Assignment -3

Python Programming

Assignment Date	7 OCTOBER 2022
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Maximum Marks	2 Marks

QUESTION:

Write python code for blinking LED and Traffic lights for Raspberry pi.Only python code is enough, no need to execute in raspberry pi.Note: you are allowed to use web search and complete the assignment.

```
import turtle

# Create a playground for turtles wn =
turtle.Screen() wn.bgcolor('white')

# Create turtles tess =
turtle.Turtle() alex =
turtle.Turtle() henry =
turtle.Turtle()


def draw_housing():
    """ Draw a nice housing to hold the traffic lights"""
tess.pensize(3)     tess.color('black', 'black')
tess.begin_fill()     tess.forward(80)     tess.left(90)
tess.forward(157)     tess.circle(40, 180)
tess.forward(157)     tess.left(90)     tess.end_fill()


draw_housing()


def circle(t, ht, colr):
    """Position turtle onto the place where the lights should be, and
turn turtle into a big circle"""
    t.penup()
    t.forward(40)
    t.left(90)
    t.forward(ht)
    t.shape('circle')
    t.fillcolor(colr)

circle(tess, 40, 'green') circle(alex,
100, 'orange') circle(henry, 160, 'red')

# This variable holds the current state of the machine state_num =
0
 def advance_state_machine():
```

```
    global state_num  # The global keyword tells Python not to create a new
local variable for state_num
     if state_num == 0:  # Transition from state 0 to state 1
henry.color('darkgrey')         alex.color('darkgrey')
tess.color('green')         wn.ontimer(advance_state_machine, 3000)  # set the
timer to explode in
3000 milliseconds (3 seconds)         state_num = 1     elif
state_num == 1:  # Transition from state 1 to state 2
henry.color('darkgrey')         alex.color('orange')
wn.ontimer(advance_state_machine, 1000)         state_num = 2
elif state_num == 2:  # Transition from state 2 to state 3
tess.color('darkgrey')
wn.ontimer(advance_state_machine, 1000)         state_num = 3
else:                 # Transition from state 3 to state 0
henry.color('red')         alex.color('darkgrey')
wn.ontimer(advance_state_machine, 2000)         state_num = 0


advance_state_machine()
 wn.listen()  # Listen for events
 wn.mainloop()  # Wait for user to close window
```

OUTPUT: