***Imagine a publishing company which does marketing for book and audio cassette versions. Create a class publication that stores the title (a string) and price (type float) of publications. From this class derive two classes: book which adds a page count (type int) and tape which***

***adds a playing time in minutes (type float). Write a program that instantiates the book and tape class, allows user to enter data and***

***displays the data members. If an exception is caught, replace all the data member values with zero values.***

***CODE :-***

#include <iostream>

#include <string>

using namespace std;

class Publication

{

public:

string title;

float price;

void input()

{

cout << "Enter the title of the publication: ";

cin.ignore();

getline(cin, title);

cout << "Enter the price of the publication: ";

cin >> price;

}

void output() const

{

cout << "The name of the publication is " << title << endl;

cout << "And its price is " << price << endl;

}

};

class Book : public Publication

{

public:

int pageCount;

void inputPage()

{

try

{

input();

cout << "Enter the page count: ";

cin >> pageCount;

if (pageCount < 0)

{

throw pageCount;

}

}

catch(...)

{

cout << "Invalid page count! Setting to 0." << endl;

pageCount = 0;

}

}

void displayPage() const

{

output();

cout << "Page count: " << pageCount << endl;

}

};

class Tape : public Publication

{

public:

float playingTime;

void inputTime()

{

try

{

input();

cout << "Enter playing time of the tape (in minutes): ";

cin >> playingTime;

if (playingTime <= 0)

{

throw playingTime;

}

}

catch(...)

{

cout << "Invalid playing time! Setting to 0." << endl;

playingTime = 0;

}

}

void displayTape() const

{

output();

cout << "Playing time: " << playingTime << " minutes" << endl;

}

};

int main()

{

Book books[10];

Tape tapes[10];

int choice, bookCount = 0, tapeCount = 0;

while (true)

{

cout << "Enter your choice:" << endl;

cout << "1) Add Book Information" << endl;

cout << "2) Add Tape Information" << endl;

cout << "3) Display Book Information" << endl;

cout << "4) Display Tape Information" << endl;

cout << "5) Exit" << endl;

cin >> choice;

switch (choice)

{

case 1:

if (bookCount < 10)

{

books[bookCount].inputPage();

bookCount++;

}

else

{

cout << "Book list is full!" << endl;

}

break;

case 2:

if (tapeCount < 10)

{

tapes[tapeCount].inputTime();

tapeCount++;

}

else

{

cout << "Tape list is full!" << endl;

}

break;

case 3:

cout << "All books information:" << endl;

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

{

books[i].displayPage();

}

break;

case 4:

cout << "All tapes information:" << endl;

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

{

tapes[i].displayTape();

}

break;

case 5:

cout << "Thanks for using the program!" << endl;

return 0;

default:

cout << "Invalid choice! Please try again." << endl;

}

}

}

***OUTPUT :-***

