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| **Observer** |
| **Line** | **Code** |
| **1****2****3****4****5****6****7****8****9****10****11****12****13****14****15****16****17****18****19****20****21****22****23****24****25****26****27****28****29****30****31****32****33****34****35****36****37****38****39****40****41****42****43****44****45****46****47****48****49****50****51****52****53****54****55****56****57****58****59****60****61****62****63****64****65****66****67****68****69****70****71****72****73****74****75****76****77****78****79****80** | **using** System;**using** System.Collections.Generic;**using** System.Threading;**namespace** Observer { **class** Subject { **private readonly** List<Observer> observers = **new** List<Observer>(); **private int** state; **public int** getState() { **return** state; } **public void** setState(**int** state) { **this**.state = state; notifyAllObservers(); } **public void** attach(Observer observer) { observers.Add(observer); } **public void** notifyAllObservers() { **foreach** (Observer observer **in** observers) { observer.update(); } } } **abstract class** Observer { **protected** Subject subject; **public abstract void** update(); } **class** BinaryObserver : Observer { **public** BinaryObserver(Subject subject) { **this**.subject = subject; subject.attach(**this**); } **public override void** update() { Console.WriteLine("Binary String: " +  Convert.ToString(subject.getState(), 2)); } } **class** OctalObserver : Observer { **public** OctalObserver(Subject subject) { **this**.subject = subject; subject.attach(**this**); } **public override void** update() { Console.WriteLine("Octal String: " +  Convert.ToString(subject.getState(), 8).ToUpper()); } } **class** HexaObserver : Observer { **public** HexaObserver(Subject subject) { **this**.subject = subject; subject.attach(**this**); } **public override void** update() { Console.WriteLine("Hex String: " +  Convert.ToString(subject.getState(), 16).ToUpper()); } } **class** Program { **static void** Main() { Subject subject = **new** Subject(); **new** HexaObserver(subject); **new** OctalObserver(subject); **new** BinaryObserver(subject); Console.WriteLine("First state change: 15"); subject.setState(15); Console.WriteLine("Second state change: 10"); subject.setState(10); Console.ReadKey(); } }} |