SENSORS AND SERVO MOTORS

Robotics 360

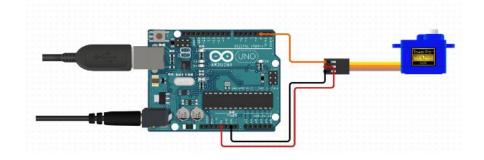
OBJECTIVE

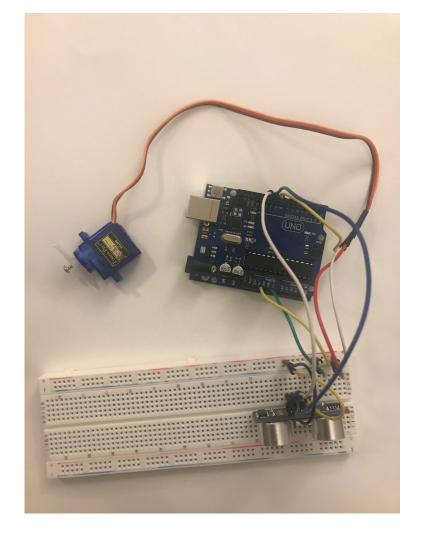
Create a program where a servo motor activates if a sensor senses a objective at a certain distance.



ARDUINO - BOARD

Follow the demonstration!





ARDUINO-PROGRAMMING

Set servo pin- sets the angle of the servo motor

Servo Motor Scratch program

```
UCTRONICS Program
 set servo pin 9 angle as 0
 wait 0.25 secs
 set servo pin 9 angle as 45"
 wait 0.25 secs
 set servo pin 9 angle as 90*
 wait 0.25 secs
 set servo pin 9 angle as 135*
 wait 0.25 secs
 set servo pin 9 angle as 180*
 wait 0.25 secs
 set servo pin 9 angle as 135*
 wait 0.25 secs
 set servo pin 9 angle as 90*
 wait 0.25 secs
 set servo pin 9 angle as 45"
 wait 0.25 secs
```

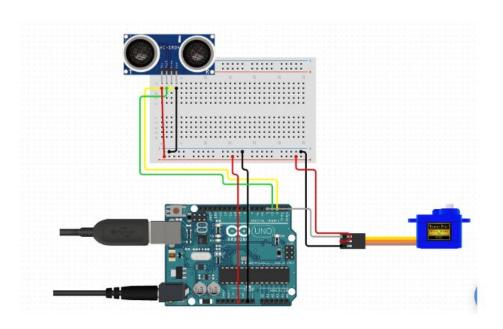
WHAT IS A SERVO MOTOR?

A motor that accounts for precise control of angular or linear position, velocity and acceleration.



For more information about the servo motor, click here and watch the video.

SERVO MOTOR AND SENSOR



```
Arduino Program
HC-SR04 Set echoPin: 11 trigPin: 10
 HC-SR04 Check distance (cm)
       HC-SR04 distance (cm) < 10 then
   repeat (2)
      set servo pin 9 angle as 0
      wait 0.25 secs
      set servo pin 9 angle as 25*
      wait 0.25 secs
      set servo pin 9 angle as 50*
      wait 0.25 secs
      set servo pin 9 angle as 25*
      wait 0.25 secs
```