using System;

namespace ProxyPatternExample

{

// Example #1

public interface ISubject

{

void Request();

}

class RealSubject : ISubject

{

public void Request()

{

Console.WriteLine("RealSubject: Handling Request.");

}

}

class Proxy : ISubject

{

private RealSubject \_realSubject;

public Proxy(RealSubject realSubject)

{

this.\_realSubject = realSubject;

}

public void Request()

{

if (this.CheckAccess())

{

this.\_realSubject.Request();

this.LogAccess();

}

}

public bool CheckAccess()

{

Console.WriteLine("Proxy: Checking access prior to firing a real request.");

return true;

}

public void LogAccess()

{

Console.WriteLine("Proxy: Logging the time of request.");

}

}

public class Client

{

public void ClientCode(ISubject subject)

{

subject.Request();

}

}

// Example #2

interface Image

{

void Display();

}

class RealImage : Image // (DataBase)

{

public string Filename { get; set; }

public RealImage(string filename)

{

Filename = filename;

}

public void Display()

{

Console.WriteLine("Displaying from RealImage");

}

public void LoadFromDisk()

{

Console.WriteLine("Loading (RealImage)");

}

}

class ProxyImage : Image

{

RealImage realImage;

public ProxyImage(RealImage realImage)

{

this.realImage = realImage;

}

public void Display()

{

realImage.Display();

realImage.LoadFromDisk();

}

}

class ProxyPatternDemo // Client (Application)

{

public void ProxyPattern(Image image)

{

image.Display();

}

}

public class Program

{

static void Main(string[] args)

{

//Client client = new Client();

//Console.WriteLine("Client: Executing the client code with a real subject:");

//RealSubject realSubject = new RealSubject();

//client.ClientCode(realSubject);

//Console.WriteLine();

//Console.WriteLine("Client: Executing the same client code with a proxy:");

//Proxy proxy = new Proxy(realSubject);

//client.ClientCode(proxy);

ProxyPatternDemo proxy = new ProxyPatternDemo();

Console.WriteLine("Real Image: ");

RealImage realImage = new RealImage("somethning.jpg");

proxy.ProxyPattern(realImage);

Console.WriteLine();

Console.WriteLine("Proxy Image : ");

ProxyImage proxyImage = new ProxyImage(realImage);

proxy.ProxyPattern(proxyImage);

Console.WriteLine();

}

}

}