9a

#include <iostream>

#include <string>

using namespace std;

struct MovieData

{

string title;

string director;

int year\_released;

int running\_time;

int production\_cost;

int first\_year\_revenue;

};

// Function prototypes

MovieData getMovieData();

void printMovieData(MovieData \*);

int main()

{

MovieData m1, m2;

MovieData \*ptr1, \*ptr2;

ptr1 = &m1;

ptr2 = &m2;

m1 = getMovieData();

m2 = getMovieData();

printMovieData(ptr1);

printMovieData(ptr2);

system("PAUSE");

return 0;

}

MovieData getMovieData()

{

MovieData temp;

cout<<"Eenter the title "<<endl;

getline(cin, temp.title);

cout<<"enter the director "<<endl;

getline(cin, temp.director);

cout<<"enter the year that the movie was released "<<endl;

cin>>temp.year\_released;

cout << "enter the minutes "<<endl;

cin>>temp.running\_time;

cout<<"enter the cost"<<endl;

cin>>temp.production\_cost;

cout<<"Enter the revenue: $"<<endl;

cin>>temp.first\_year\_revenue;

cin.ignore();

return temp;

}

void printMovieData(MovieData \*pointer)

{

cout<<"title: "<<pointer->title<<endl;

cout<<"director: "<<pointer->director<<endl;

cout<<"year Released: "<< pointer->year\_released<<endl;

cout<<"running Time: "<< pointer->running\_time<<endl;

cout<<"production Cost: "<< pointer->production\_cost<<endl;

cout<<"first Year Revenue: "<< pointer->first\_year\_revenue<<endl;

}

Text

Description automatically generated with medium confidence

9b

#include <iostream>

#include <string>

using namespace std;

struct MovieData

{

string title;

string director;

int year\_released;

int running\_time;

int production\_cost;

int first\_year\_revenue;

};

// Function prototypes

MovieData getMovieData();

void printMovieData(MovieData \*);

int main()

{

MovieData m1, m2;

MovieData \*ptr1, \*ptr2;

ptr1 = &m1;

ptr2 = &m2;

m1 = getMovieData();

m2 = getMovieData();

printMovieData(ptr1);

printMovieData(ptr2);

system("PAUSE");

return 0;

}

MovieData getMovieData()

{

MovieData temp;

cout<<"Eenter the title "<<endl;

getline(cin, temp.title);

cout<<"enter the director "<<endl;

getline(cin, temp.director);

cout<<"enter the year that the movie was released "<<endl;

cin>>temp.year\_released;

cout << "enter the minutes "<<endl;

cin>>temp.running\_time;

cout<<"enter the cost"<<endl;

cin>>temp.production\_cost;

cout<<"Enter the revenue: $"<<endl;

cin>>temp.first\_year\_revenue;

cin.ignore();

return temp;

}

void printMovieData(MovieData \*pointer)

{

cout<<"title: "<<pointer->title<<endl;

cout<<"director: "<<pointer->director<<endl;

cout<<"year Released: "<< pointer->year\_released<<endl;

cout<<"running Time: "<< pointer->running\_time<<endl;

cout<<"production Cost: "<< pointer->production\_cost<<endl;

cout<<"first Year Revenue: "<< pointer->first\_year\_revenue<<endl;

}

Text

Description automatically generated with medium confidence

9c

#include <iostream>

#include <cstdlib>

#include <fstream>

using namespace std;

const int SIZE = 12;

struct Weather

{

double monthlyrainfall,highTemp,lowTemp,avgTemp;

};

string month[SIZE]= {"January","February", "March",

"April", "May", "June", "July",

"August", "September", "October",

"November", "December"};

void getData(Weather[]);

void calculate(Weather[], double&, double&, int&, int&);

void display (Weather[],double, double , int, int);

int main()

{

double yearlyTotalRain =0,averageYearlyTemp=0;

int yearliHITemp=0, yearlyLowTemp=0;

Weather wed[SIZE];

// populate the structure

getData(wed);

//calculate the yearly values

calculate(wed,yearlyTotalRain,averageYearlyTemp, yearliHITemp,

yearlyLowTemp);

// display yearly values

display(wed,yearlyTotalRain,averageYearlyTemp, yearliHITemp,

yearlyLowTemp);

return 0;

}

void getData(Weather w[])

{

ifstream fin("weather.txt");

if(!fin)

{

cout << "Error opening the input file";

exit(EXIT\_FAILURE);

}

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

{

fin >> w[i].monthlyrainfall;

fin >> w[i].highTemp;

fin >> w[i].lowTemp;

w[i].avgTemp = (w[i].highTemp + w[i].lowTemp)/2;

}

fin.close();

}

void calculate(Weather w[], double& ytRain, double&aytemp, int&yHiTemp, int&

yLowTemp)

{

double high = w[0].highTemp;

double low = w[0].lowTemp;

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

{

ytRain = ytRain + w[i].monthlyrainfall;

aytemp = aytemp + w[i].avgTemp;

if( high < w[i].highTemp)

{

high = w[i].highTemp;

yHiTemp = i;

}

if( low > w[i].lowTemp)

{

low = w[i].lowTemp;

yLowTemp = i;

}

}

aytemp = aytemp/SIZE;

}

void display(Weather w[],double ytRain, double aytemp, int yHiTemp, int

yLoTemp)

{

cout << "\n\nSTATISTICS\n\n" ;

cout << "Total yearly rain = " << ytRain << endl;

cout << "Average yearly temperature = " << aytemp << endl;

cout << "Highest temperature for the year = " <<w[yHiTemp].highTemp << "occured in month of " <<month[yHiTemp] << endl;

cout << "Lowest temperature for the year = " <<w[yLoTemp].lowTemp << " occured in month of " <<month[yLoTemp]<< endl << endl;

}

