

Computer Programming Paradigm Lab  
Lab Experiment No. 3

Name: Shashwat Tripathi  
Batch: C

Roll. No.: 60  
Div: D10A

AIM: C++ Program (with member, constructor, destructor and methods).

**PROBLEM STATEMENT:**

Write a program to design a class representing the information regarding digital libraries having books and tapes. Book and Tape class are derived from a common class called Media.

Class Book have following members and functions:

Data Members - title, price, pages

Member functions - Parameterized constructors

Display book details

Class Tape have following members and functions:

Data Members - title, price, time (length of tape)

Member functions - Parameterized constructors

Display tape details

The program should demonstrate Runtime Polymorphism.

**CODE:**

```
#include <iostream>
#include <string>
using namespace std;

class Media
{
public:
    string Title;
    float Price;

    Media()
    {
        Title = " ";
        Price = 0;
    }
    Media(string T, float P)
    {
        Title = T;
        Price = P;
    }

    virtual void display()
    {
    }
};
```

```

class Book : public Media
{
    int Pages;
public:
    Book()
    {
        Title = " ";
        Pages = 0;
    }
    Book(string T, float P, int Pg) : Media(T, P)
    {
        Pages = Pg;
    }

    virtual void display()
    {
        cout << "Book Title: " << Title << endl;
        cout << "Book Price: " << Price << endl;
        cout << "Number of Pages: " << Pages << endl;
    }
};

class Tapes : public Media
{
    float Time;
public:
    Tapes()
    {
        Time = 0.0;
    }
    Tapes(string T, float P, float time) : Media(T, P)
    {
        Time = time;
    }

    virtual void display()
    {
        cout << "Tape Title: " << Title << endl;
        cout << "Tape Price: " << Price << endl;
        cout << "Length of Tape(in hrs): " << Time << "h" << endl;
    }
};

int main()
{
    cout << "D10A_60_Shashwat Tripathi" << endl;
    cout << endl << "----- Book Details -----" << endl;
    ;
    Book B("Programming in JAVA", 1299, 516);
    B.display();
    cout << endl << "----- Tape Details -----" << endl;
    Tapes tape("C++ Tutorial for Beginners - Full Course", 799, 4.01);
    tape.display();
    return 0;
}

```

## OUTPUT:

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

Code

```
[Running] cd "c:\Users\shweta\Documents\Shashwat\Notepad++\PCPF\" && g++ PCPFLab3.cpp -o PCPFLab3 &&
"c:\Users\shweta\Documents\Shashwat\Notepad++\PCPF\"PCPFLab3
D10A_60_Shashwat Tripathi
```

```
----- Book Details -----
```

```
Book Title: Programming in JAVA
```

```
Book Price: 1299
```

```
Number of Pages: 516
```

```
----- Tape Details -----
```

```
Tape Title: C++ Tutorial for Beginners - Full Course
```

```
Tape Price: 799
```

```
Length of Tape(in hrs): 4.01h
```

```
[Done] exited with code=0 in 5.115 seconds
```