Design a circuit to implement the following task :

Measure the distance of the nearest obstacle using ultrasonic sensor (HC SR05) and Arduino UNO.

1. If the distance is greater than X, then a DC motor should rotate clockwise
2. If the distance is lesser than Y (X >Y), then the same DC motor should rotate anti-clockwise
3. If the distance is between X and Y, then a DC motor should stop.

Simulate your circuit and code on Tinkercad and manually feed the values to the ultrasonic sensor to check if the above 3 conditions are satisfied.

Components required : Arduino UNO, small breadboard, DC motor, Ultrasonic sensor, L293D IC (not the module)

Ground Work : Learn the working of ultrasonic sensor, and make yourself aware about how to control a DC motor using L293D IC and Arduino UNO. Make an account on Tinkercad and start simulating.

NOTE: We used X=80 and Y=60.Although you can use any convenient values for simulation.

Submission : Once you are satisfied with the simulation, click on the SHARE button on your screen, a pop up message will display the link to your project. Copy that link and mail it to the undersigned.