```
clear;
mylego = legoev3('usb');
clearLCD(mylego)
% Ultrasonic Sensor
mysonicsensor = sonicSensor(mylego); % Creates connection to ultrasonic
sensor
hasTurnedAround = false;

% Motor Ports
mymotor1 = motor(mylego,'B');
mymotor2 = motor(mylego,'C');

% Motor Speeds
speed = 50;
mymotor1.Speed = speed;
mymotor2.Speed = speed;

mygyrosensor = gyroSensor(mylego);
resetRotationAngle(mygyrosensor);

% Sets variables
start_button = false;
button=true;
wheel_stop = false;

while(start_button == false && hasTurnedAround == false) % While start
button is not pressed
   if(readButton(mylego, 'up') == 1) % Starts loop when button is pressed
       pause(0.5)
       start(mymotor1);
       start(mymotor2);
       while(true && hasTurnedAround == false)
           proximity = readDistance(mysonicsensor);
           disp(proximity)
           pause(0.02)
           if(proximity <= 0.5)
               stop(mymotor1,1);
               stop(mymotor2,1);
               wheel_stop = true;
               pause(0.2);
           while(wheel_stop == true)
                angle = abs(readRotationAngle(mygyrosensor));
                disp(angle);
                playTone(mylego, 1000, 0.5, 7);
                start(mymotor2);
                if(angle >= 170 && angle <= 190)
                    stop(mymotor2,1);
                    %stop(mymotor1,1);
                    wheel_stop = false;
                    hasTurnedAround = true;
                    pause(0.5)
                    start(mymotor1);
```

```
                    start(mymotor2);
                end
            end
            end
        end
    end
end

pause(1);
stop(mymotor1, 1);
stop(mymotor2, 1);
```

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