***Computer Programming Paradigm Lab***

***Lab Experiment No. 3***

**Name: Shashwat Tripathi Roll. No.: 60**

**Batch: C 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:**

