Resolution File for the Adapter Pattern Exercise

Exercise

Use the already existing program that was shown in the presentation and add the following things:

Implement an even more advanced media player which can play mp5 and vlx format files. For that you had to create a new Adapter called **AdvancedMediaAdapter**. The already existing audio player has to play mp5 and vlx files.

Solution

New Code

## Interface for the new media player

interface IEvenMoreAdvancedMediaPlayer

{

void PlayVlx(string fileName);

void PlayMp5(string fileName);

}

## Classes for playing vlx and mp5 sounds

public class VlxPlayer : IEvenMoreAdvancedMediaPlayer

{

public void PlayVlx(string fileName)

{

Console.WriteLine("Playing vlx file. Name: " + fileName);

}

public void PlayMp5(string fileName)

{

//do nothing

}

}

public class Mp5Player : IEvenMoreAdvancedMediaPlayer

{

public void PlayVlx(string fileName)

{

//do nothing

}

public void PlayMp5(string fileName)

{

Console.WriteLine("Playing mp5 file. Name: " + fileName);

}

}

## New adapter

class AdvancedMediaAdapter:IMediaPlayer

{

IEvenMoreAdvancedMediaPlayer evenMoreAdvancedMusicPlayer;

public AdvancedMediaAdapter(string audioType)

{

if (audioType == "vlx")

{

evenMoreAdvancedMusicPlayer = new VlxPlayer();

}

else if (audioType == "mp5")

{

evenMoreAdvancedMusicPlayer = new Mp5Player();

}

}

public void Play(string audioType, string fileName)

{

if (audioType == "vlx")

{

evenMoreAdvancedMusicPlayer.PlayVlx(fileName);

}

else if (audioType == "mp5")

{

evenMoreAdvancedMusicPlayer.PlayMp5(fileName);

}

}

}

## Some changes in the already existing AudioPlayer class

public class AudioPlayer : IMediaPlayer

{

MediaAdapter mediaAdapter;

AdvancedMediaAdapter advancedMediaAdapter;

public void Play(string audioType, string fileName)

{

//inbuilt support to play mp3 music files

if (audioType=="mp3")

{

Console.WriteLine("Playing mp3 file. Name: " + fileName);

}

//mediaAdapter is providing support to play other file formats

else if (audioType=="vlc" || audioType=="mp4")

{

mediaAdapter = new MediaAdapter(audioType);

mediaAdapter.Play(audioType, fileName);

}

else if (audioType=="vlx" || audioType=="mp5")

{

advancedMediaAdapter = new AdvancedMediaAdapter(audioType);

advancedMediaAdapter.Play(audioType, fileName);

}

else

{

Console.WriteLine("Invalid media. " + audioType + " format not supported");

}

}

}

Testing

static void Main(string[] args)

{

AudioPlayer audioPlayer = new AudioPlayer();

audioPlayer.Play("mp3", "beyond the horizon.mp3");

audioPlayer.Play("mp4", "alone.mp4");

audioPlayer.Play("vlc", "far far away.vlc");

audioPlayer.Play("avi", "mind me.avi");

audioPlayer.Play("vlx", "thunderstruck.vlx");

audioPlayer.Play("mp5", "the end.mp5");

}

