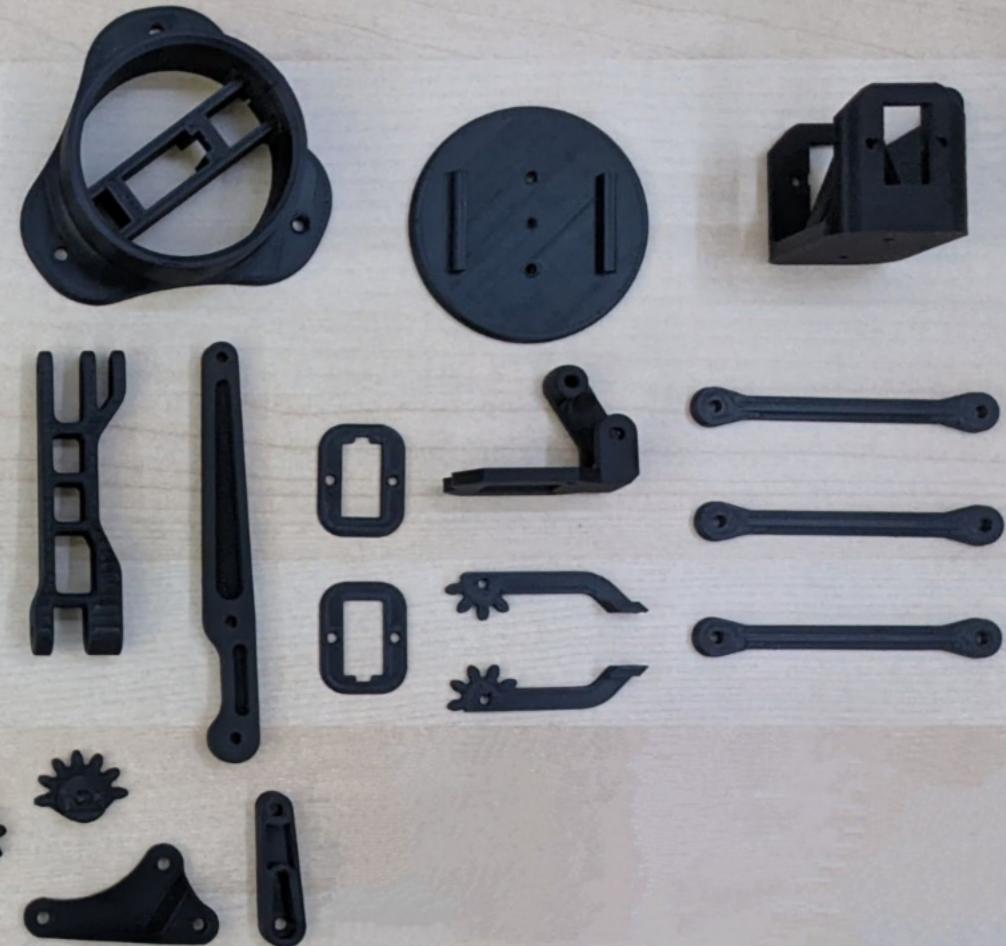
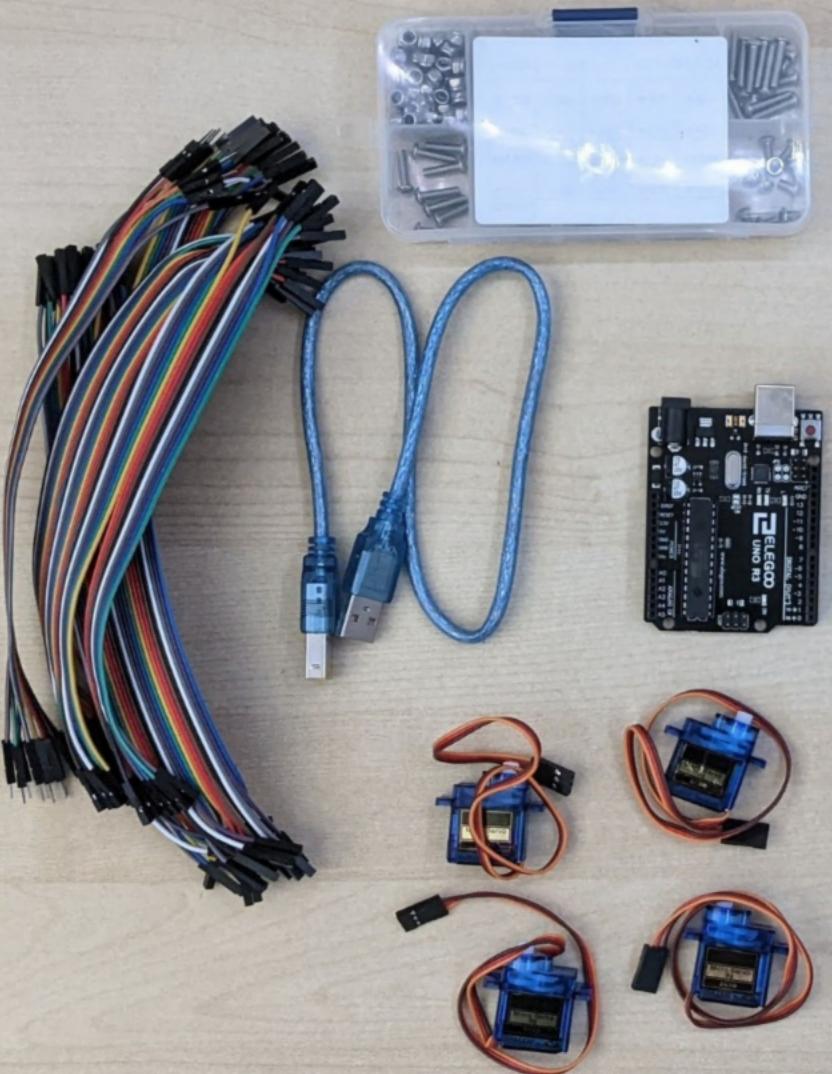
Jumper Cable

USB Cable

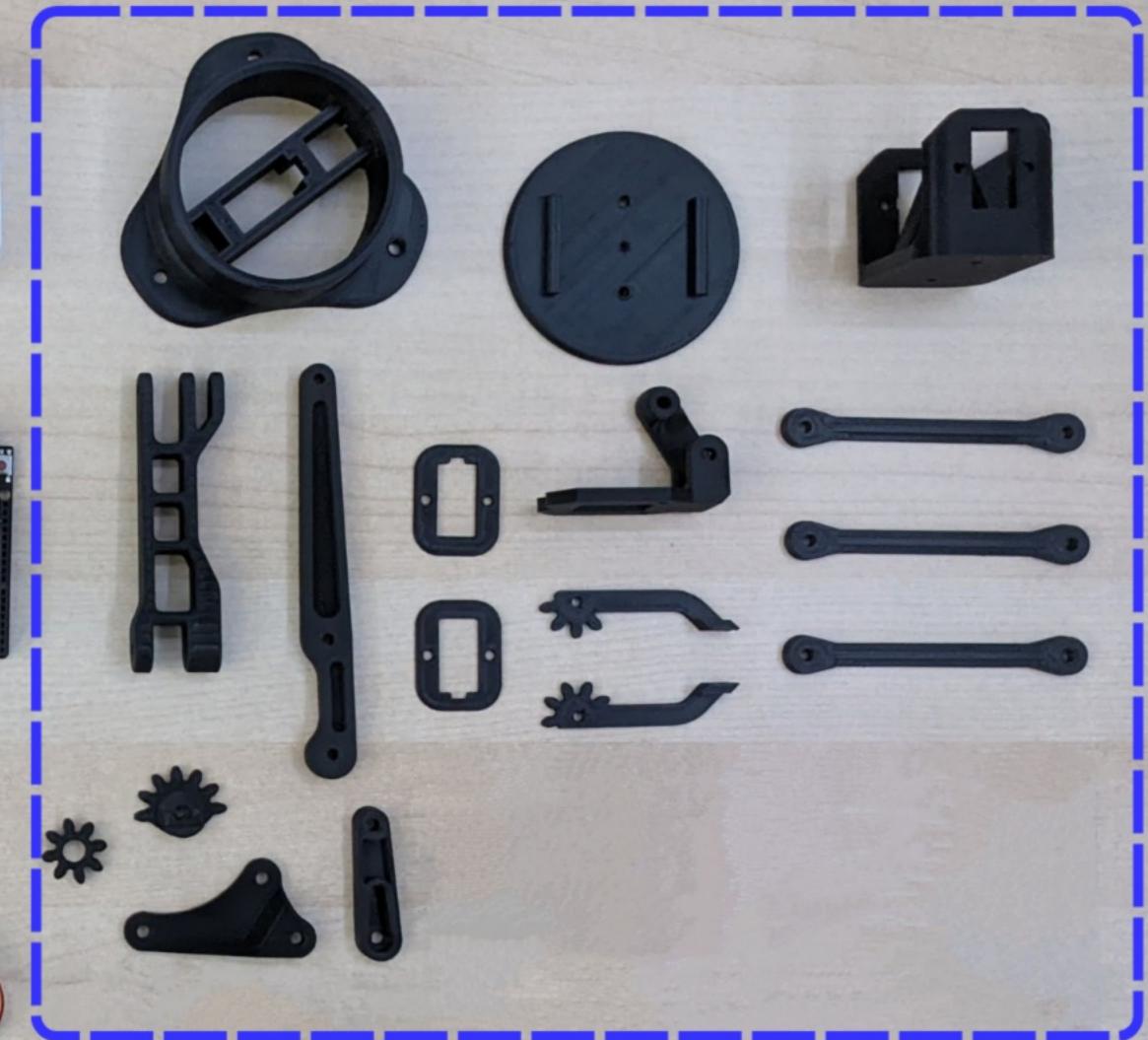
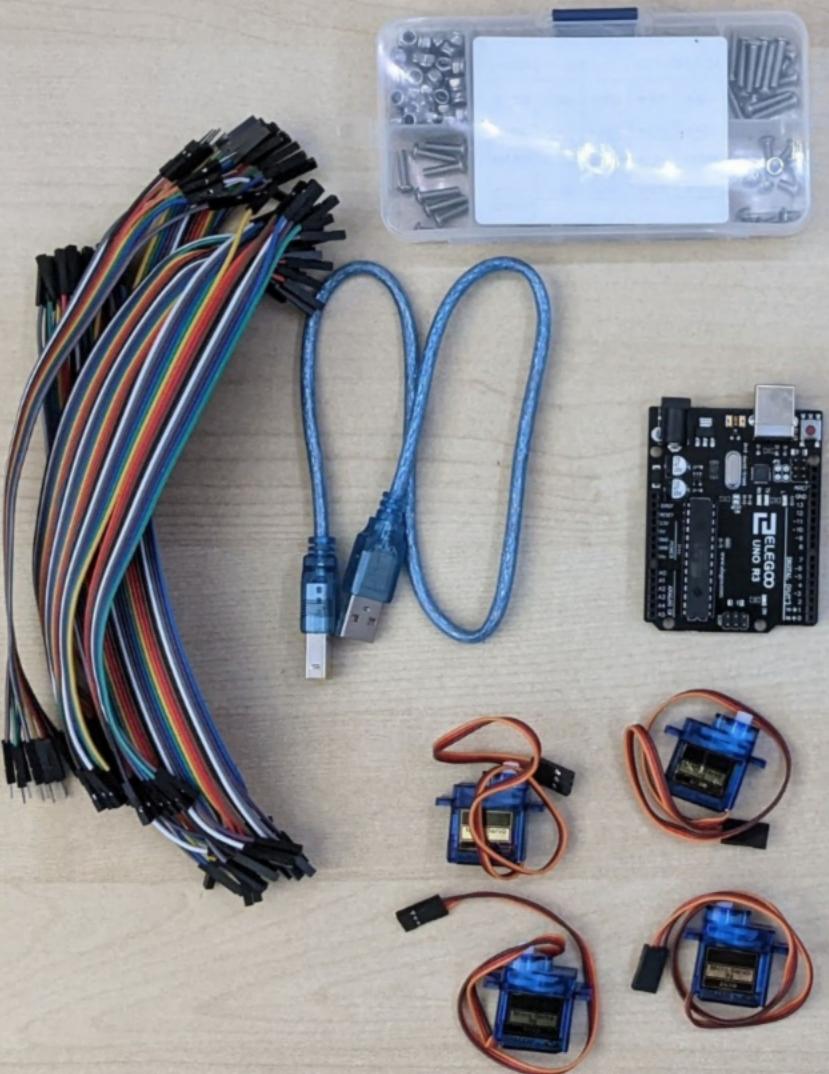
Arduino UNO

Servo Motors



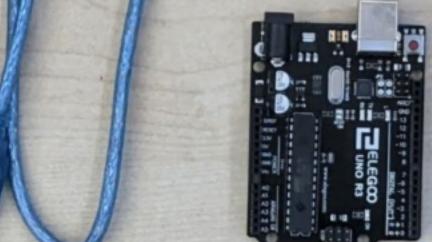
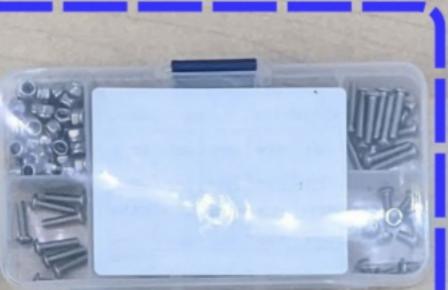


## Robot Parts



M3 Nuts and Bolts

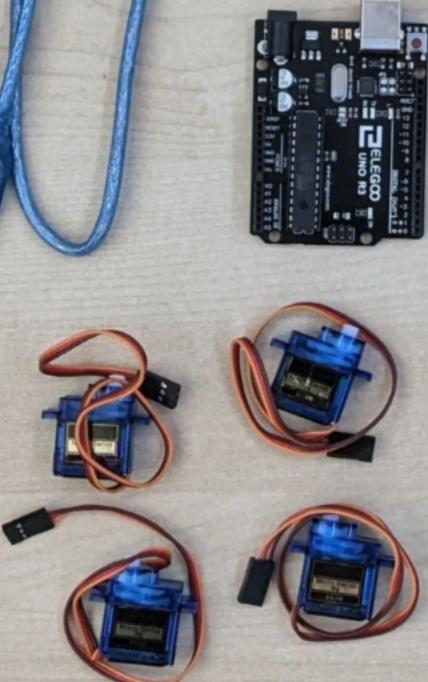
Robot Parts



M3 Nuts and Bolts

Robot Parts

M3 Screwdriver



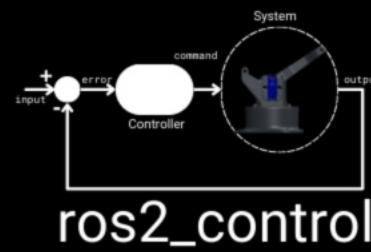


# ROS 2

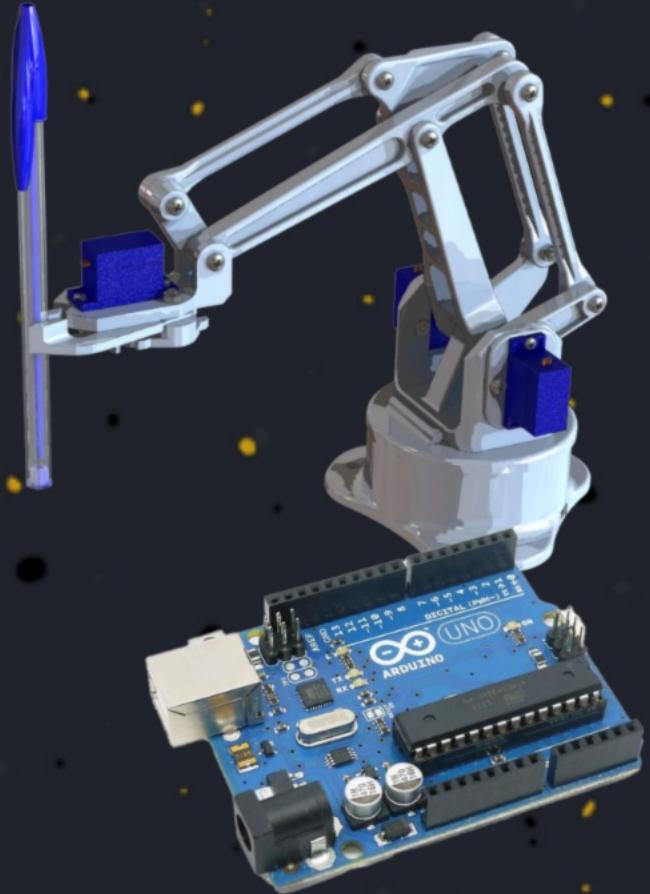
MoveIt2



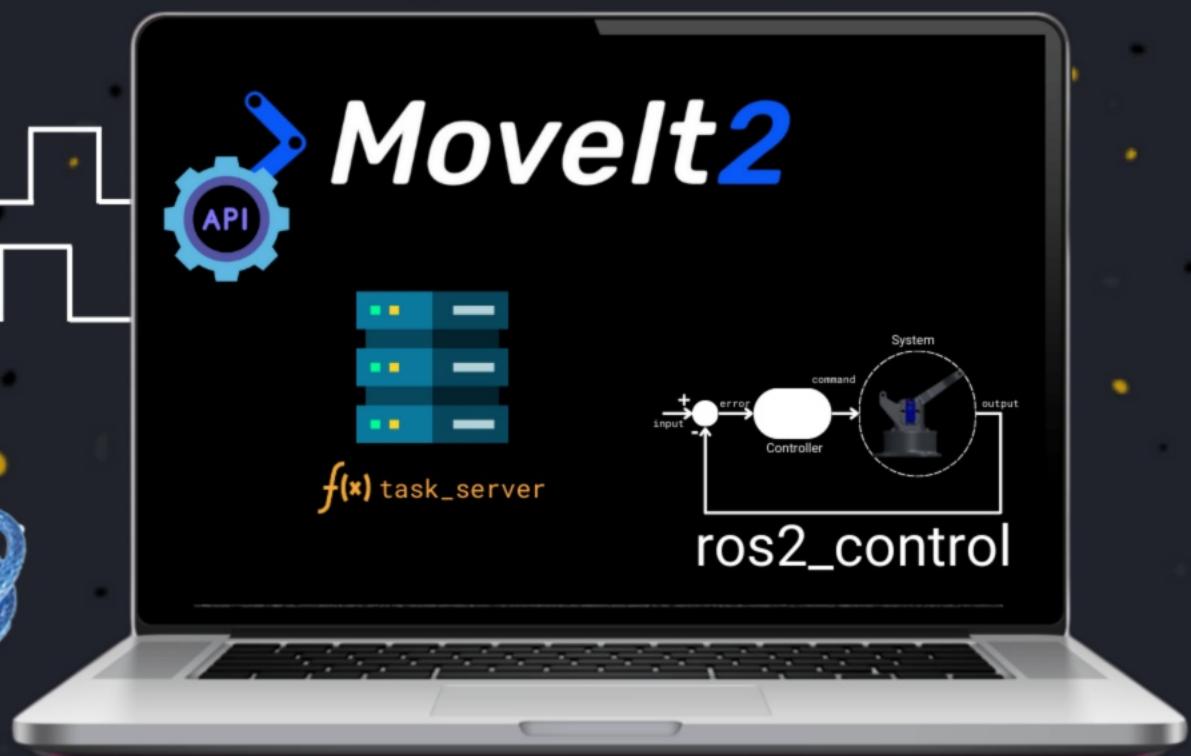
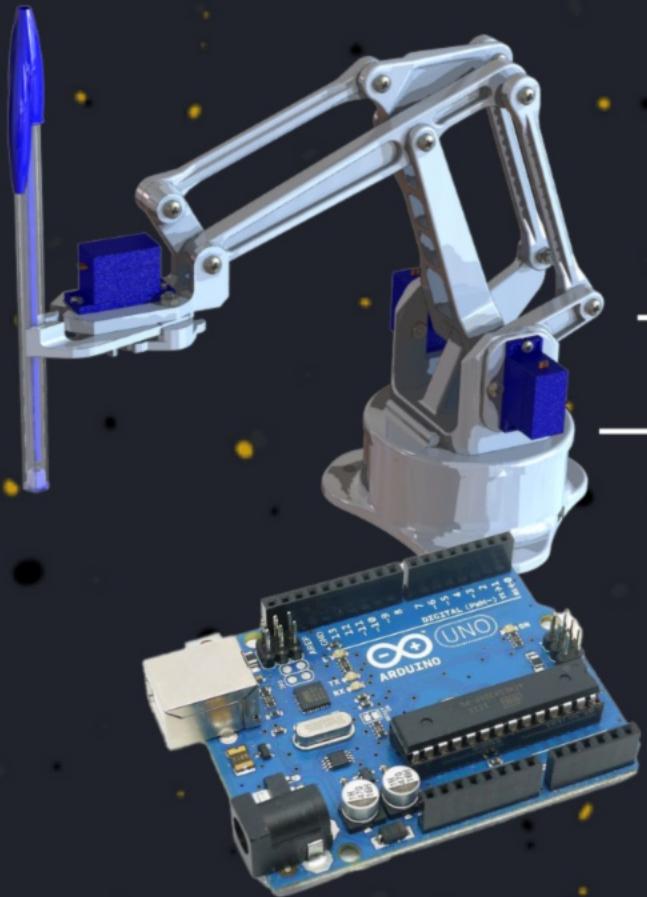
$f(x)$  task\_server



ros2\_control



## Serial Communication

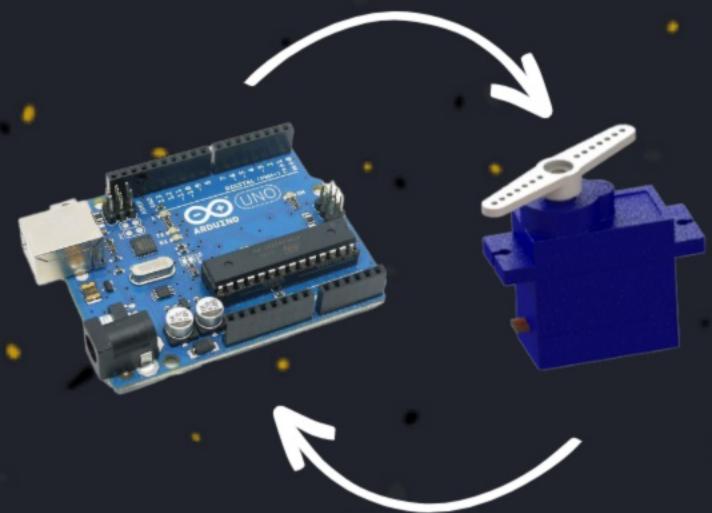


# ROS 2

# Lifecycle Nodes

Pick the Pen

Driver



# Lifecycle Nodes



# Lifecycle Nodes



# Lifecycle Nodes



# Lifecycle Nodes



# Lifecycle Nodes



# Lifecycle Nodes



# Lifecycle Nodes





Initial State

Unconfigured



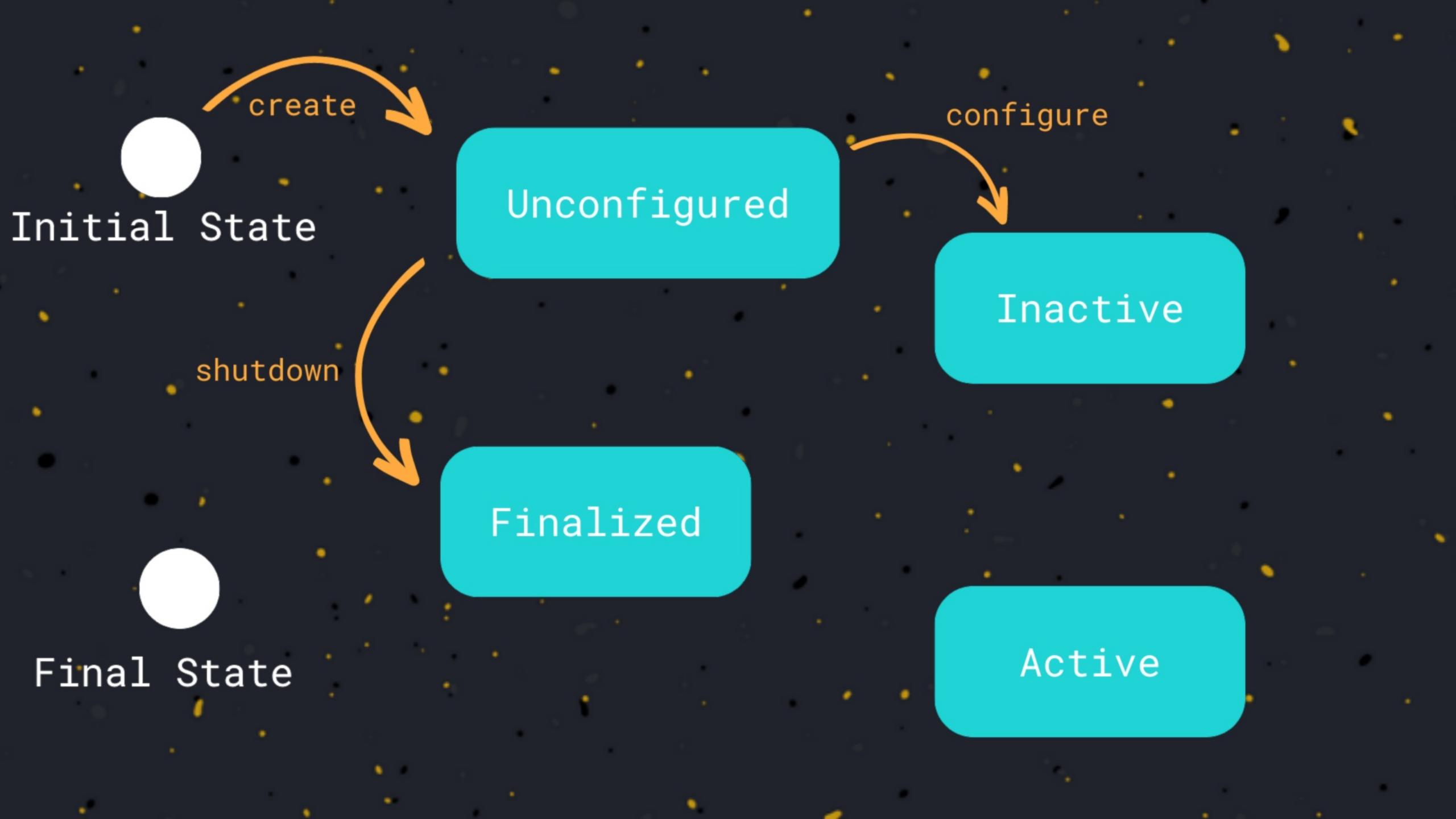
Final State

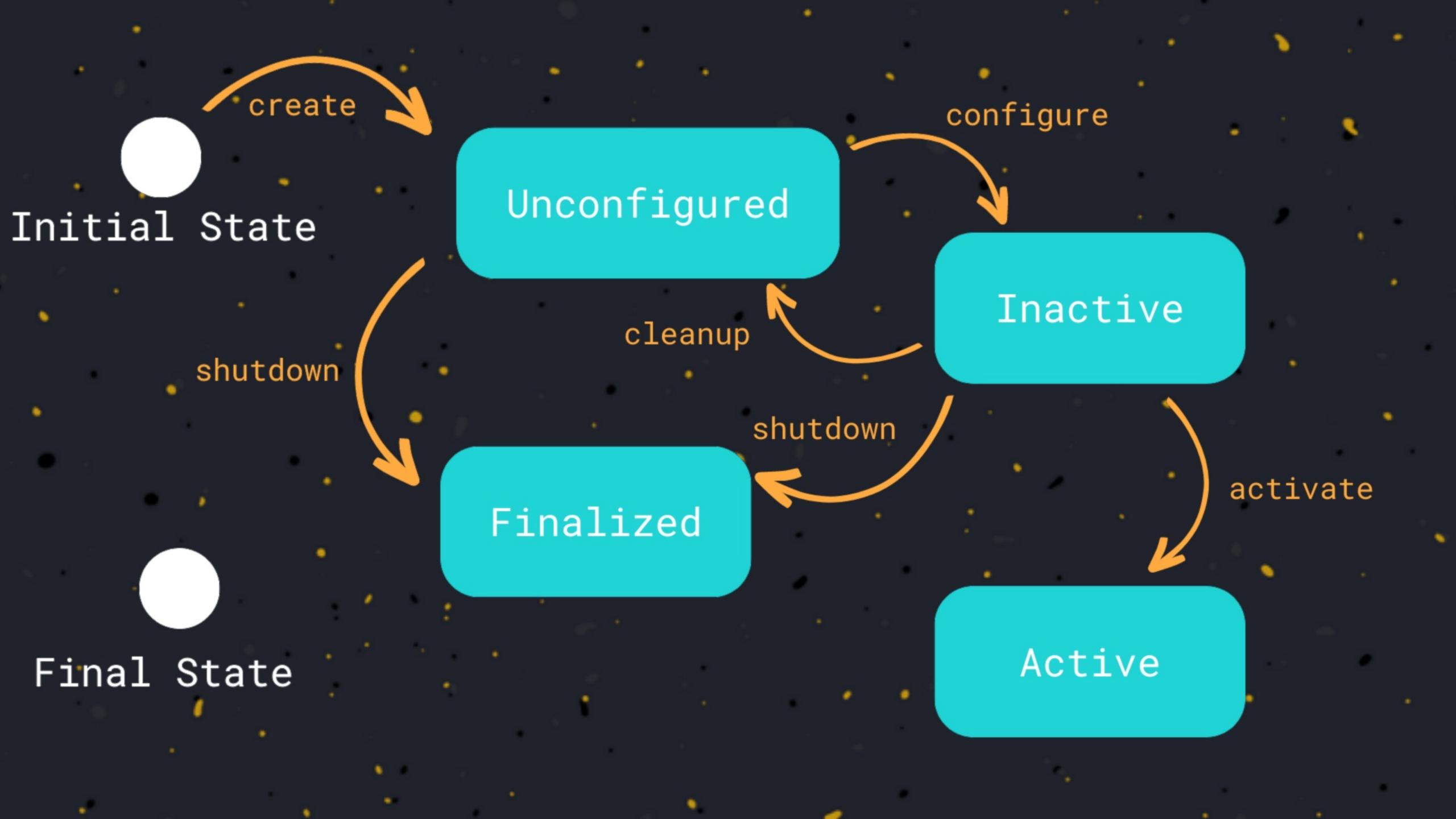
Inactive

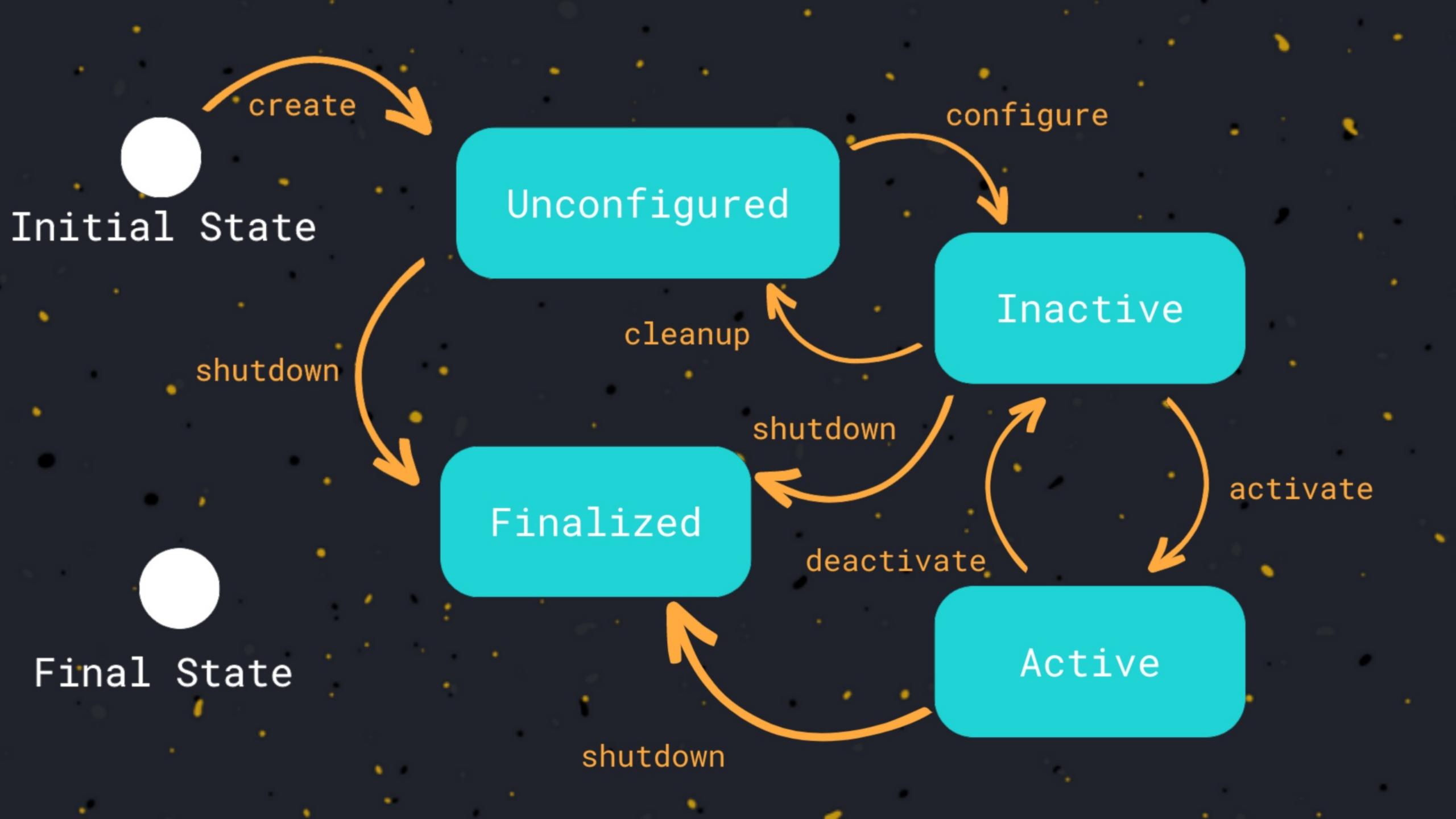
Finalized

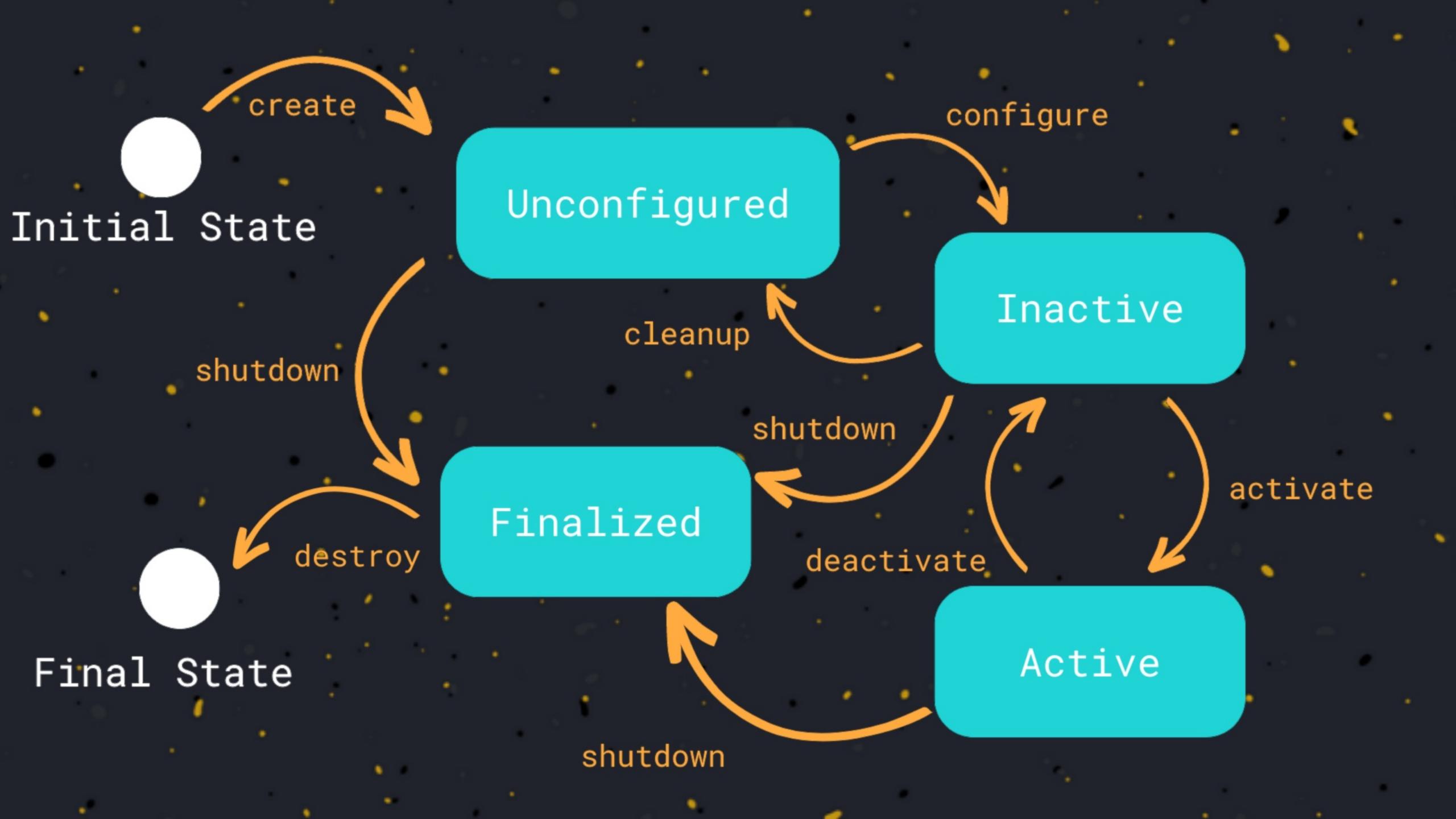
Active





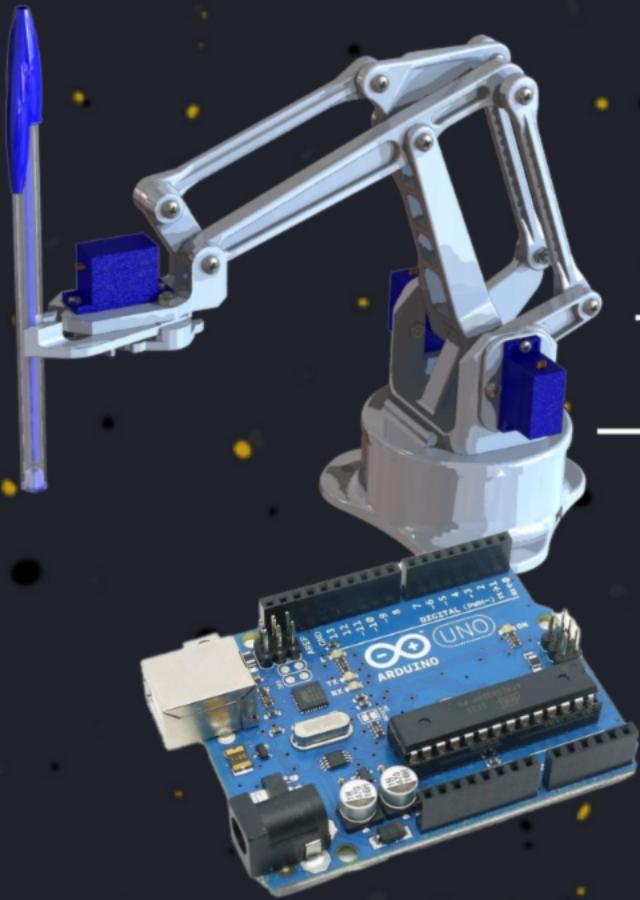




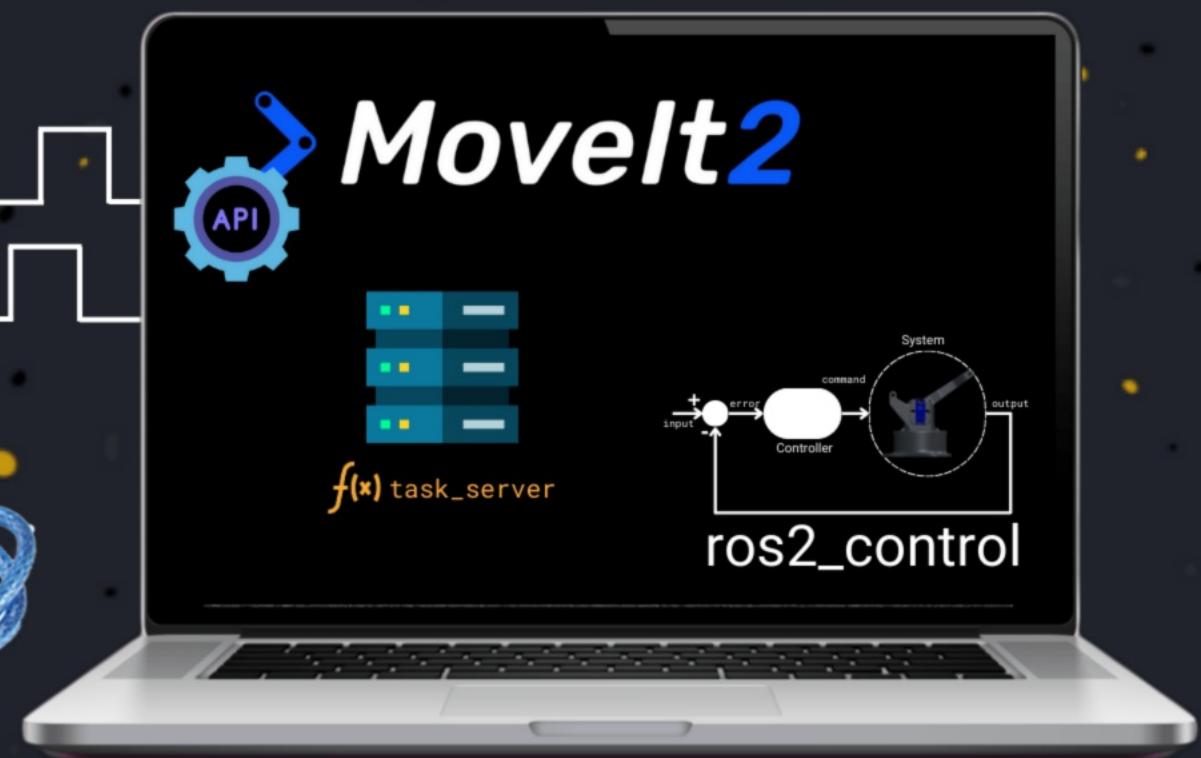


# Lifecycle Nodes





Serial  
Communication



ROS 2

b43,s92,e30,g0,

b43,s92,e30,g0,

base<angle>,

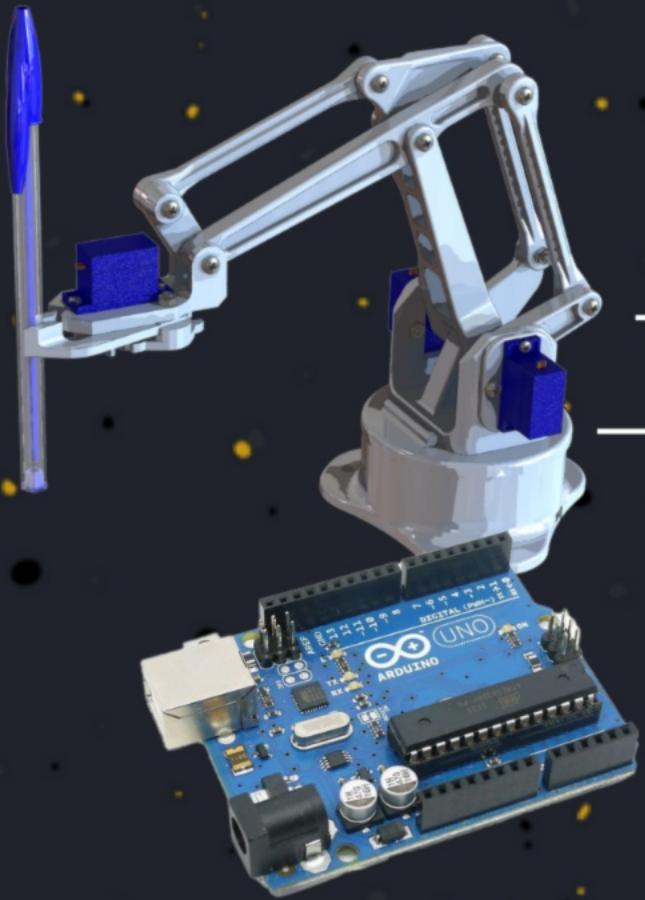
```
    shoulder<angle>,
    b43,s92,e30,g0,
base<angle>,
```

shoulder<angle>,  
**b43,s92,e30,g0,**

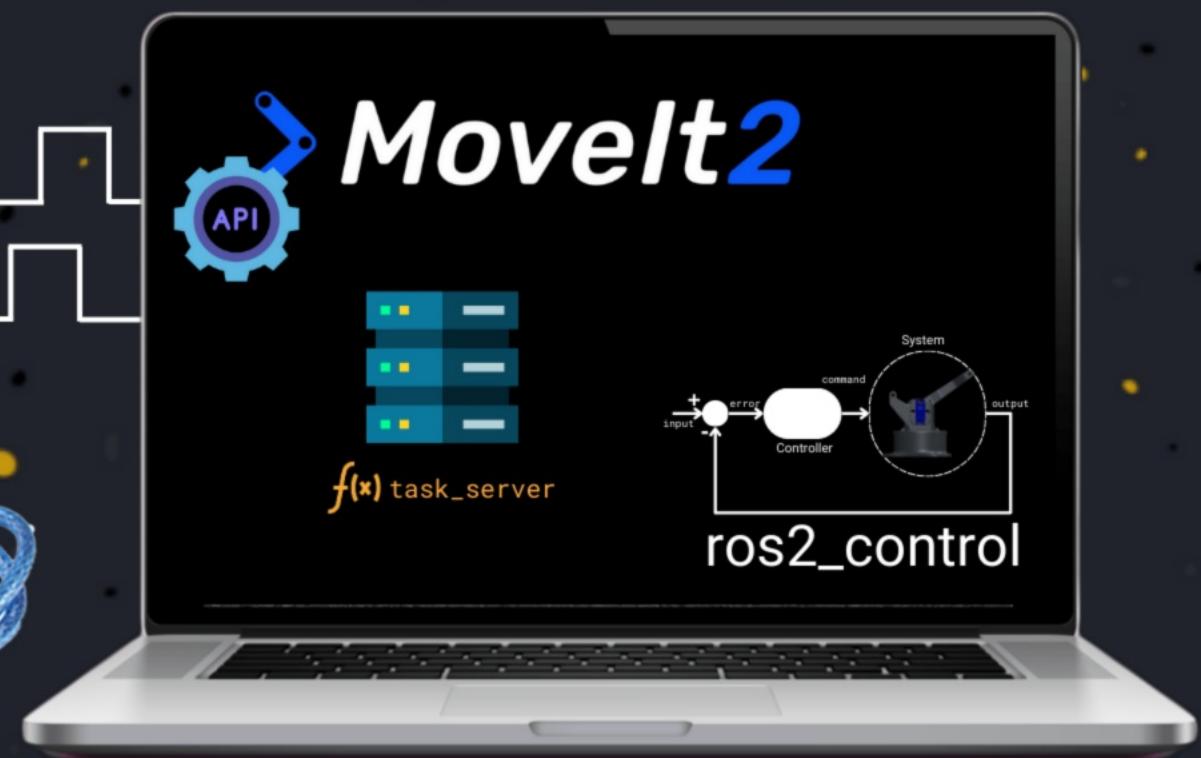
base<angle>, elbow<angle>,

```
shoulder<angle>, gripper<angle>,  
b43,s92,e30,g0,
```

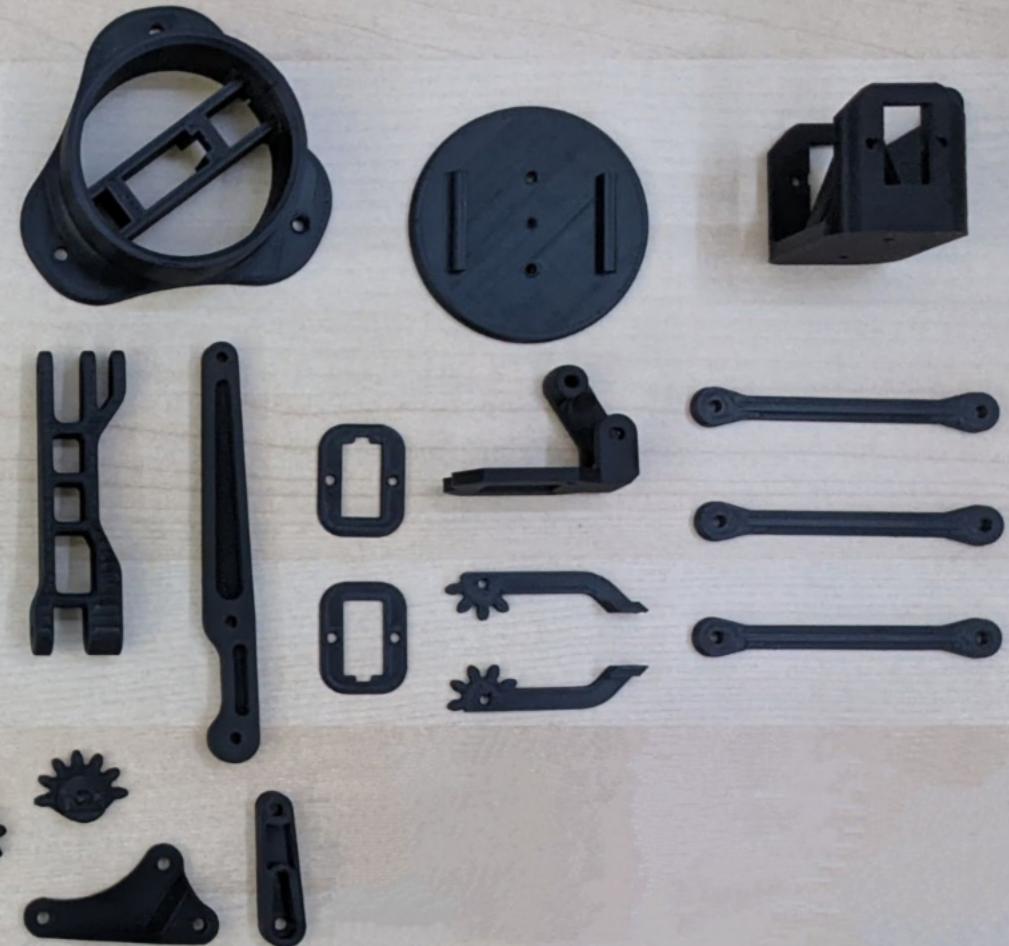
```
base<angle>, elbow<angle>,
```



Serial  
Communication



ROS 2



# Arduinobot

