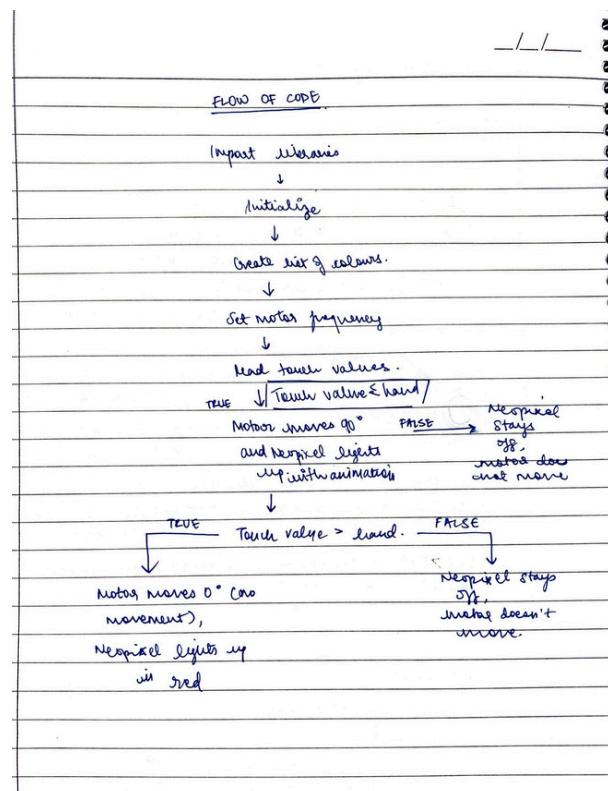
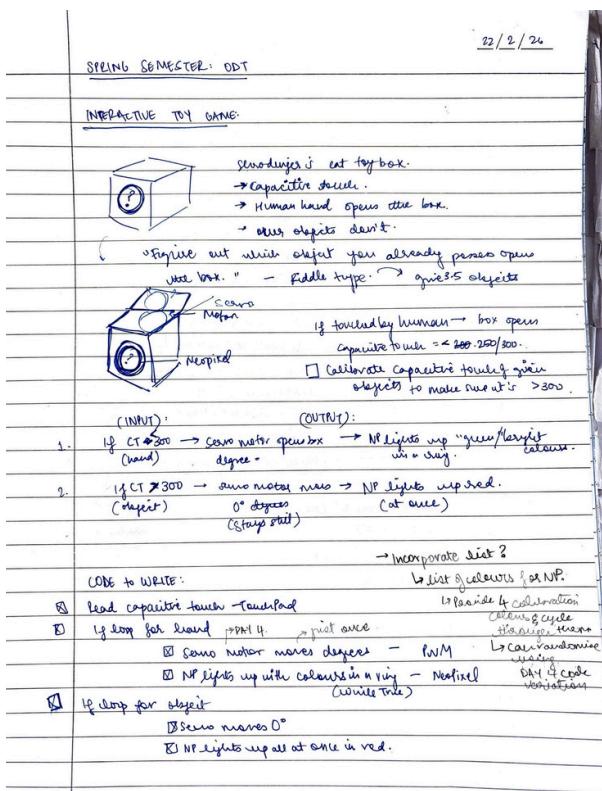
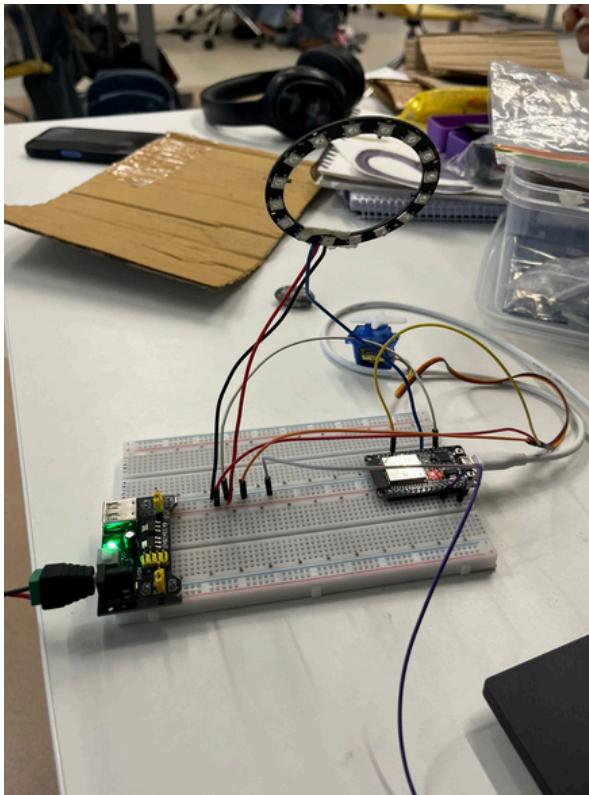


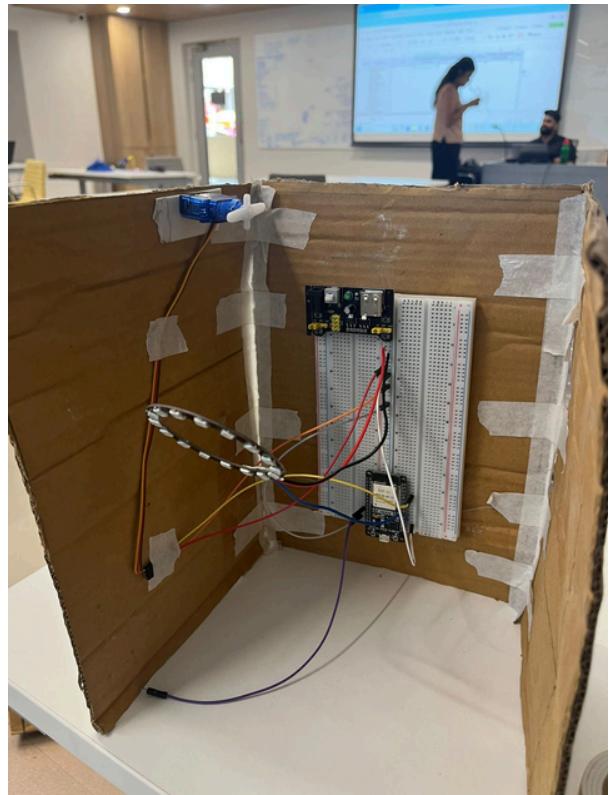
Our circuit diagram



Basic concept logic and flow of code



Our circuit with the capacitive touch cable, neopixel and servo motor



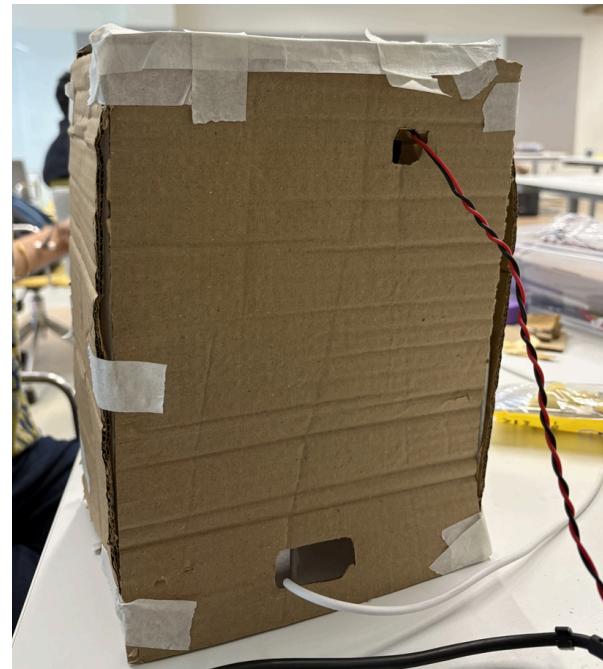
The circuit attached to the wall of our box, with spaces for wiring

```

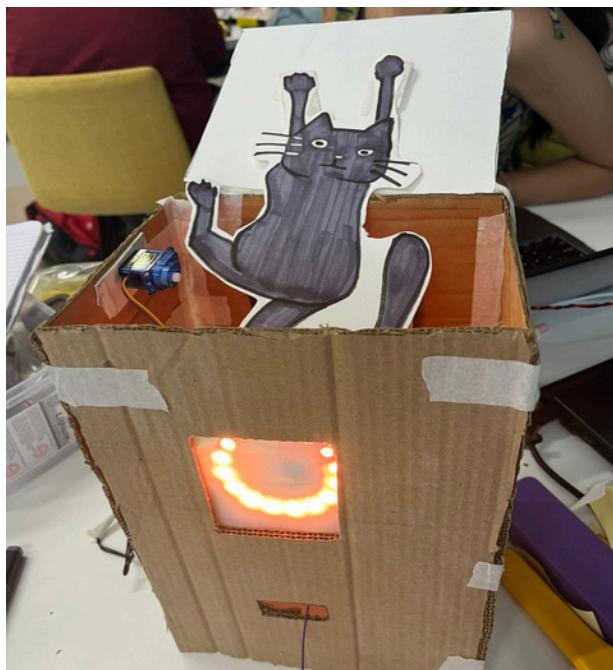
1 from machine import Pin, TouchPad, PWM
2 import time
3 import random
4 import neopixel
5
6 touch = TouchPad(Pin(14))
7 motor = PWM(Pin(21), Pin.OUT)
8 np = neopixel.NeoPixel(Pin(4), 16)
9
10 colours = [(255, 70, 0), (255, 215, 0), (0, 100, 0)]
11 motor.freq(50)
12
13 while True:
14     touch_val = touch.read()
15     #print(touch_val)
16     time.sleep(0.5)
17     if touch_val < 200:
18         motor.duty(40)
19         #the orientation of the servo motor is horizontal
20         x = random.randint(0, 2)
21         for i in range (0, 16):
22             np[i] = colours[x]
23             np.write()
24             print("yay")
25             time.sleep(0.02)
26
27     #if touch_val < 490:
28
29 #else loop that worked but didnt switch off for each object
30 else:
31     motor.duty(80)
32     for i in range(0, 16):
33         np[i] = (255, 0, 0)
34         time.sleep(0.05)
35         print("wrong")
36         np.write()
37     for num in range (0, 16):
38         np[num] = (0, 0, 0)

```

Process of writing code



Front and back of the box



Testing out neopixel cycles and opening the lid with the servo motor together