#include <iostream>

using namespace std;

class film

{

private:

string name;

double critics\_rate, users\_rate;

public:

void init(string n, double c, double u);

void print();

double average();

};

class catalog

{

private:

int num;

film films[30];

public:

catalog(int n) : num(n)

{}

void init(string n, double c, double u, int i);

void print();

void bestworst();

};

void film::init(string n, double c, double u)

{

name = n;

critics\_rate = c;

users\_rate = u;

}

void film::print()

{

cout << "Name = " << name << endl;

cout << "Critics rating = " << critics\_rate << endl;

cout << "Users rating = " << users\_rate << endl;

cout << "Average = " << average() << endl;

}

double film::average()

{

return (critics\_rate + users\_rate) \* 1.0 / 2.0;

}

void catalog::init(string n, double c, double u, int i)

{

films[i].init(n,c,u);

}

void catalog::print()

{

for (int i = 0; i < num; i++)

{

films[i].print();

cout << endl;

}

cout << "\n\n";

bestworst();

}

void catalog::bestworst()

{

double min = 6, max = -1;

int best=0, worst=0;

for (int i = 0; i < num; i++)

{

if (films[i].average() > max)

{

max = films[i].average();

best = i;

}

if (films[i].average() < min)

{

min = films[i].average();

worst = i;

}

}

cout << "Best film is: " << endl;

films[best].print();

cout << "\nWorst film is: " << endl;

films[worst].print();

}

int main()

{

int n;

string name;

double c, u;

cout << "Input n: ";

cin >> n;

catalog catalog1(n);

for (int i = 0; i < n; i++)

{

cout << "Input name: ";

cin >> name;

cout << "Input critics rating: ";

cin >> c;

cout << "Input users rating: ";

cin >> u;

catalog1.init(name, c, u, i);

}

cout << "\n\n";

catalog1.print();

return 0;

}