**PROBLEM STATEMENT/TITLE:**

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.

**PROGRAM/SOURCE CODE:**

***#include*<iostream>**

***#include*<string>**

**using namespace std;**

**class publication{**

**string title;**

**float price;**

**public:**

**publication()**

**{**

**title = "";**

**price = 0;**

**}**

**void getdata()**

**{**

**cout<<"Enter the data of the product"<<endl;**

**cout<<"Enter the title"<<endl;**

**getline(cin,title);**

**cout<<"Enter the price";**

**cin>>price;**

**}**

**void printdata()**

**{**

**cout<<"The title is"<<title<<endl;**

**cout<<"Price of the product is "<<price<<endl;**

**}**

**};*//End of the class publication***

***//Deriving the classes book and tape***

**class book:public publication**

**{**

**int pagecount;**

**public:**

**void addpagecount()**

**{**

**cout<<"Enter the pagecount of a book "<<endl;**

**cin>>pagecount;**

***if*(pagecount<1)**

**{**

***throw* pagecount;**

**}**

**}**

**void getcount()**

**{**

**cout<<"The selected book's page count is"<<pagecount<<endl;**

**}**

**};**

**class tapes:public publication**

**{**

**float audiotime;**

**public:**

**void getaudiotime()**

**{**

**cout<<"Enter the audio time of the casset"<<endl;**

**cin>>audiotime;**

***if*(audiotime<1)**

**{**

***throw* audiotime;**

**}**

**}**

**void printaudiotime()**

**{**

**cout<<"The selected tapes audio time is"<<audiotime<<endl;**

**}**

**};**

**int main()**

**{**

***try***

**{**

***//Creating common objects***

**book b1;**

**tapes t1;**

***//getting the choice of the user***

**int choice,addingchoice;**

***do*{**

**cout<<"Enter the choice"<<endl;**

**cout<<"1. for Admin"<<endl;**

**cout<<"2. for buyer"<<endl;**

**cout<<"0. for exit"<<endl;**

**cin>>choice;**

***switch*(choice)**

**{**

***case* 1:**

**cout<<"Enter the type of product for adding"<<endl;**

**cout<<"1. For Book"<<endl;**

**cout<<"2. for Casset"<<endl;**

**cin>>addingchoice;**

***if*(addingchoice == 1)**

**{**

**cin.ignore();**

**b1.getdata();**

**b1.addpagecount();**

**}**

***else* *if*(addingchoice == 2)**

**{**

**cin.ignore();**

**t1.getdata();**

**t1.getaudiotime();**

**}**

***else***

**{**

**cout<<"Invalid Choice!"<<endl;**

**}**

***break*;**

***case* 2:**

**cout<<"Enter the type of product you want to see"<<endl;**

**cout<<"1. For Book"<<endl;**

**cout<<"2. for Casset"<<endl;**

**cin>>addingchoice;**

***if*(addingchoice == 1)**

**{**

**cin.ignore();**

**b1.printdata();**

**b1.getcount();**

**}**

***else* *if*(addingchoice == 2)**

**{**

**cin.ignore();**

**t1.printdata();**

**t1.printaudiotime();**

**}**

***break*;**

***default*:**

**cout<<"You have enterd invalid choice"<<endl;**

**}*//end of switch***

**}*while*(choice!=0);**

***return* 0;**

**}**

***catch*(int e)**

**{**

**cout<<"Exception caught pagecount is invalid!";**

**}**

***catch*(float e)**

**{**

**cout<<"Exception caught pagecount is invalid!";**

**}**

***catch*(...)**

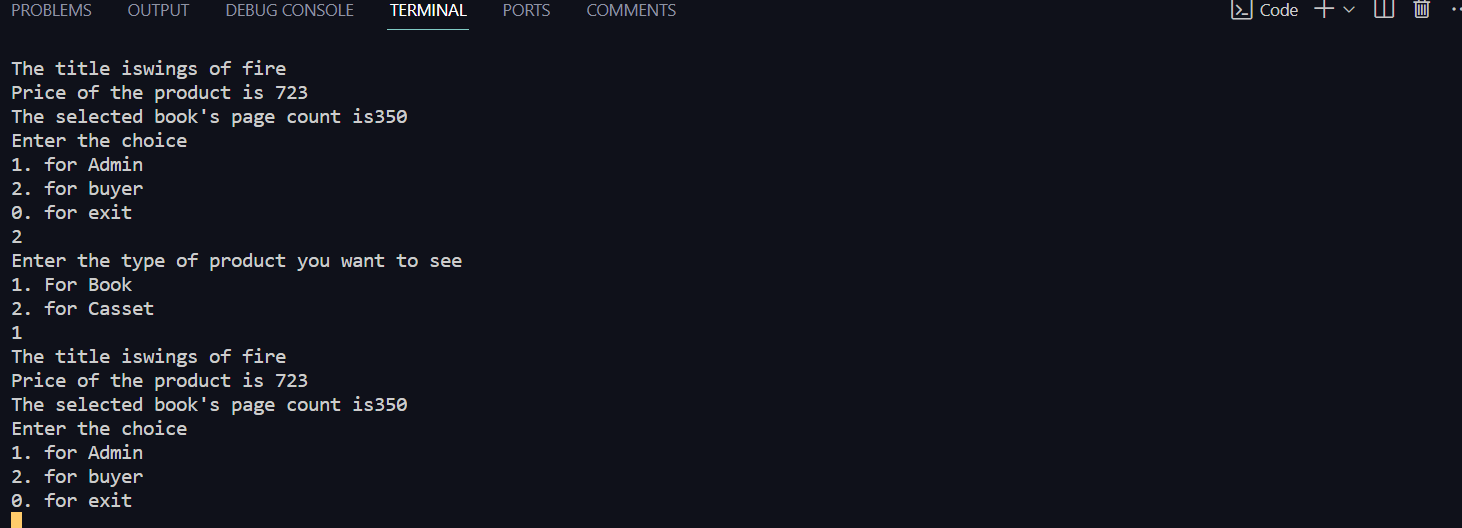
**{**

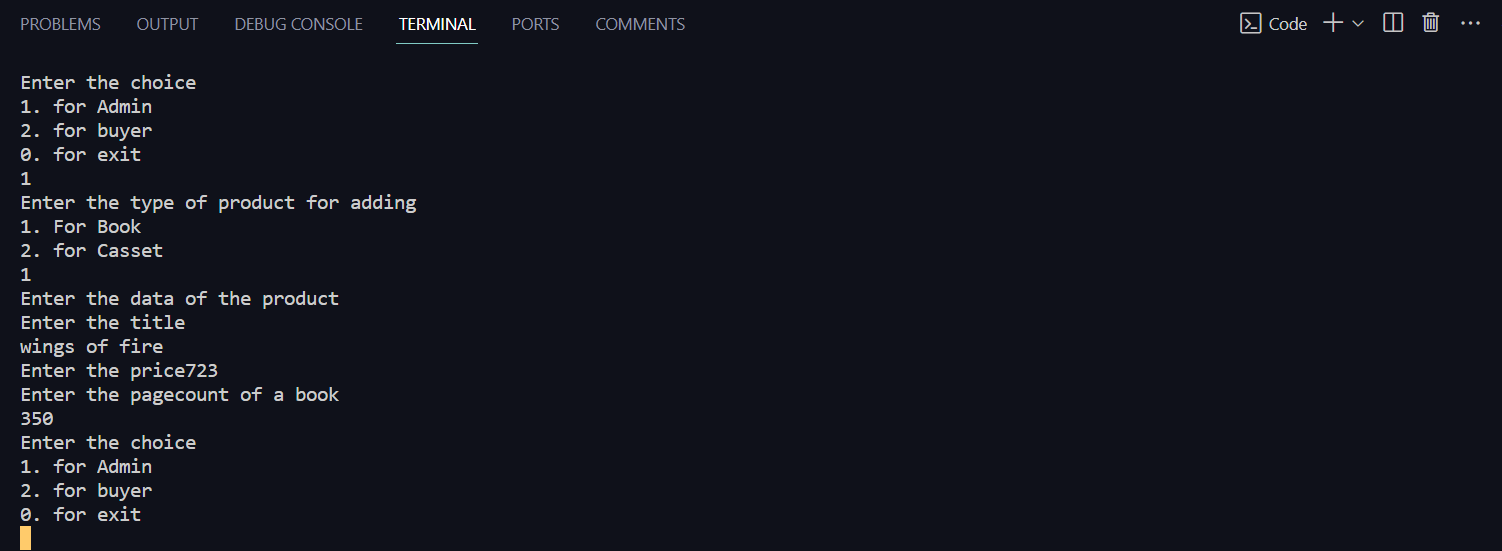
**cout<<"The exception caught !";**

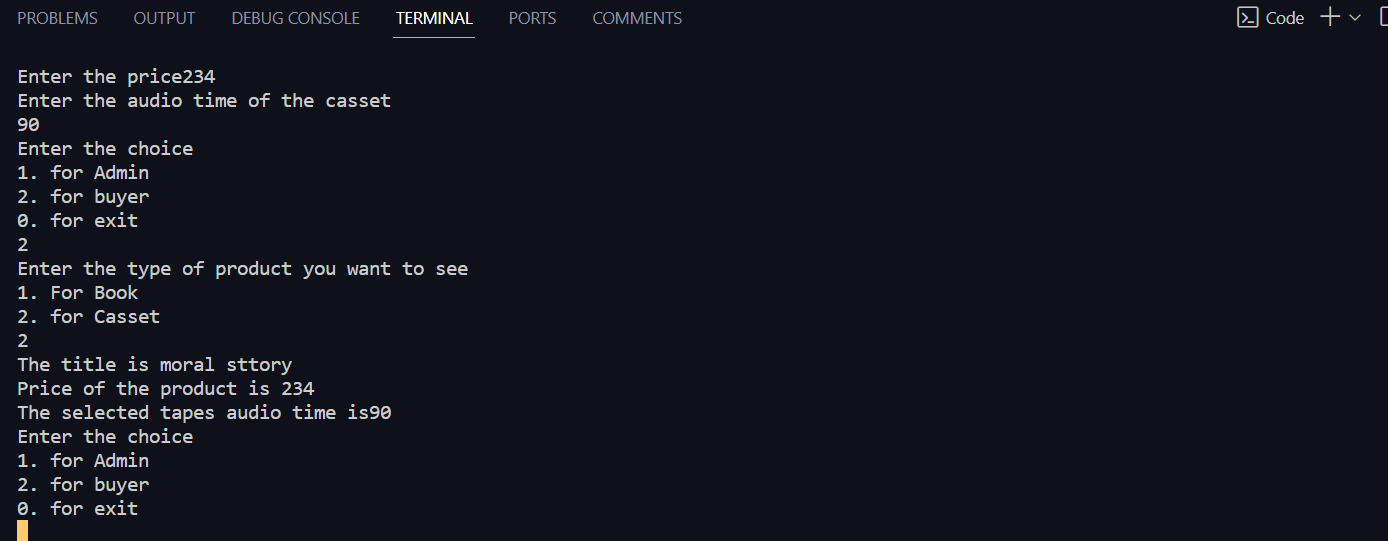
**}**

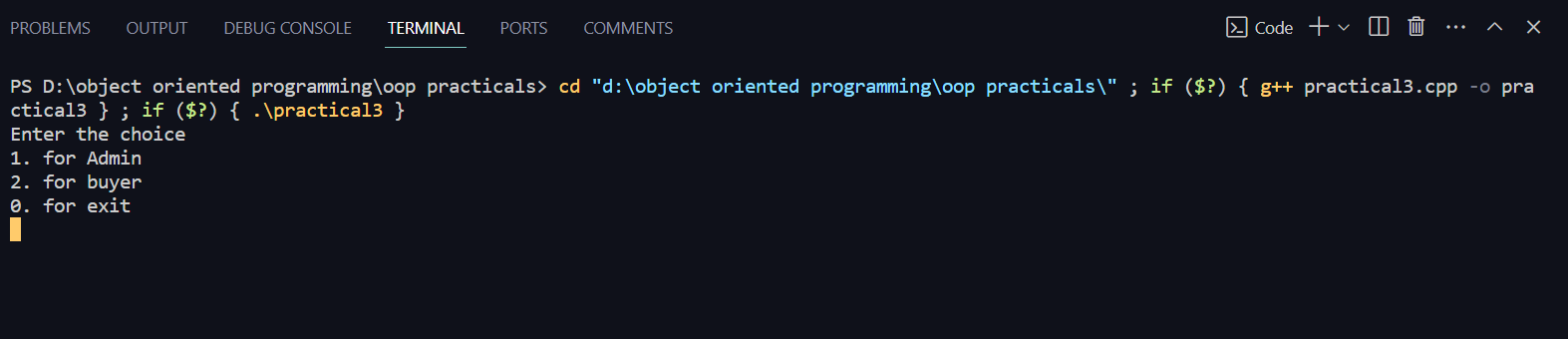
**}*//End of mainA***

**OUTPUT:**

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