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| **Bridge** | |
| **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**  **81**  **82**  **83**  **84**  **85**  **86**  **87**  **88**  **89**  **90**  **91**  **92**  **93**  **94**  **95**  **96**  **97**  **98**  **99**  **100**  **101**  **102**  **103**  **104**  **105**  **106**  **107**  **108**  **109**  **110**  **111**  **112**  **113**  **114**  **115**  **116**  **117**  **118**  **119**  **120**  **121**  **122**  **123**  **124**  **125**  **126**  **127**  **128**  **129**  **130**  **131**  **132**  **133**  **134**  **135**  **136**  **137**  **138**  **139** | **using** System;  **namespace** Bridge {  **abstract class** UniversalController {  **public** TV tv;  **public** UniversalController(TV tv) {  **this**.tv = tv;  }  **public abstract void** On();  **public abstract void** Off();  **public abstract void** ChangeChannel(**int** channel);  **public abstract void** IncreaseVolume();  **public abstract void** DecreaseVolume();  }  **class** GermanyController : UniversalController {  **public** GermanyController(TV tv) : **base**(tv) {  }  **public override void** ChangeChannel(**int** channel) {  tv.ChangeChannel(channel);  }  **public override void** DecreaseVolume() {  tv.ChangeVolume(tv.Volume - 1);  }  **public override void** IncreaseVolume() {  tv.ChangeVolume(tv.Volume + 1);  }  **public override void** Off() {  tv.Off();  }  **public override void** On() {  tv.On();  }  }  **class** ChinaController : UniversalController {  **public** ChinaController(TV tv) : **base**(tv) {  }  **public override void** ChangeChannel(**int** channel) {  tv.ChangeChannel(channel);  }  **public override void** DecreaseVolume() {  tv.ChangeVolume(tv.Volume - 1);  }  **public override void** IncreaseVolume() {  tv.ChangeVolume(tv.Volume + 1);  }  **public override void** Off() {  tv.Off();  }  **public override void** On() {  tv.On();  }  }  **abstract class** TV {  **protected int** volume;  **public int** Volume { get; }  **public abstract void** On();  **public abstract void** Off();  **public abstract void** ChangeChannel(**int** channel);  **public abstract int** ChangeVolume(**int** volume);  }  **class** LGTV : TV {  **const int** MAX\_VOLUME = 100;  **public override void** ChangeChannel(**int** channel) {  **if** ((channel <= 0) || (channel > 100))  **throw new** Exception("Invalid Channel#:" + channel);  //Change channel here....  }  **public override int** ChangeVolume(**int** volume) {  **if** (volume < 0) volume = 0;  **else** {  **if** (volume > MAX\_VOLUME) volume = MAX\_VOLUME;  **else this**.volume = volume;  }  **return this**.volume;  }  **public override void** Off() {  //Off the TV  }  **public override void** On() {  //On the TV  }  }  **class** SonyTV : TV {  **const int** MAX\_VOLUME = 80;  **public override void** ChangeChannel(**int** channel) {  **if** ((channel <= 0) || (channel > 100))  **throw new** Exception("Invalid Channel#:" + channel);  //Change channel here....  }  **public override int** ChangeVolume(**int** volume) {  **if** (volume < 0) volume = 0;  **else** {  **if** (volume > MAX\_VOLUME) volume = MAX\_VOLUME;  **else this**.volume = volume;  }  **return this**.volume;  }  **public override void** Off() {  //Off the TV  }  **public override void** On() {  //On the TV  }  }  **class** Program {  **static void** Main(**string**[] args) {  LGTV lg = **new** LGTV();  SonyTV sony = **new** SonyTV();  TV tv = lg;  UniversalController controller = **new** GermanyController(tv);  controller = **new** ChinaController(controller.tv);//Change Controller  controller.On();//On the LG TV  controller.tv = sony;//Reprogram the controller to control sony tv  controller.On();//Will on the Sony TV  Console.ReadKey();  }  }  } |