Parking Sensor

```
#include <LiquidCrystal.h>

// initialize the library with the numbers of the interface pins
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);
int inches = 0;

int cm = 0;

long readUltrasonicDistance(int triggerPin, int echoPin)
{
  pinMode(triggerPin, OUTPUT);  // Clear the trigger
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  // Sets the trigger pin to HIGH state for 10 microseconds
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
  // Reads the echo pin, and returns the sound wave travel time in microseconds
  return pulseIn(echoPin, HIGH);
}

void setup() {
  Serial.begin(9600);
  pinMode(9,OUTPUT); //led
  pinMode(10,OUTPUT);//buzzer
  // set up the LCD's number of columns and rows:
  lcd.begin(16, 2);
  lcd.setCursor(2,0);
  // Print a message to the LCD.
```

```
 lcd.print("Cm");
}

void loop() {



 // set the cursor to column 0, line 1
 // (note: line 1 is the second row, since counting begins with 0):
  lcd.setCursor(5, 1);
 // print the number of seconds since reset:

  cm = 0.01723 * readUltrasonicDistance(7, 7);
 // convert to inches by dividing by 2.54

 inches = (cm / 2.54);
 if(cm>75 && cm<100)
 {
   digitalWrite(9,HIGH);
   digitalWrite(10,HIGH);
   delay(1000);
   digitalWrite(9,LOW);
   digitalWrite(10,LOW);
   delay(1000);
 }
 else if(cm>50 && cm<75)
 {
   digitalWrite(9,HIGH);
   digitalWrite(10,HIGH);
   delay(500);
   digitalWrite(10,LOW);
   digitalWrite(9,LOW);
```

```
    delay(500);
  }
  else if(cm<50)
  {
    digitalWrite(10,HIGH);
    digitalWrite(9,HIGH);
  }
  else
  {
    digitalWrite(10,LOW);
    digitalWrite(9,LOW);
  }

  lcd.print(cm);
  Serial.print(inches);
  Serial.print("in, ");
  Serial.print(cm);
  Serial.println("cm");
  delay(100); // Wait for 100 millisecond(s)

}
```