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

```csharp
interface IEvenMoreAdvancedMediaPlayer
{
        void PlayVlx(string fileName);
        void PlayMp5(string fileName);
}
```

Classes for playing vlx and mp5 sounds

```csharp
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

```csharp
class AdvancedMediaAdapter:IMediaPlayer
{
        IEvenMoreAdvancedMediaPlayer evenMoreAdvancedMusicPlayer;
```

```csharp
        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

```csharp
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

```csharp
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");
    }
```

```
Playing mp3 file. Name: beyond the horizon.mp3
Playing mp4 file. Name: alone.mp4
Playing vlc file. Name: far far away.vlc
Invalid media. avi format not supported
Playing vlx file. Name: thunderstruck.vlx
Playing mp5 file. Name: the end.mp5
```