HANDOUT #9

```
#importing the Library
from gpiozero import LED,Button,Buzzer
from time import sleep
from signal import pause

#introducint TM1637 to program
import tm1637
display = tm1637.TM1637(20, 16) #20=CLK  16=DIO

#give name to components - variable
red_led = LED(14)
green_led=LED(18)
buzzer=Buzzer(25)
pc_button = Button(24)

#add anti spam LED here
anti_spam_led=LED(7)

#traffic light LEDs
tl_red = LED(13)
tl_amber = LED(19)
tl_green = LED(26)


#initialise state of components to off
#initialise pedestrian crossing lights
red_led.off()
green_led.off()
buzzer.off()

#initialise traffic lights
tl_red.off()
tl_amber.off()
tl_green.off()

#must initialise the anti spam LED as well
anti_spam_led.off()


#new function to handle spamming
def checkstatus():
    if anti_spam_led.on():
        pass
    else:
        anti_spam_led.on()
        greenman()
```

HANDOUT #9 (Cont'd)

```
#create a function for greenman
def greenman():
   tl_green.off()
   tl_amber.blink(on_time=.5,
off_time=.5,n=5)
   sleep(5)
   tl_red.on()

   red_led.off()
   green_led.on()
   sleep(10)
   for count in range(9,-1,-1):

      green_led.blink(on_time=.5,
off_time=.5, n=1)

buzzer.blink(on_time=.5,off_time=.5,n
=1)
      S1=' '
      S2=' '
      S3=' '
      S4=str(count)
      display.set_values([S1, S2, S3, S4])
      sleep(1)

   green_led.off()
   display.clear()
   red_led.on()

   tl_red.off()
   tl_green.on()
   #reset anti_spam_led
   anti_spam_led.off()
```

```
#logic of program
#set initial status of traffic light and pedestrian crossing
#start point
#traffic light is green and traffic is moving
tl_green.on()
#pedestrian crossing is red, cannot cross
red_led.on()

# some modification is needed here
#instead of running greenman, we run the check_status first
#pc_button.when_pressed = greenman
pc_button.when_pressed = checkstatus
pause()
```