

People Counter with Direction Detection:

Place an IR sensor on either side of a doorway to count the number of people entering and exiting. Display the count on a 7-segment display. Use the ultrasonic sensor to confirm direction by measuring the time an object passes between the two IR sensors.

<https://www.tinkercad.com/things/3x69GPfu20w-copy-of-people-counter-with-direction-detection>

Temperature Monitoring System:

Using a DHT11 or LM35 temperature sensor, create a temperature monitoring system that reads temperature data and displays it on the Serial Monitor. Adjust the code to send a warning message if the temperature exceeds a certain threshold.

<https://www.tinkercad.com/things/ibDScWw91Uc-copy-of-temperature-monitoring-system>

Motion-Activated Alarm:

Connect a PIR motion sensor to the Arduino and write code to sound a buzzer when movement is detected. Add a feature to log the timestamp of each detected movement in the Serial Monitor.

<https://www.tinkercad.com/things/IJBQXne0t8Y-copy-of-motion-activated-alarm>

Digital Stopwatch:

Create a simple stopwatch using an LCD display and two buttons. Use one button to start/stop the stopwatch and the other to reset it.

<https://www.tinkercad.com/things/1OfIZriTz6I-copy-of-digital-stopwatch>

Countdown Timer with Obstacle-Activated Reset:

Use the touch sensor to start a countdown on the 7-segment display. If the ultrasonic sensor detects an obstacle (within a specified range) during the countdown, reset the timer. Display "E" on the display if the countdown completes without interruption.

<https://www.tinkercad.com/things/cDsXwqYaAhG-copy-of-4countdown-timer-with-obstacle-activated-reset>

Touch-Activated Range Finder:

Program the Arduino to take a distance reading from the ultrasonic sensor only when the touch sensor is activated. Display the measured distance on the 7-segment display and hold the value for 5 seconds before clearing.

<https://www.tinkercad.com/things/hJwbyplTOQe-copy-of-touch-activated-range-finder-partial>

Smart Distance Counter:

Connect both an ultrasonic sensor and a touch sensor to the Arduino. Display a counter on the 7-segment display that increments every time an object (such as a hand) crosses a specified distance threshold (detected by the ultrasonic sensor). Use the touch sensor to reset the counter.

<https://www.tinkercad.com/things/6ux1SDrahzM-copy-of-smart-distance-counter>

Distance Measurement Display:

Connect an ultrasonic sensor and a 7-segment display to the Arduino. Program it to measure the distance to an object in front of the ultrasonic sensor and display the result on the 7-segment display.

<https://www.tinkercad.com/things/8i3DqnjUhl7-copy-of-distance-measurement-display>