

NAME:-SHRUTI MUKUND PAWAR  
ROLL NO:-S213003  
CLASS:-SYCS  
DIV:-C  
BATCH:-C1  
SUBJECT:OOP

#### PROBLEM STATEMENT:

Imagine a publishing company which does marketing for Book and audio cassette versions.create a class publication that stores the title(string) and price(float) of publications.From this class derive two classes:book which adds a pageCount(int) and tape which adds a playing time in Minutes(float).Write a program that instantiates the object 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 0.

#### CODE:

```
#include <iostream>
using namespace std;
class publication
{
    string title;
    float price;
public:
    void setdata()
    {
        cout<<"Enter the title: " <<endl;
        getline (cin, title);
        if ( "\0" == title)
            throw string("Error: Title is an empty string.");
        cout<<"Enter the price: " <<endl;
        cin>> price;
        if (price <= 0)
            throw string ("Error: Incorrect Price.");
    }
    void display()
    {
        cout<<"Title is: " << title <<endl;
        cout<<"Price is: " <<price<<endl;
    }
    void clear()
    {
        title = '\0';
        price = 0.0;
    }
}
```

```

    }
};
class book : public publication
{
    int pgcount ;
public:
    void setdata()
    {
        publication::setdata();
        cout<<"Enter the pgcount: " <<endl;
        cin>> pgcount;
        if (pgcount <= 0)
            throw string ("Error: Incorrect Pagecount.");
    }
    void display()
    {
        publication::display() ;
        cout<< "Number of pages are: "<< pgcount <<endl;
    }
    void clear()
    {
        publication::clear() ;
        pgcount = 0;
    }
};
class Tape : public publication
{
    int ptime;
public:
    void setdata()
    {
        publication::setdata();
        cout<<"Enter the playing time: " <<endl;
        cin>> ptime;
        if(ptime <= 0)
            throw string ("Error: Incorrect Playing Time.");
    }
    void display()
    {
        publication::display();
        cout<< "Playing Time: "<< ptime <<endl ;
    }
    void clear()
    {
        publication::clear();
    }
};

```

```

    ptime = 0;
}
};
int main()
{
    book bk;
    Tape tp;
    string mystr;
    try
    {
        cout<<"Enter Book Details: "<<endl;
        bk.setdata();
        cout<<"\nBook Details are: "<<endl;
        bk.display();
    }
    catch(string errmsg)
    {
        cout<<errmsg<<endl<<endl;
        bk.clear();
        bk.display();
    }
    getline (cin, mystr);
    try
    {
        cout<<"\nEnter Tape Details: "<<endl;
        tp.setdata();
        cout<<"\nTape Details are: "<<endl;
        tp.display();
    }
    catch(string errmsg)
    {
        cout<<errmsg<<endl<<endl;
        tp.clear();
        tp.display();
    }
    return 0;
}

```

Input:

```
Enter Book Details:
Enter the title:
Basics of C++
Enter the price:
250
Enter the pgcount:
500
```

Output:

```
Book Details are:
Title is: Basics of C++
Price is: 250
Number of pages are: 500
```

Input:

```
Enter Tape Details:
Enter the title:
Best of Ed Sheeren
Enter the price:
400
Enter the playing time:
30.25
```

Output:

```
Tape Details are:
Title is: Best of Ed Sheeren
Price is: 400
Playing Time: 30
```