

### Statement-

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-

```
#include<iostream>
#include<string>
#include<exception>
using namespace std;
class publication
{
    private:
        string title;
        float price;
    public:
        publication(string t="",float p=0.0):title(t),price(p){}

        virtual void display()const
        {
            cout<<"title:"<<title<<endl;
            cout<<"price"<<price<<endl;
        }
};
class book:public publication
{
    private:
        int pagecount;
    public:
        book(string t="",float p=0.0,int pc=0):publication(t,p),pagecount(pc){}

        void display() const override{
            publication::display();
            cout<<"pagecount:"<<pagecount<<endl;
        }
};
class tape:public publication
{
    private:
        float playing_time;
    public:
        tape(string t="",float p=0.0,float pt=0.0):publication(t,p),playing_time(pt){}
```

```

void display()const override{
    publication::display();
    cout<<"playing time :"<<playing_time<<endl;
}
};

int main()
{
    try
    {
        //book info
        string booktitle;
        float bookprice;
        int bookpages;
        //tape info
        string tapetitle;
        float tapeprice;
        float tapetime;
        //input for book
        cout<<"enter the book title:";
        getline(cin,booktitle);
        cout<<"enter the book price:";
        cin>>bookprice;
        cout<<"enter the book pages :";
        cin>>bookpages;
        cin.ignore();
        //input for tape
        cout<<"enter the tape name:";
        getline(cin,tapetitle);
        cout<<"enter the tape price:";
        cin>>tapeprice;
        cout<<"enter the tape timing in minuits:";
        cin>>tapetime;

        //create object of class
        book b1(booktitle,bookprice,bookpages);
        tape t1(tapetitle,tapeprice,tapetime);

        //display data
        cout<<"book data :\n";
        b1.display();
        cout<<"tape data:\n";
        t1.display();

    }
    catch(const exception& e)
    {
        cerr<<"error occured"<<e.what()<<endl;
        book b1("",0,0.0);
        tape t1("",0.0,0.0);
    }
}

```

```
//display reset data
cout<<"book data:";
b1.display();
cout<<"tape data:";
t1.display();
}

return 0;
}
```