HOMEWORK

3873-FBAS/BSCS/F18,B

Course Code: CS211

Course Name: OOP

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Submission Date: December 2,2019

Publication.h

```cpp
#pragma once
#include<iostream>
#include<string>
using namespace std;
class Publication
{
        string tittle;
        float price;
public:
        void getInfo()
        {
                cout << "Enter tittle::::";
                getline(cin, tittle, '!');
                cout << "Enter price::::";
                cin >> price;
        }
        void displayInfo()
        {
                cout << "Tittle is:" << tittle << endl
                        << "Price is=" << price << endl;
        }
        virtual void getData() = 0;
        virtual void putData() = 0;
        virtual bool isOverSized() = 0;
};
```

Book.h

```cpp
#pragma once
#include<iostream>
#include<string>
using namespace std;
#include "Publication.h"
class Book : public Publication
{
        int pgCount;
public:
        void getData()
        {
                Publication::getInfo();
                cout << "Enter total number of pages::::";
                cin >> pgCount;
```

```
        }
        void putData()
        {
                Publication::displayInfo();
                cout << "Total number of pages are=" << pgCount << endl;
        }
        bool isOverSized()
        {
                return(pgCount > 455) ? true : false;
        }
};
```

Tape.h

```
#pragma once
#include<iostream>
#include<string>
using namespace std;
#include "Publication.h"
class Tape : public Publication
{
        float tm; //time in minutes
public:
        void getData()
        {
                Publication::getInfo();
                cout << "Enter time in minutes::::";
                cin >> tm;
        }
        void putData()
        {
                Publication::displayInfo();
                cout << "Time is=" << tm << endl;
        }
        bool isOverSized()
        {
                return(tm > 35.75) ? true : false;
        }
};
```

Test.cpp

```cpp
#include "Test.h"
#include "Book.h"
#include "Tape.h"
#include<iostream>
#include<string>
using namespace std;
int main()
{
        Publication *p[100];
        int n = 0;
        char choice1,choice2;
        int option;
        do
        {
                cout << "***********MENU***********" << endl
                        << "Press b/B:Book." << endl
                        << "Press t/T:Tape." << endl
                        << "Press 1:getdata." << endl
                        << "Press 2:putdata." << endl
                        << "Press 3:isOverSized." << endl;
                cout <<"Book or Tape ? (b / t) :::::";
                cin >> choice1;
                if (choice1 == 'B' || choice1 == 'b')
                {
                        p[n] = new Book;
                        do
                        {
                                cout << "Enter option:::::";
                                cin >> option;
                                switch (option)
                                {
                                case 1: p[n]->getData();
                                        break;
                                case 2: p[n]->putData();
                                        break;
                                case 3:
                                {
                                        if (p[n]->isOverSized())
                                                cout << "The book is oversized." << endl;
                                        else
                                                cout << "The book is not oversized." << endl;
                                        break;
                                }
                                default: cout << "Invalid option." << endl;
```

```
                }
            } while (option != 4);
        }
        else
        {
                p[n] = new Tape;
                do
                {
                        cout << "Enter option:::::";
                        cin >> option;
                        switch (option)
                        {
                        case 1: p[n]->getData();
                                break;
                        case 2: p[n]->putData();
                                break;
                        case 3:
                        {
                                if (p[n]->isOverSized())
                                        cout << "The tape is oversized." << endl;
                                else
                                        cout << "The tape is not oversized." << endl;
                                break;
                        }
                        default: cout << "Invalid option." << endl;
                        }
                } while (option != 4);
        }
     n++;
     cout << "Enter another ? (y / n) : ";
     cin >> choice2;
    } while (choice2 == 'y');
  system("pause");
  return 0;
}
```

Output:

```
C:\Users\Zainab Israr\source\repos\homework\Debug\homework.exe                                    —   □   ×
***********MENU***********
Press b/B:Book.
Press t/T:Tape.
Press 1:getdata.
Press 2:putdata.
Press 3:isOverSized.
Book or Tape ? (b / t) :::::b
Enter option:::::1
Enter tittle::::The Alchemist!
Enter price::::499
Enter total number of pages::::499
Enter option:::::2
Tittle is:
The Alchemist
Price is=499
Total number of pages are=499
Enter option:::::3
The book is oversized.
Enter option:::::4
Invalid option.
Enter another ? (y / n) : y
***********MENU***********
Press b/B:Book.
Press t/T:Tape.
Press 1:getdata.
Press 2:putdata.
Press 3:isOverSized.
Book or Tape ? (b / t) :::::t
Enter option:::::1
Enter tittle::::1984!
Enter price::::799
Enter time in minutes::::45.89
Enter option:::::2
Tittle is:
1984
Price is=799
Time is=45.89
Enter option:::::3
The tape is oversized.
Enter option:::::4
Invalid option.
Enter another ? (y / n) : n
Press any key to continue . . .
```