#include <iostream>

#include <iomanip>

#include <string>

#include <vector>

#include <sstream>

using namespace std;

vector<string> split(const string &s, char delimiter) {

vector<string> tokens;

stringstream ss(s);

string token;

while (getline(ss, token, delimiter)) {

tokens.push\_back(token);

}

return tokens;

}

bool isInteger(const string &s){

for(char c:s){

if (!isdigit(c)) {

if(c==' '){continue;}

return false; // If any character is not a digit, return false

}

}

return true;

}

int main() {

// step1

cout << "Enter a title for the data:" << endl;

string title;

getline(cin, title);

cout << "You entered: " << title<< endl;

// step2

cout << "\nEnter the column 1 header:" << endl;

string header1;

getline(cin, header1);

cout << "You entered: " << header1<< endl;

cout << "\nEnter the column 2 header:" << endl;

string header2;

getline(cin, header2);

cout << "You entered: " << header2<< endl;

//step3

cout << "\nEnter a data point (-1 to stop input):" << endl;

string line;

vector<pair<string, int>> personalData;

while (getline(cin, line)) {

if (line == "-1") {

break;

}

vector<string> dataParts = split(line, ',');

if(dataParts.size()==1){

cout << "Error: No comma in string." << endl;

cout << "\nEnter a data point (-1 to stop input):" << endl;

continue;

}

if(dataParts.size()>2){

cout << "Error: Too many commas in input." << endl;

cout << "\nEnter a data point (-1 to stop input):" << endl;

continue;

}

if(!isInteger(dataParts[1])){

cout << "Error: Comma not followed by an integer." << endl;

cout << "\nEnter a data point (-1 to stop input):" << endl;

continue;

}

string dataString = dataParts[0];

int dataInt = stoi(dataParts[1]);

cout << "Data string: " << dataString << endl;

cout << "Data integer: " << dataInt << endl;

cout << "\nEnter a data point (-1 to stop input):" << endl;

personalData.push\_back({dataString, dataInt});

}

vector<pair<string, int>> personalData2;

cout<< endl;

cout <<right<<setw(33)<< title << endl;

cout << left<< setw(20) << header1 << "|"<< right << setw(23)<<header2<<endl;

cout<<"--------------------------------------------"<<endl;

for (const auto &data : personalData) {

cout << left<< setw(20) << data.first << "|"<< right << setw(23) << data.second <<endl;

personalData2.push\_back({data.first, data.second});

}

cout << endl;

for (const auto &data : personalData2) {

cout << left << setw(20) << data.first << " "; // Add a space after data string

cout << setfill('\*') << setw(data.second) << endl;

}

return 0;

}