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import random
import time

# Define the function to monitor temperature
def monitor_temperature(threshold_high, threshold_low):
    """
    Monitors the temperature, checks against defined thresholds,
    and provides alerts if necessary.
    """
    while True:
        # Simulate temperature reading (replace with actual sensor input in real-world applications)
        current_temperature = random.uniform(20.0, 40.0) # Simulating temperature between 20°C and 40°C
        print(f"Current Temperature: {current_temperature:.2f}°C")

        # Check if the temperature exceeds the high threshold
        if current_temperature > threshold_high:
            print("ALERT: Temperature is too high! Immediate action required.")

        # Check if the temperature is below the low threshold
        elif current_temperature < threshold_low:
            print("ALERT: Temperature is too low! Immediate action required.")

        # Optional: Provide a neutral message if within acceptable range
        else:
            print("Temperature is within acceptable range.")

        # Wait for 2 seconds before checking again (simulating continuous monitoring)
        time.sleep(2)

# Set the high and low temperature thresholds (in Celsius)
threshold_high = 35.0 # Threshold for high temperature (e.g., 35°C)
threshold_low = 25.0 # Threshold for low temperature (e.g., 25°C)

# Start monitoring the temperature
monitor_temperature(threshold_high, threshold_low)

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↗ Current Temperature: 33.73°C
Temperature is within acceptable range.
Current Temperature: 26.18°C
Temperature is within acceptable range.
Current Temperature: 36.65°C
ALERT: Temperature is too high! Immediate action required.
Current Temperature: 30.25°C
Temperature is within acceptable range.
Current Temperature: 39.53°C
ALERT: Temperature is too high! Immediate action required.
Current Temperature: 30.24°C
Temperature is within acceptable range.
Current Temperature: 27.32°C
Temperature is within acceptable range.
Current Temperature: 22.74°C
ALERT: Temperature is too low! Immediate action required.
Current Temperature: 31.08°C
Temperature is within acceptable range.
Current Temperature: 32.25°C
Temperature is within acceptable range.
Current Temperature: 28.86°C
Temperature is within acceptable range.
Current Temperature: 27.91°C
Temperature is within acceptable range.
Current Temperature: 22.08°C
ALERT: Temperature is too low! Immediate action required.
Current Temperature: 34.03°C
Temperature is within acceptable range.
Current Temperature: 33.62°C
Temperature is within acceptable range.
Current Temperature: 22.45°C
ALERT: Temperature is too low! Immediate action required.
Current Temperature: 29.55°C
Temperature is within acceptable range.
Current Temperature: 38.46°C
ALERT: Temperature is too high! Immediate action required.
Current Temperature: 29.16°C
Temperature is within acceptable range.
Current Temperature: 39.42°C
ALERT: Temperature is too high! Immediate action required.
Current Temperature: 30.88°C
Temperature is within acceptable range.
Current Temperature: 23.30°C

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ALERT: Temperature is too low! Immediate action required.
Current Temperature: 39.74°C
ALERT: Temperature is too high! Immediate action required.
Current Temperature: 22.85°C
ALERT: Temperature is too low! Immediate action required.
Current Temperature: 21.33°C
ALERT: Temperature is too low! Immediate action required.
Current Temperature: 27.46°C
Temperature is within acceptable range.
Current Temperature: 25.41°C
Temperature is within acceptable range.
Current Temperature: 21.25°C
ALERT: Temperature is too low! Immediate action required.
Current Temperature: 28.60°C