Task1:

#include <iostream>

#include <string>

Class HomeOwner {

Private:

Std::string name;

Public:

HomeOwner(const std::string& name) : name(name) {}

Std::string getName() const { return name; }

};

Class EnvironmentSensor {

Private:

Int temperature;

Public:

EnvironmentSensor(int temperature) : temperature(temperature) {}

Int getTemperature() const { return temperature; }

};

Class WaterHeater {

Private:

Int heatingTemperature;

Public:

WaterHeater() : heatingTemperature(0) {}

Void setHeatingTemperature(int temperature) { heatingTemperature = temperature; }

Int getHeatingTemperature() const { return heatingTemperature; }

};

Class SmartGeyser {

Private:

HomeOwner owner;

EnvironmentSensor sensor;

WaterHeater heater;

Public:

SmartGeyser(const HomeOwner& owner, const EnvironmentSensor& sensor) : owner(owner), sensor(sensor) {}

Void activateGeyser() {

Int currentTemp = sensor.getTemperature();

Int requiredTemp = currentTemp + 10; // Example calculation

Heater.setHeatingTemperature(requiredTemp);

}

};

Int main() {

HomeOwner owner(“RAM”);

EnvironmentSensor sensor(20); // Example temperature

SmartGeyser geyser(owner, sensor);

// Activate geyser and calculate heating temperature

Geyser.activateGeyser();

Std::cout << “Heating temperature set to: “ << geyser.getHeatingTemperature() << “ degrees Celsius\n”;

Return 0;

}

TASK2:

#include <iostream>

#include <string>

Class HomeOwner {

Private:

Std::string name;

Public:

HomeOwner(const std::string& name) : name(name) {}

Std::string getName() const { return name; }

};

Class EnvironmentSensor {

Private:

Std::string season;

Int temperature;

Public:

EnvironmentSensor(const std::string& season, int temperature) : season(season), temperature(temperature) {}

Std::string getSeason() const { return season; }

Int getTemperature() const { return temperature; }

};

Class WaterHeater {

Private:

Int temperature;

Public:

WaterHeater() : temperature(0) {}

Void setTemperature(int temp) { temperature = temp; }

Int getTemperature() const { return temperature; }

};

Class SmartGeyser {

Private:

HomeOwner owner;

EnvironmentSensor sensor;

WaterHeater heater;

Public:

SmartGeyser(const HomeOwner& owner, const EnvironmentSensor& sensor) : owner(owner), sensor(sensor) {}

Void activate() {

Int currentTemp = sensor.getTemperature();

Int requiredTemp = currentTemp + 15; // Adjusted for winter

Heater.setTemperature(requiredTemp);

Std::cout << “Geyser activated. Heating temperature set to: “ << requiredTemp << “ degrees Celsius.\n”;

}

};

Int main() {

HomeOwner owner(“John Doe”);

EnvironmentSensor sensor(“Winter”, 5); // Adjusted for winter

SmartGeyser geyser(owner, sensor);

Geyser.activate();

Return 0;

}