|  |  |
| --- | --- |
| **Proxy** | |
| **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**  **58**  **59**  **60**  **61**  **62**  **63**  **64**  **65**  **66**  **67**  **68**  **69**  **70**  **71**  **72** | // Shows virtual and protection proxies  **using** System;  **namespace** Proxy {  **class** SubjectAccessor {  **public interface** ISubject {  **string** Request();  }  **private class** Subject : ISubject {  **public string** Request() {  **return** "Subject Request Choose left door\n";  }  }  **public class** CacheProxy : ISubject {  Subject subject = **new** Subject();  **string** answer = **null**;  **public string** Request() {  **if** (answer == **null**) answer = subject.Request();  **return** "Cache Proxy: Call to " + answer;  }  }  **public class** VirtualProxy : ISubject {  Subject subject = **null**;  **public string** Request() {  //A Virtual Proxy creates the object only on its first method call  **if** (subject == **null**) {  Console.WriteLine("Subject inactive");  subject = **new** Subject();  }  Console.WriteLine("Subject active");  **return** "Virtual Proxy: Call to " + subject.Request();  }  }  **public class** ProtectionProxy : ISubject {  //An Authentication Proxy first asks for a password  Subject subject = **null**;  **string** password = "secret";  **public string** Authenticate(**string** supplied) {  **if** (subject!=**null**) **return**  "Protection Proxy: You already allowed to access";  **if** (supplied!=password) **return** "Protection Proxy: No access";  subject = **new** Subject();  **return** "Protection Proxy: Authenticated";  }  **public string** Request() {  **if** (subject == **null**) **return** "Protection Proxy: Authenticate first";  **return** "Protection Proxy: Call to " + subject.Request();  }  }  }  **class** Program : SubjectAccessor {  **static void** Main(**string**[] args) {  ISubject subject = **new** VirtualProxy();  Console.WriteLine(subject.Request());  Console.WriteLine(subject.Request());  Console.WriteLine("------------------------------------------------");  subject = **new** ProtectionProxy();  Console.WriteLine(subject.Request());  Console.WriteLine((subject **as** ProtectionProxy).Authenticate("Don't know"));  Console.WriteLine((subject **as** ProtectionProxy).Authenticate("secret"));  Console.WriteLine((subject **as** ProtectionProxy).Authenticate("secret"));  Console.WriteLine(subject.Request());  Console.ReadKey();  }  }  } |