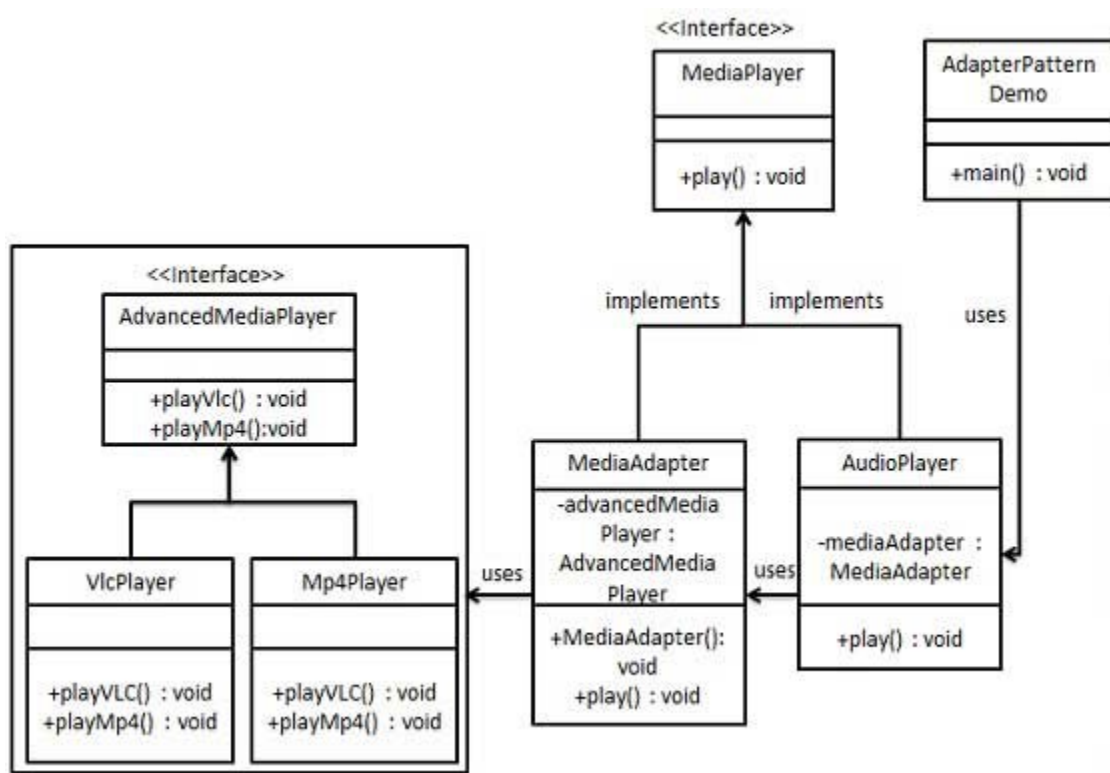


CS 542 HW Assignment 4 (Due by 12pm on March 8st)

1. [20 points] Given an audio player device that can play mp3 files only, use **Adapter** pattern to create an adapter for the audio player device such that it can use an advanced audio player capable of playing vlc and mp4 files.



As shown in the figure above, we have a *MediaPlayer* interface and a concrete class *AudioPlayer* implementing the *MediaPlayer* interface. *AudioPlayer* can play mp3 format audio files by default.

We are having another interface *AdvancedMediaPlayer* and concrete classes implementing the *AdvancedMediaPlayer* interface. These classes can play vlc and mp4 format files.

We want to make *AudioPlayer* to play other formats as well. To attain this, we have created an adapter class *MediaAdapter* which implements the *MediaPlayer* interface and uses *AdvancedMediaPlayer* objects to play the required format.

AudioPlayer uses the adapter class *MediaAdapter* passing it the desired audio type without knowing the actual class which can play the desired format. The client program will use *AudioPlayer* class to play various formats.

Submission

SUBMIT ALL THE FILES IN A ZIP FILE TO COUGAR COURSES:

Always make sure the files you submit can be compiled on empress.csusm.edu.

- Program1: Submit **adapter.cpp** in a zip file to cougar course.

Note: Compress all the above files in a zip file, name it with your name, and submit the zip file on Cougar Course. For example, my first name is Xin and my last name is Ye, then I will name the zip file as XinYe.zip.

Grading

1. On Cougar Course, submit all the files in a zip file with your name. Otherwise, we will not grade it.
2. Your code should be compiled on Cougar Course. If there is a compilation error, you will get 0 points.
3. If your code fails in 1 test case, we will deduct 10% of the total points.
4. If your code fails in 2 test cases, we will deduct 20% of the total points.
5. If your code fails in 3 test cases, we will deduct 40% of the total points.
6. If your code fails in more than 3 test cases, we will deduct 90% of the total points.
7. The comments in your code count for 10% of the total points.
8. Additionally, we will deduct 5 points for each day after the due date.