#include <iostream>

#include <string>

const int MAX\_PUPILS = 30;

// Function to validate weight

bool isValidWeight(float weight) {

return (weight > 0 && weight < 500); // Assuming a realistic weight range

}

// Function to calculate weight difference

float calculateWeightDifference(float weight1, float weight2) {

return weight2 - weight1;

}

int main() {

float weightsFirstDay[MAX\_PUPILS];

float weightsLastDay[MAX\_PUPILS];

float weightDifference[MAX\_PUPILS];

std::string names[MAX\_PUPILS];

**// Task 1: Input and store weights and names**

std::cout << "TASK 1: Enter the names and weights of " << MAX\_PUPILS << " pupils on the first day of term:\n";

for (int i = 0; i < MAX\_PUPILS; ++i) {

std::cout << "Enter name of pupil " << i + 1 << ": ";

std::cin >> names[i];

std::cout << "Enter weight of pupil " << i + 1 << " (in kg): ";

std::cin >> weightsFirstDay[i];

// Validate weight

while (!isValidWeight(weightsFirstDay[i])) {

std::cout << "Invalid weight! Please enter a valid weight for pupil " << i + 1 << ": ";

std::cin >> weightsFirstDay[i];

}

}

**// Task 2: Input and store weights on the last day of term and calculate weight difference**

std::cout << "\nTASK 2: Enter the weights of " << MAX\_PUPILS << " pupils on the last day of term:\n";

for (int i = 0; i < MAX\_PUPILS; ++i) {

std::cout << "Enter weight of pupil " << i + 1 << " (in kg): ";

std::cin >> weightsLastDay[i];

// Validate weight

while (!isValidWeight(weightsLastDay[i])) {

std::cout << "Invalid weight! Please enter a valid weight for pupil " << i + 1 << ": ";

std::cin >> weightsLastDay[i];

}

// Calculate difference

weightDifference[i] = calculateWeightDifference(weightsFirstDay[i], weightsLastDay[i]);

}

**// Task 3: Output pupils with weight differences more than 2.5 kg**

std::cout << "\nTASK 3: Pupils with weight differences more than 2.5 kg:\n";

for (int i = 0; i < MAX\_PUPILS; ++i) {

if (weightDifference[i] > 2.5 || weightDifference[i] < -2.5) {

std::string change = (weightDifference[i] > 0) ? "rise" : "fall";

std::cout << "Name: " << names[i] << ", Weight Difference: " << weightDifference[i] << " kg (" << change << ")\n";

}

}

return 0;

}