**David Chapman**

**CSCI 5335 – Assignment 6**

**2/22/2015**

**CODE:**

**/\*Created by: David Chapman**

**\* CSCI 5335 Assignment 7: Adapter Pattern**

**\* 2/23/2015**

**\* Revisions:**

**\* 2/25/2015 - Added binary representation of HELLO**

**\***

**\***

**\* <Summary>**

**\* Implementation of adapter pattern design using languages.**

**\* There are 3 types of Human Languages: English, Spanish, and French. Machines cannott**

**\* speak human languages, they can only report their status in binary code. The Binary**

**\* Adapter returns the prntStatus method of the Machine Language which returns the**

**\* machines binary representation of HELLO.**

**\* <Summary>**

**\***

**\* \*/**

**using System;**

**using System.Collections.Generic;**

**using System.Linq;**

**using System.Text;**

**using System.Threading.Tasks;**

**namespace DChapman\_CSCI5335\_Assignment7**

**{**

**class Program**

**{**

**//The abstract class**

**public abstract class HumanLanguage**

**{**

**public abstract void sayHello();**

**}**

**//The HumanLanguage sub classes:**

**public class English : HumanLanguage**

**{**

**public override void sayHello()**

**{**

**Console.ForegroundColor = ConsoleColor.Yellow;**

**Console.WriteLine("Hello.");**

**Console.ResetColor();**

**}**

**}**

**public class Spanish : HumanLanguage**

**{**

**public override void sayHello()**

**{**

**Console.ForegroundColor = ConsoleColor.Yellow;**

**Console.WriteLine("Hola.");**

**Console.ResetColor();**

**}**

**}**

**public class French : HumanLanguage**

**{**

**public override void sayHello()**

**{**

**Console.ForegroundColor = ConsoleColor.Yellow;**

**Console.WriteLine("Bonjour.");**

**Console.ResetColor();**

**}**

**}**

**//MachineLanguage abstract class. This class will have to be adapted.**

**public abstract class MachineLanguage**

**{**

**public abstract void prntStatus();**

**}**

**//MachineLanguage sub classS**

**public class Binary : MachineLanguage**

**{**

**public override void prntStatus()**

**{**

**Console.ForegroundColor = ConsoleColor.Green;**

**Console.WriteLine("01001000");**

**Console.WriteLine("01000101");**

**Console.WriteLine("01001100");**

**Console.WriteLine("01001111");**

**Console.ResetColor();**

**}**

**}**

**//BinaryAdapter inherits HumanLanguge. This is the adapter:**

**public class BinaryAdapter : HumanLanguage**

**{**

**MachineLanguage binary = new Binary();**

**public BinaryAdapter(MachineLanguage \_binary)**

**{**

**this.binary = \_binary;**

**}**

**public override void sayHello()**

**{**

**binary.prntStatus();**

**}**

**}**

**static void Main(string[] args)**

**{**

**Console.Title = "Object Oriented Design Assignment 7: Adapter Pattern";**

**Console.WindowHeight = 30;**

**Console.WindowWidth = 120;**

**//Create Language objects:**

**HumanLanguage English = new English();**

**HumanLanguage French = new French();**

**HumanLanguage Spanish = new Spanish();**

**MachineLanguage Binary = new Binary();**

**//This is the adapter for the binary language:**

**HumanLanguage BinaryAdapter = new BinaryAdapter(Binary);**

**Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");**

**Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");**

**Console.WriteLine("\* Welcome to the Speech Simulator \*");**

**Console.WriteLine("\* Listed below are the words for \*");**

**Console.WriteLine("\* 'Hello' in various languages \*");**

**Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");**

**Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");**

**Console.WriteLine();**

**//Print out hello in each language**

**Console.WriteLine("English: ");**

**English.sayHello();**

**Console.WriteLine();**

**Console.WriteLine("French: ");**

**French.sayHello();**

**Console.WriteLine();**

**Console.WriteLine("Spanish: ");**

**Spanish.sayHello();**

**Console.WriteLine();**

**//The adapter makes it possible for the binary object to sayHello:**

**Console.WriteLine("Machine: ");**

**BinaryAdapter.sayHello();**

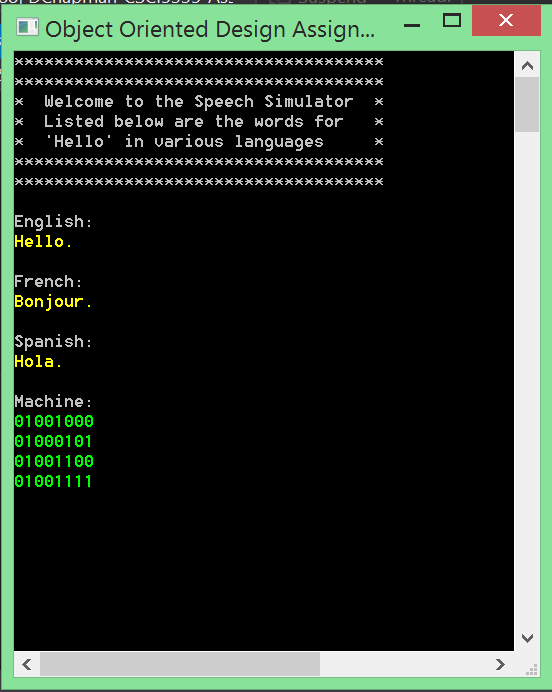
**Console.ReadKey();**

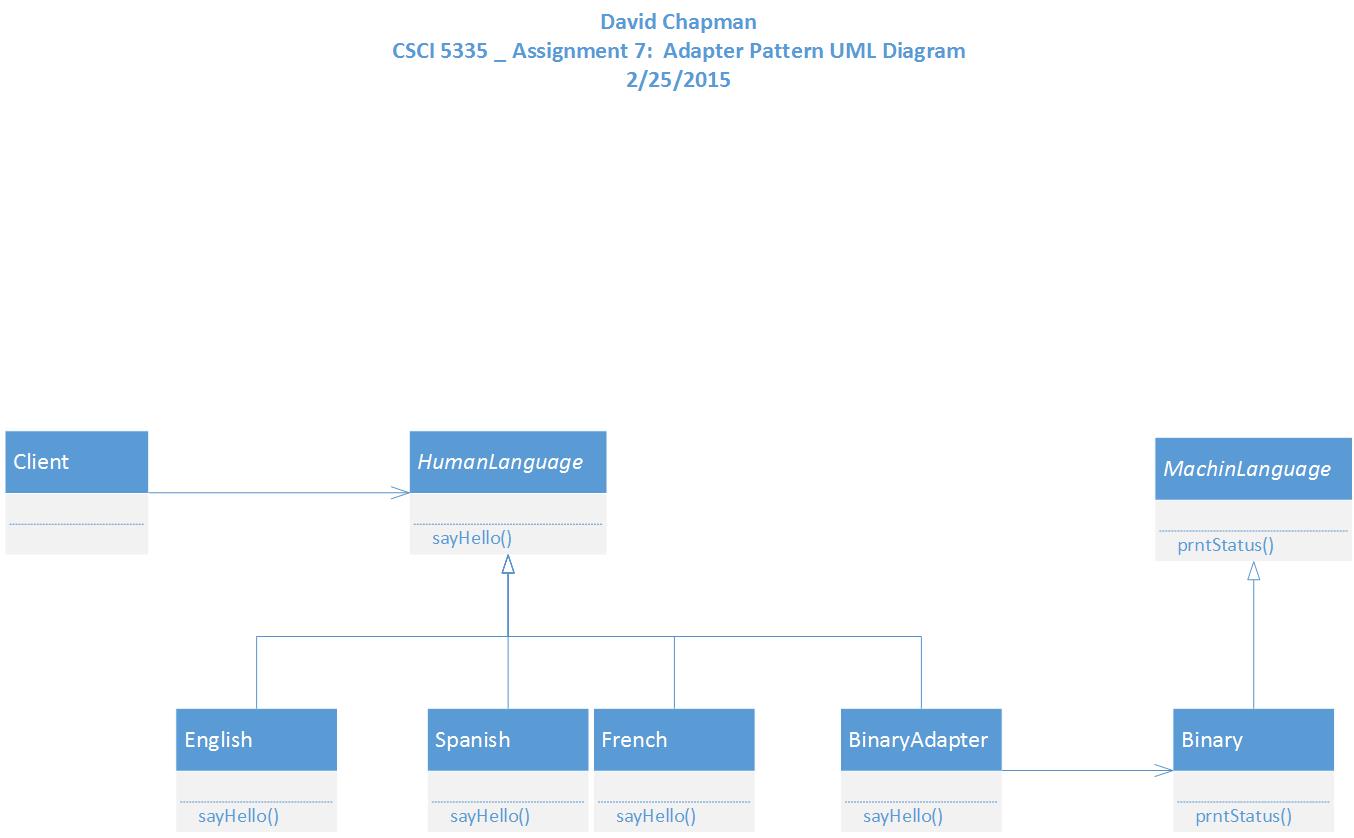
**}**

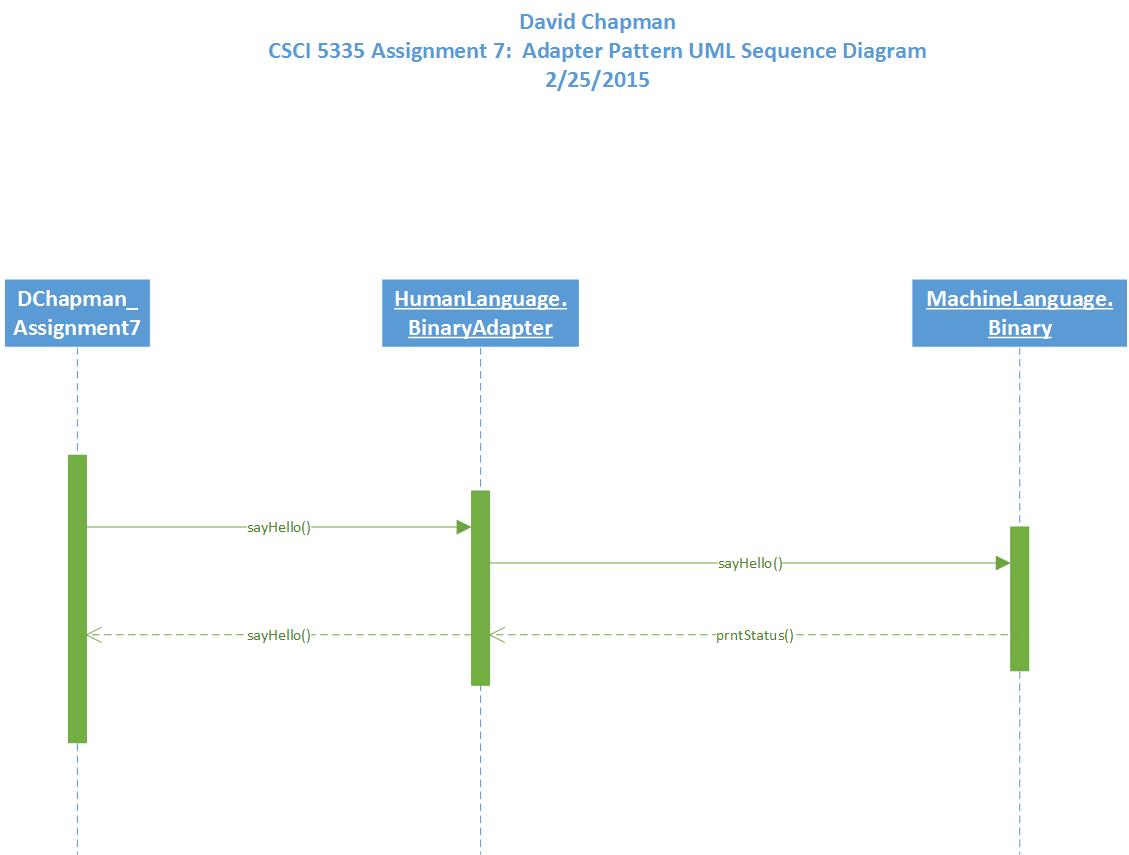
**}**

**}**

**SCREEN SHOT:**



****

****