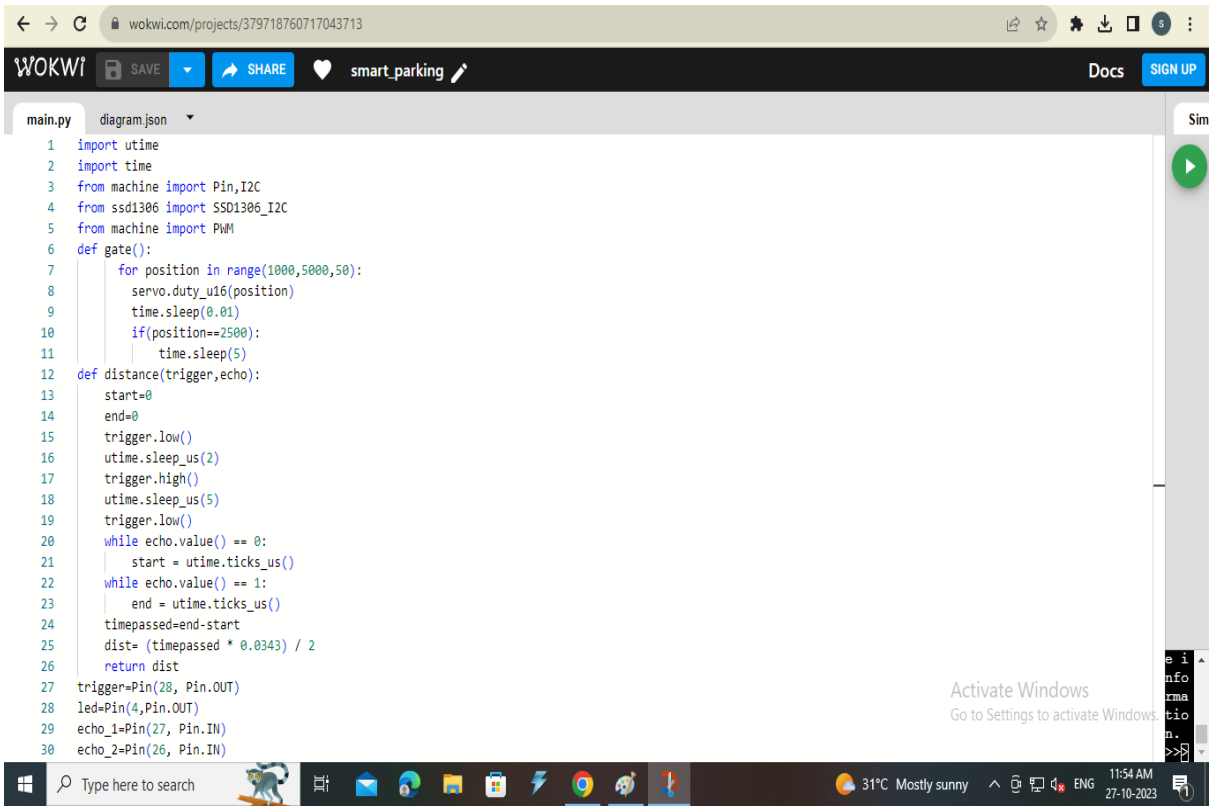
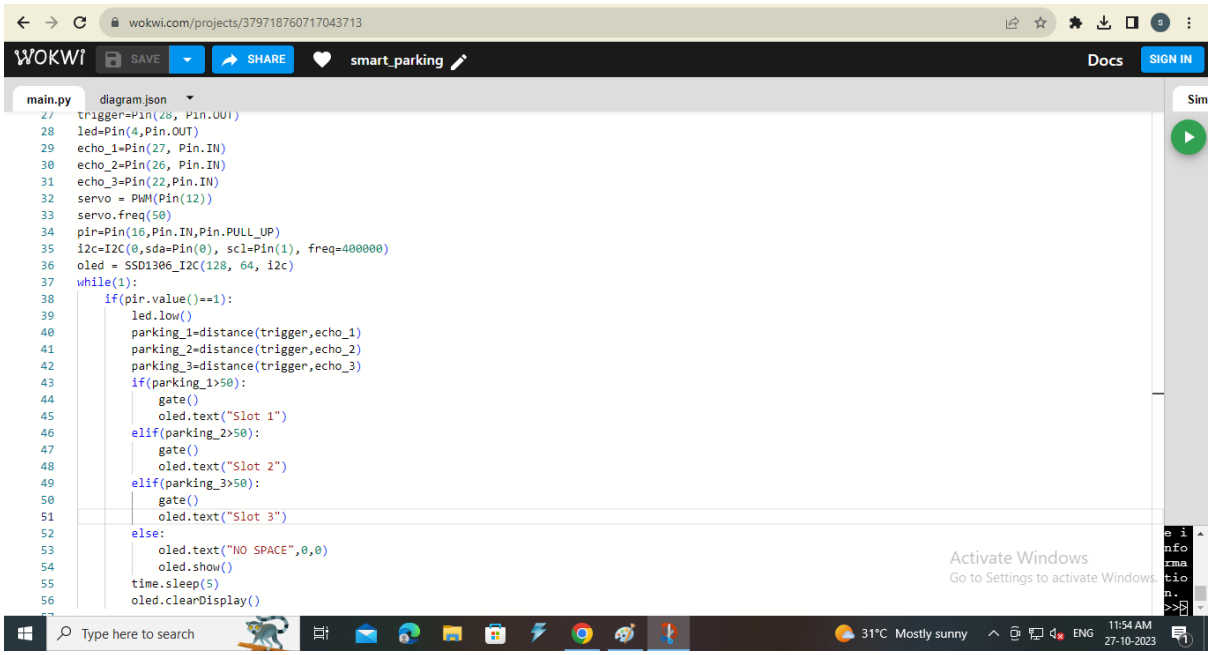
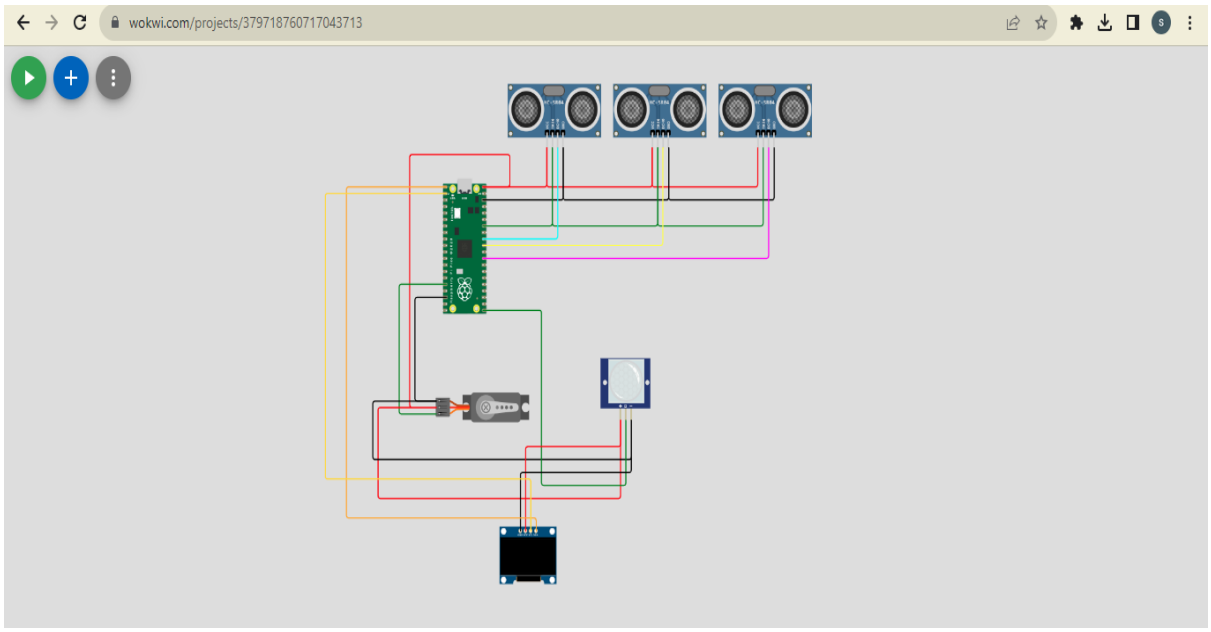
SMART PARKING

(PHASE 4)







SOURCE CODE

```
import utime
import time
from machine import Pin
from machine import PWM
def gate():
      for position in range(1000,5000,50):
```

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        servo.duty_u16(position)
        time.sleep(0.01)
        if(position==2500):
            time.sleep(5)
def distance(trigger,echo):
    start=0
    end=0
    trigger.low()
    utime.sleep_us(2)
    trigger.high()
    utime.sleep_us(5)
    trigger.low()
    while echo.value() == 0:
        start = utime.ticks_us()
    while echo.value() == 1:
        end = utime.ticks_us()
    timepassed=end-start
    dist= (timepassed * 0.0343) / 2
    return dist
trigger=Pin(28, Pin.OUT)
led=Pin(4,Pin.OUT)
echo_1=Pin(27, Pin.IN)
echo_2=Pin(26, Pin.IN)
echo_3=Pin(22,Pin.IN)
servo = PWM(Pin(12))
servo.freq(50)
pir=Pin(16,Pin.IN,Pin.PULL_UP)

while(1):
    if(pir.value()==1):
        led.low()
        parking_1=distance(trigger,echo_1)
        parking_2=distance(trigger,echo_2)
        parking_3=distance(trigger,echo_3)
        if(parking_1>50):
            gate()
        elif(parking_2>50):
            gate()
        elif(parking_3>50):
            gate()
        time.sleep(5)
```

WOKWI LINK:
https://wokwi.com/projects/379718760717043713