import time

import random

from geopy.distance import geodesic

# Import the necessary libraries from the first pseudocode

import sensors

import communication

import vehicle\_control

# Define global variables from the second pseudocode

emergency\_button\_pressed = False

driver\_location = (0, 0)

medical\_sensors\_data = {} # Placeholder for medical sensor data

# Define system parameters from the first pseudocode

emergency\_button = Button()

seatbelt\_sensor = MedicalSensor()

communication\_module = CommunicationModule()

vehicle\_controller = VehicleController()

time\_limit = 60 # seconds

# Main system loop

while True:

# Simulate periodic checks and actions from the second pseudocode

emergency\_button\_pressed = emergency\_button.is\_pressed()

sensors.read\_medical\_sensor\_data()

sensors.analyze\_medical\_sensor\_data()

if emergency\_button\_pressed:

# Driver initiated emergency

# Notify the nearest hospital (combine the logic from both pseudocodes)

hospital = find\_nearest\_hospital()

communication\_module.notify\_hospital(hospital)

# Start a timer for the driver's response (from the first pseudocode)

response\_timer = sensors.start\_timer()

while not response\_timer.is\_expired():

if emergency\_button.is\_pressed():

response\_timer.reset()

else:

vital\_signs = seatbelt\_sensor.measure\_vital\_signs()

if is\_emergency(vital\_signs):

# Automatic intervention required (from the first pseudocode)

communication\_module.notify\_emergency\_services()

vehicle\_controller.take\_control()

vehicle\_controller.safely\_stop\_vehicle()

break # Exit the loop

if response\_timer.is\_expired():

# Driver didn't respond in time, take necessary actions (from the first pseudocode)

communication\_module.notify\_emergency\_services()

vehicle\_controller.take\_control()

vehicle\_controller.safely\_stop\_vehicle()

else:

# Regular operation

continue

# Simulate providing feedback to the driver from the second pseudocode

sensors.provide\_user\_feedback()

# Simulate periodic checks

time.sleep(5)

# Functions for specific tasks from the first pseudocode

def find\_nearest\_hospital():

# Logic to determine the nearest hospital based on the vehicle's GPS coordinates

pass

def start\_timer():

# Start a timer for the predefined time limit

pass

def is\_emergency(vital\_signs):

# Analyze the vital signs to detect if there's an emergency

pass