

## OOP LAB ASSIGNMENTS(PRACTICALS)

**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()
```

```
    {
```

OOP LAB ASSIGNMENTS(PRACTICALS)

```
        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;
```

OOP LAB ASSIGNMENTS(PRACTICALS)

```
    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;
```

OOP LAB ASSIGNMENTS(PRACTICALS)

```
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();
}
```

OOP LAB ASSIGNMENTS(PRACTICALS)

```
        b1.getcount();
    }
    else if(addingchoice == 2)
    {
        cin.ignore();
        t1.printdata();
        t1.printaudiotime();
    }
    break;
default:
    cout<<"You have entered 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
```

## OOP LAB ASSIGNMENTS(PRACTICALS)

## OUTPUT:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
The title iswings of fire
Price of the product is 723
The selected book's page count is350
Enter the choice
1. for Admin
2. for buyer
0. for exit
2
Enter the type of product you want to see
1. For Book
2. for Casset
1
The title iswings of fire
Price of the product is 723
The selected book's page count is350
Enter the choice
1. for Admin
2. for buyer
0. for exit
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
Enter the choice
1. for Admin
2. for buyer
0. for exit
1
Enter the type of product for adding
1. For Book
2. for Casset
1
Enter the data of the product
Enter the title
wings of fire
Enter the price723
Enter the pagecount of a book
350
Enter the choice
1. for Admin
2. for buyer
0. for exit
```

## OOP LAB ASSIGNMENTS(PRACTICALS)

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
Enter the price234
Enter the audio time of the casset
90
Enter the choice
1. for Admin
2. for buyer
0. for exit
2
Enter the type of product you want to see
1. For Book
2. for Casset
2
The title is moral sttory
Price of the product is 234
The selected tapes audio time is90
Enter the choice
1. for Admin
2. for buyer
0. for exit
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
PS D:\object oriented programming\oop practicals> cd "d:\object oriented programming\oop practicals\" ; if ($?) { g++ practical3.cpp -o practical3 } ; if ($?) { .\practical3 }
Enter the choice
1. for Admin
2. for buyer
0. for exit
```