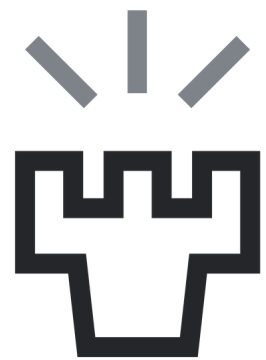


Owgle

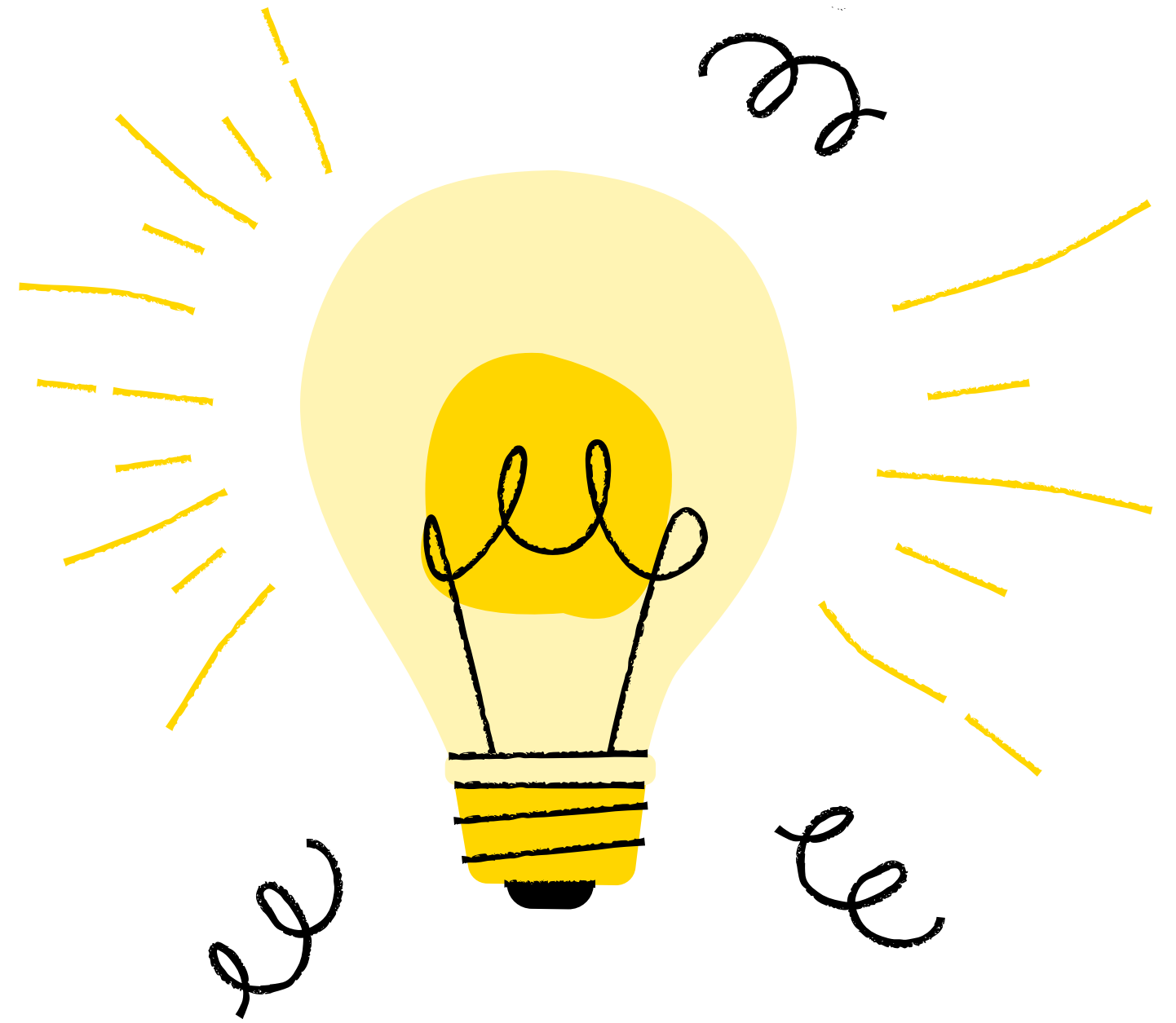
Juuso Herajärvi, Juuso Särkelä,
Petra Heikkinen & Sara Jokitalo



UNIVERSITY
OF OULU

PRINCIPLES OF DIGITAL FABRICATION | SPRING 2021

Where it all
started?
How we come up
with our idea?



Our first sketch



Sketches

"some sound"



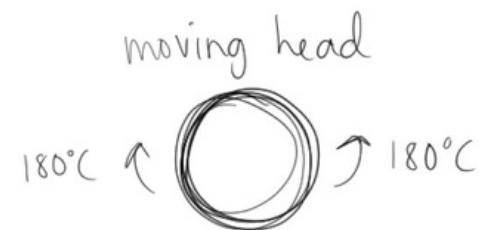
box where
arduino and
most of the parts
is placed



object too close
→ wing/wings up
shaking head
+ some sound

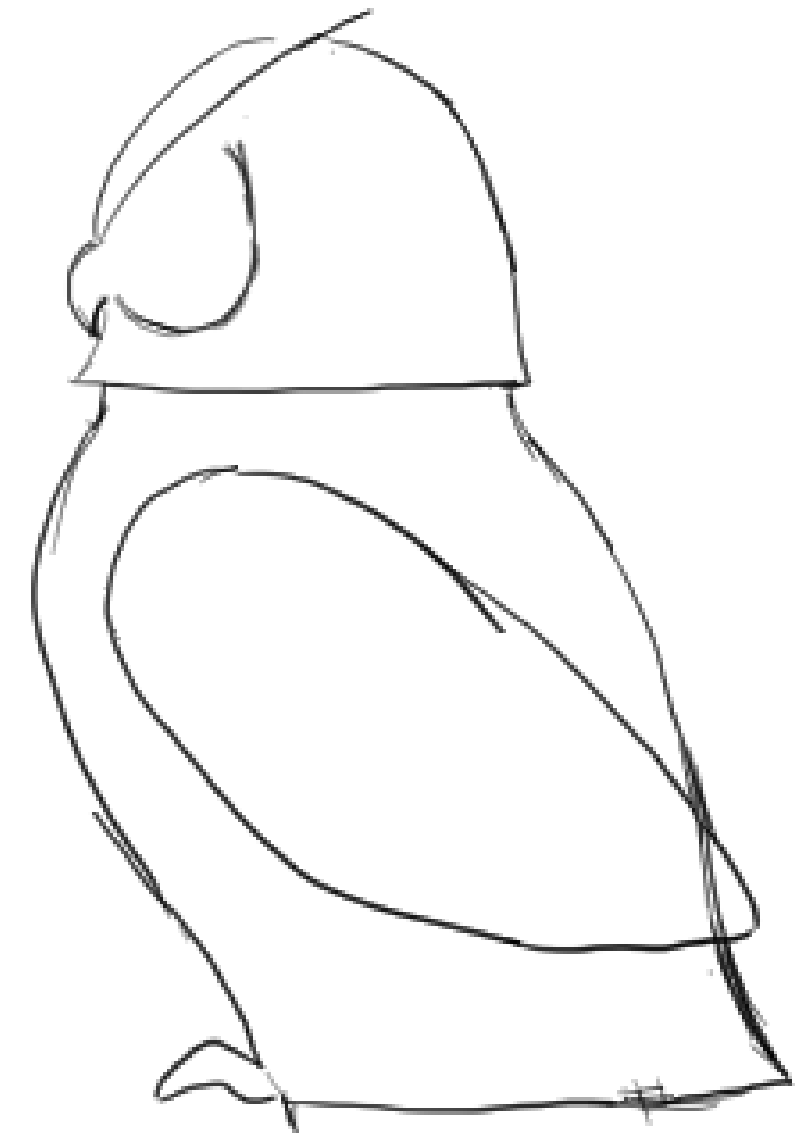
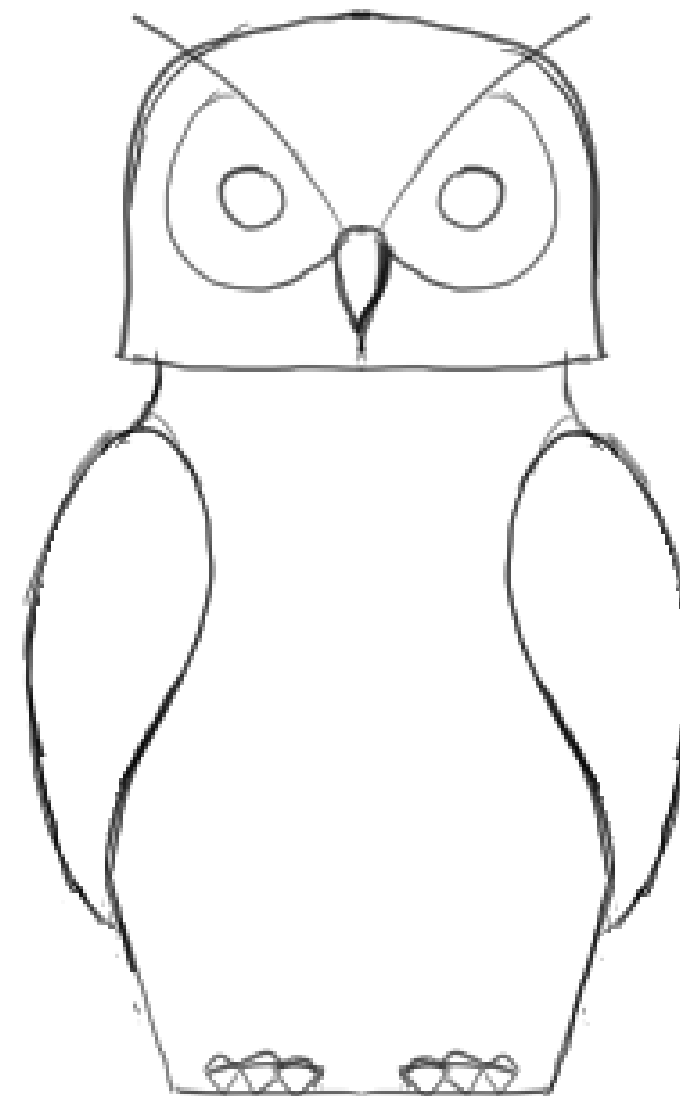
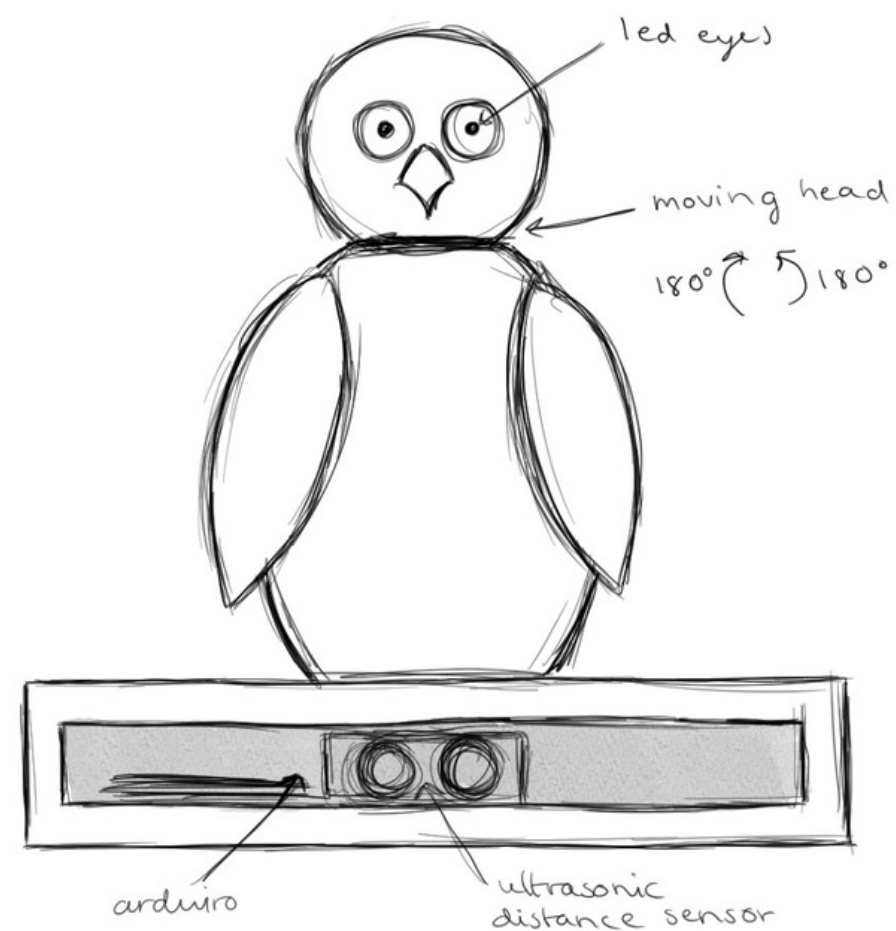


4x PIR sensor

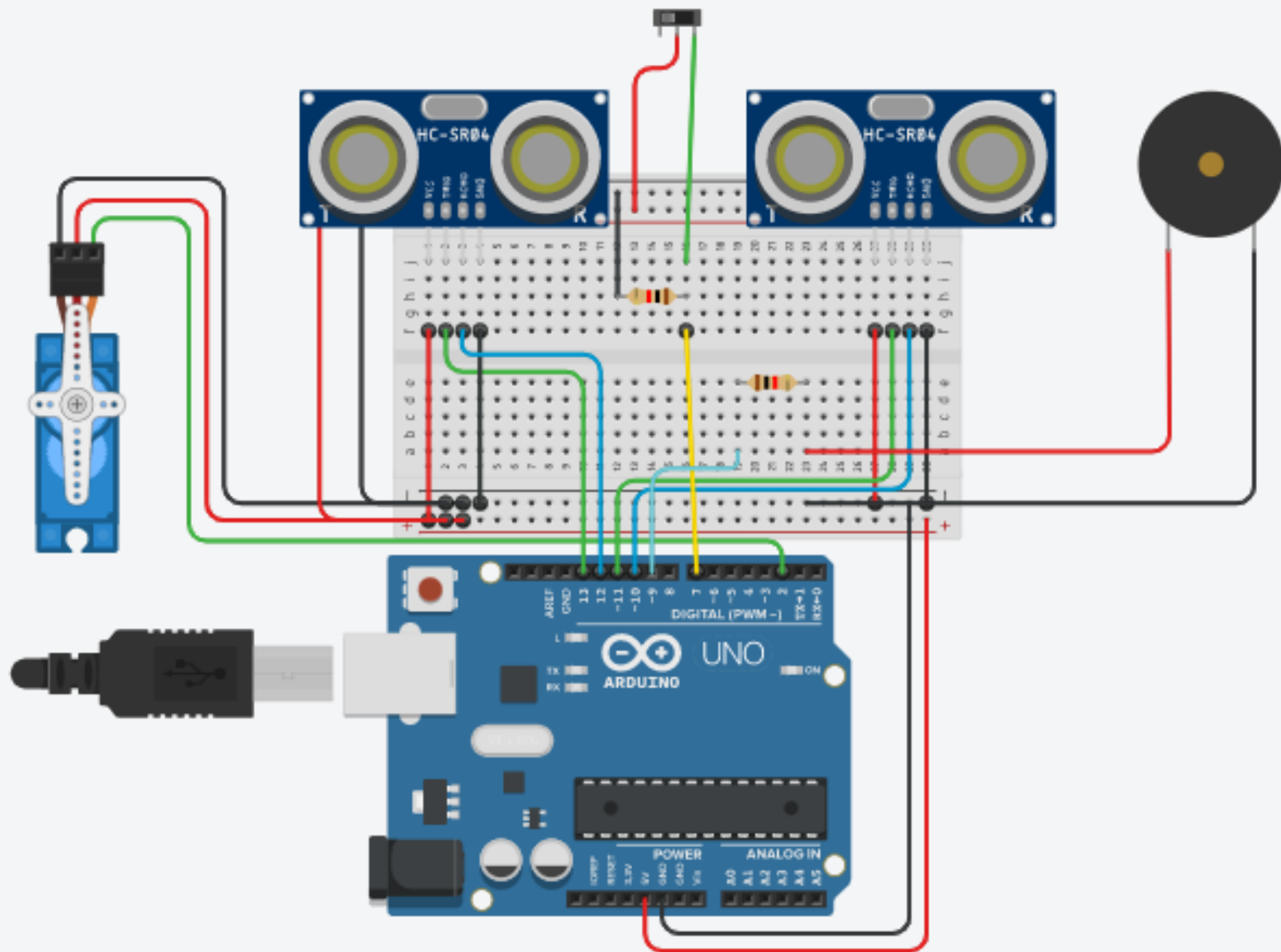


head follows
the movement

servo moving the head
servo moving the wings



Arduino circuit + code



OWGLE | Arduino 1.8.13

File Edit Sketch Tools Help



OWGLE

```
#include <Servo.h>
Servo myservo;
int sensor_1_trig = 13;
int sensor_1_echo = 12;

int sensor_2_trig = 11;
int sensor_2_echo = 10;

int servo = 2;

int buzzer = 9;

int on_off = 7;

long duration_right, duration_left, cm_right, cm_left;

int threshold = 50; //sets the distance on which the sensor detects 'movement'
int angle = 90; // sets the starting angle for the servo
int shout = 5; // sets the distance on which the buzzer activates
int pass; // an empty variable used in the buzz() function

void setup()
{
  Serial.begin(9600);
  myservo.attach(2);

  pinMode(sensor_1_trig, OUTPUT);
  pinMode(sensor_1_echo, INPUT);

  pinMode(sensor_2_trig, OUTPUT);
```

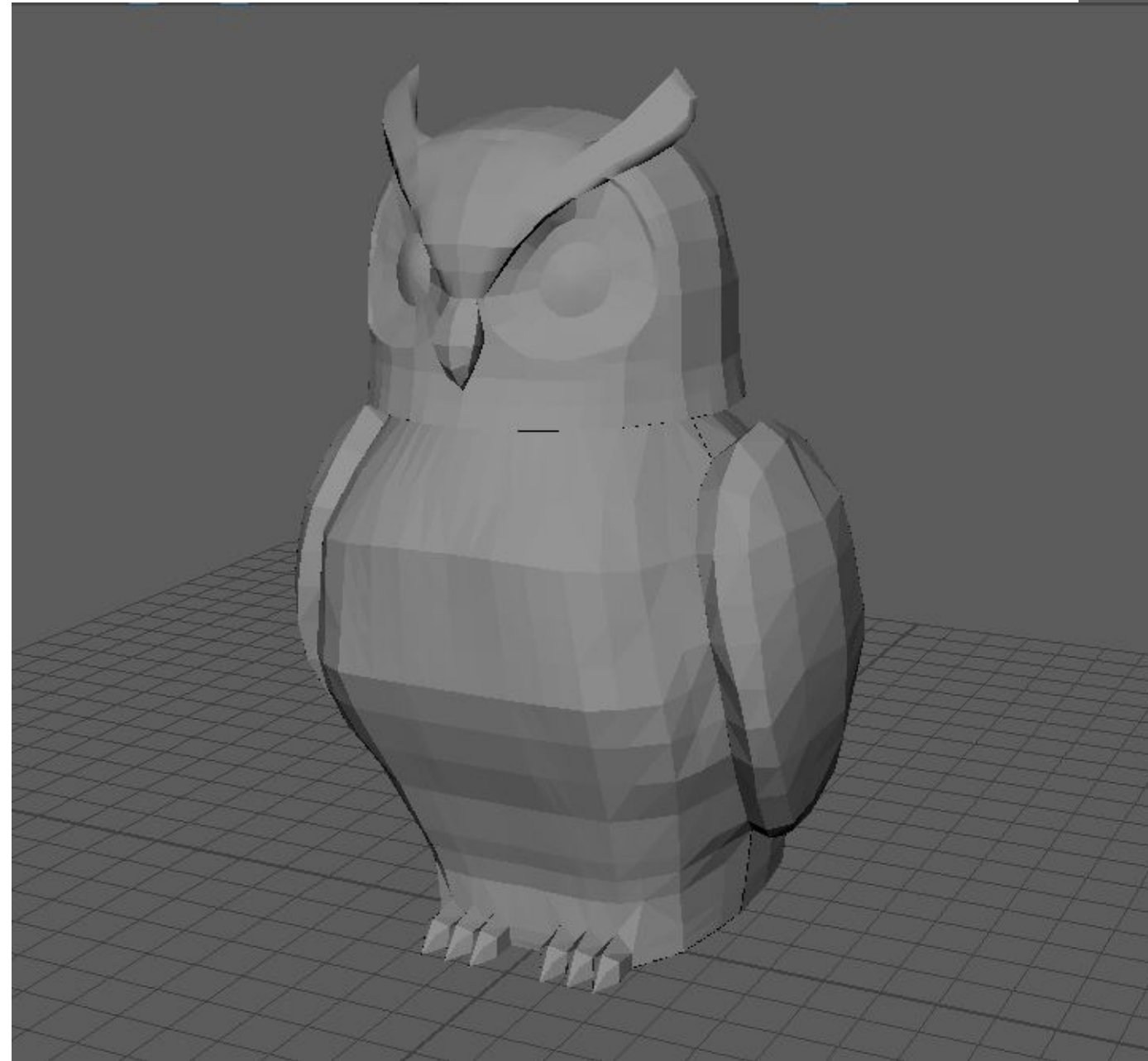

3D modeling

Fusion 360 & Maya

Fusion 360



Maya



Fab Lab

Laser cutter & 3D printer

Wooden box & owl

