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## OBJECT ORIENTED PROGRAMMING LABORATORY

### LAB ASSIGNMENT 3

#### Problem 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.

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#### Main Program

```
#include<iostream>
using namespace std;
class publication
{
    public:
        string title;
        float price;
        void add()
        {
            cout<<"\n Enter Publication information: ";
            cout<<"\n Enter title of Publication: ";
            cin.ignore();
            getline(cin,title);

            cout<<"\n Enter the price of publication: ";
            cin>>price;
        }

        void display()
        {
            cout<<"\n -----";
            cout<<"\n TITLE OF PUBLICATION      : " <<title;
            cout<<"\n PUBLICATION PRICE      : " <<price;
        }
};

class book:public publication
{
    private:
        int page_count;
    public:
        void add_book()
        {
            try
```

```

        {
            add();
            cout<<"\n Enter page count of book: ";
            cin>>page_count;
            if(page_count<=0)
                throw page_count=0;
        }
        catch(...)
        {
            cout<<"\n Invalid page count!!! \n";
            page_count=0;
        }
        }

        void display_book()
        {
            display();
            cout<<"\n Page Count          : "<<page_count;
            cout<<"\n -----";
        }
    };

```

```

class tape:public publication
{
    private:
    float play_time;
    public:
    void add_tape()
    {
        try
        {
            add();
            cout<<"\n Enter play duration of tape: ";
            cin>>play_time;
            if(play_time<=0)
                throw play_time;
        }
        catch(...)
        {
            cout<<"\n Invalid play time!!!\n";
            play_time=0;
        }
    }

    void display_tape()
    {
        display();
        cout<<"\n Play time          : "<<play_time<<"mins";
        cout<<"\n -----";
    }
};

```

```

int main()
{
    book b1[10];
    tape t1[10];
    int ch=0, b_count=0, t_count=0;
    do
    {
        cout<<"\nPUBLICATION DETAILS: ";
        cout<<"\n 1. Add Book Details: ";
        cout<<"\n 2. Add Tape Details: ";
        cout<<"\n 3. Display Book details: ";
        cout<<"\n 4. Display Tape Details: ";
        cout<<"\n 5. Exit";
        cout<<"\n Enter your choice: ";
        cin>>ch;
        switch(ch)
        {
            case 1:
                b1[b_count].add_book();
                b_count++;
                break;

            case 2:
                t1[t_count].add_tape();
                t_count++;
                break;

            case 3:
                cout<<"\n Publication Information System(BOOKS): ";
                for(int j=0; j<b_count; j++)
                {
                    b1[j].display_book();
                }
                break;

            case 4:
                cout<<"\n Publication Information System (TAPES): ";
                for(int j=0; j<t_count; j++)
                {
                    t1[j].display_tape();
                }
                break;

            case 5:
                exit(0);
                cout<<"Exit";

        }
    }
    while (ch!=5);

    return 0;
}
*****

```

## OUTPUT:

### PUBLICATION DETAILS:

1. Add Book Details:
2. Add Tape Details:
3. Display Book details:
4. Display Tape Details:
5. Exit

Enter your choice: 1

Enter Publication information:

Enter title of Publication: Law of Attraction

Enter the price of publication: 250

Enter page count of book: 300

### PUBLICATION DETAILS:

1. Add Book Details:
2. Add Tape Details:
3. Display Book details:
4. Display Tape Details:
5. Exit

Enter your choice: 2

Enter Publication information:

Enter title of Publication: Secret of Happiness

Enter the price of publication: 400

Enter play duration of tape: 600

### PUBLICATION DETAILS:

1. Add Book Details:
2. Add Tape Details:
3. Display Book details:
4. Display Tape Details:
5. Exit

Enter your choice: 3

Publication Information System(BOOKS):

-----  
TITLE OF PUBLICATION : Law of Attraction  
PUBLICATION PRICE : 250  
Page Count : 300  
-----

### PUBLICATION DETAILS:

1. Add Book Details:

2. Add Tape Details:
3. Display Book details:
4. Display Tape Details:
5. Exit

Enter your choice: 4

#### Publication Information System (TAPES):

-----  
TITLE OF PUBLICATION : Secret of Happiness  
PUBLICATION PRICE : 400  
Play time : 600mins  
-----

#### PUBLICATION DETAILS:

1. Add Book Details:
2. Add Tape Details:
3. Display Book details:
4. Display Tape Details:
5. Exit

Enter your choice: 5

Exit