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| l5 Project\_LOCKER\_ A simple, yet useful project that has been implement in many appliances to date. Components\_ 1x Ultrasonic Sensor  1x Liquid Crystal Display  1x Arduino Uno Board  1x BreadBoard  1x Arduino connector  1x Servo Motor  Few M-M Jumper Wires  Few M-F Jumper Wires Pics\_and\_Videos\_ On WhatsApp Groups, both pics and videos are shared | |  | | --- | | Abhinav vattimilliL5 robotics project | online Sea Breeze Robotics batch, project LOCker |  Working\_of\_project\_Working\_ The Ultrasonic sensor is tweaked to a range of 10 cm while the LCD is programmed to display a default message of “LOCKED” as long as there is nothing within the proximity of the Ultrasonic sensor, while the Servo motor is set at 0º. Whenever an object is detected in the given range of the Ultrasonic sensor, it relays the data to the LCD and the Servo motor. The Servo turns 90º while the LCD changes the displayed message to “Welcome!”. And within 1000 milliseconds of removing the object from the proximity of the sensor, the LCD changes the message back to “LOCKED” while the Servo motor returns to its original angle of 0º. Pin Connections\_ servopin 6  trig 7 VCC to 5V  echo 8 GND to GND of Arduino  VSS -GND of Arduino VDD -5V of Arduino  VO to potpin RW -GND of Arduino A -5V of Arduino K -GND of Arduino  rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2 Applications\_and\_uses\_Applications In Banks, security houses, prisons, etc. To prevent theft, crime, escape etc. and commercially for everyone too. Uses These Lock Boxes can be made more precise with the help of fingerprint, retina or face scanners that are common in today’s world. It can be used to safely store smaller valuables safely, within one’s own residence. All in all, it is a safer alternative to lockers due to its efficiency. |

### Code\_

#include <LiquidCrystal.h>

#include <Servo.h>

#define trig 7

#define echo 8

Servo myservo;

int servopin=6;

const int rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2;

LiquidCrystal lcd(rs, en, d4, d5, d6, d7);

void setup() {

pinMode(trig,OUTPUT);

pinMode(echo,INPUT);

lcd.begin(16,2);

lcd.print("Please Verify");

myservo.attach(servopin);

}

void loop() {

long duration,distance;

digitalWrite(trig,HIGH);

delay(1000);

digitalWrite(trig,LOW);

duration=pulseIn(echo,HIGH);

distance=duration/58.2;

Serial.print("Distance:");

Serial.println(distance);

delay(1000);

if(distance<10)

{

lcd.setCursor(0, 1);

lcd.print("Welcome!");

myservo.write(90);

delay(1000);

}

else

{

lcd.setCursor(0, 1);

lcd.print("LOCKED!!");

myservo.write(0);

delay(1000);

}

}