/\*Task-01\*/

#include <iostream>

using namespace std;

class Singleton

{

private:

static Singleton\* instance;

int value;

Singleton()

{

value = 0;

}

public:

static Singleton\* getInstance()

{

if (instance == nullptr)

{

instance = new Singleton();

}

return instance;

}

int getData() const

{

return value;

}

void setData(int newvalue)

{

value = newvalue;

}

};

Singleton\* Singleton::instance = nullptr;

int main()

{

Singleton\* s1 = Singleton::getInstance();

s1->setData(27);

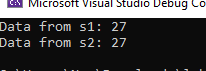
cout << "Data from s1: " << s1->getData() << endl;

Singleton\* s2 = Singleton::getInstance();

cout << "Data from s2: " << s2->getData() << endl;

return 0;

}



/\*Task-02\*/

#include <iostream>

using namespace std;

class Math

{

public:

static const double PI;

static const double E;

static double circumference(double radius)

{

double c = 2 \* PI \* radius;

return c;

}

static double area(double radius)

{

double a = PI \* radius \* radius;

return a;

}

};

const double Math::PI = 3.14159;

const double Math::E = 2.718;

int main()

{

double radius;

cout << "-------------------------INPUTS------------------------------------" << endl;

cout << "Enter the radius of the circle : \t";

cin >> radius;

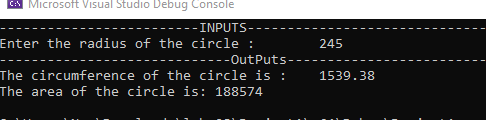
cout << "-----------------------------OutPuts-----------------------------------" << endl;

cout << "The circumference of the circle is : \t" << Math::circumference(radius) << endl;

cout << "The area of the circle is: " << Math::area(radius) << endl;

return 0;

}



/\*Task-05\*/

#include <iostream>

#include <string>

using namespace std;

class Publication

{

private:

string title;

float price;

public:

void getdata()

{

cout << "Enter title: ";

getline(cin, title);

cout << "Enter price: ";

cin >> price;

}

void putdata() const

{

cout << "Title :\t" << title << endl;

cout << "Price :\t" << price << endl;

}

};

class Book : public Publication

{

private:

int page\_count;

public:

void getdata()

{

Publication::getdata();

cout << "Enter page count: ";

cin >> page\_count;

cin.ignore();

}

void putdata()

{

Publication::putdata();

cout << "Page count: " << page\_count << endl;

}

};

class Tape : public Publication

{

private:

float playing\_time;

public:

void getdata()

{

Publication::getdata();

cout << "Enter playing time (in minutes): ";

cin >> playing\_time;

cin.ignore();

}

void putdata() {

Publication::putdata();

cout << "Playing time: " << playing\_time << " minutes" << endl;

}

};

int main()

{

Book b;

Tape t;

cout << "Enter book details:" << endl;

b.getdata();

cout << endl << "Enter tape details:" << endl;

t.getdata();

cout << endl << "Book details:" << endl;

b.putdata();

cout << endl << "Tape details:" << endl;

t.putdata();

return 0;

}

