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//Good Soup:
//Detect sound to make motor run clockwise
//Motor runs forwards, LED turns off
//Time delay stops motor, LED turns on solid
//Button pressed to reverse motor back down, while motor is in reverse, LED flashes
//Time delay stops motor at the bottom, LED is solid again

void setup()
{
  Serial.begin(9600);
  //OUTPUTS
  //pinMode(LED_BUILTIN, OUTPUT);
  pinMode(13, OUTPUT); //Motor forward
  pinMode(12, OUTPUT); //Motor backward
  pinMode(3, OUTPUT); //LED
  //INPUTS
  pinMode(2, INPUT); //Push Button (lower button)
  pinMode(4, INPUT); //Sound Sensor (here upper button)
}

void loop()
{
  digitalWrite(3, LOW); //LED initialized off
  if (digitalRead(4) == HIGH){ //If button/voice sensor is activated
    for (int xnew = 0; xnew<70; xnew++){ //go through loop until height is desired (can be
      changed to change height)
      //To change height the spoon stops at, increase the 'xnew< ...' variable to go for longer,
      decrease to go for less time
      //Run motor forwards
      Serial.print("motor running forwards\n"); //monitor if the motor is running correctly
      analogWrite(13, 255);
      digitalWrite(12, LOW);
    }
  }
  //If nothing is triggered, motor is off and LED is ON
  digitalWrite(13,LOW);
  digitalWrite(12,LOW);
  digitalWrite(3, HIGH);

  if (digitalRead(2) == HIGH){ //If button is pressed
    for (int ynew = 0; ynew<17; ynew++){ //go through loop until height is desired (can be
      changed to change height)
      //To change height the spoon stops at, increase the 'ynew< ...' variable to go for longer,
      decrease to go for less time

```

```
//Run motor backwards
analogWrite(12, 255);
digitalWrite(13, LOW);
//Flash LED while motor Runs backwards
digitalWrite(3, LOW);
delay(50);
digitalWrite(3, HIGH);
delay(50);
}
}
}
```