You have a TemperatureSensor class that measures temperature in Celsius. You want a separate DisplayTemperature function to print the temperature in Fahrenheit. However, the conversion formula requires accessing the private celsius member.

Create a TemperatureSensor class with a private celsius member and a public constructor.

Implement a friend function DisplayTemperature that takes a TemperatureSensor object and prints the temperature in Fahrenheit (conversion formula provided).

Write a main function to demonstrate how to use the classes.

include <iostream>

using namespace std;

class TemperatureSensor {

private:

double c;

public:

TemperatureSensor(double tempC) : c(tempC) {}

friend void Temp ( TemperatureSensor& sensor);

};

void Temp ( TemperatureSensor& sensor) {

double f = (sensor.c \* 9.0 / 5.0) + 32.0;

cout << "Temperature in Fahrenheit: " << f << "°F" <<endl;

}

int main() {

TemperatureSensor sensor(35.0);

Temp (sensor);

return 0;

}

Output:

