Scientific Computing and Object Oriented Programming - Homework 1

On demand (video) content in C#

Deadline 26-03-2018 23:59

Objective Design and implementation of classes to model diverse types of video content.

A mass media and entertainment company makes available different content types through its media streaming and on-demand video services. In particular, there are three types of videos: documentary, series episode, and movie. The three types of videos share two common attributes: *title* and *duration in seconds*. Moreover, each type has peculiar attributes:

- information on the topic (e.g. Science, Economics, ...) is available for documentaries
- information on the series name (e.g. "Stranger Things"), the season (e.g. 1) and the episode number (e.g. 10) is available for episodes of a series
- information on the genre (e.g. action, adventure, comedy) is available for movies

Write a distinct class for each of the video types listed above. The class names must be: `Documentary`, `SeriesEpisode`, and `Movie`. Each class must have a constructor where all the fields are initialized, get and set methods for each field, and a method `ToString()` which returns a `String` with the title, the duration, and the values of the peculiar attributes for that video type.

Write a class `MainApp` that consists only in the `static Main()` method, where the following instances are created and written to the standard output stream (use `Console.WriteLine()`):

- the documentary "Inside Job", 108 minutes, topic "economics"
- the "End Times" episode of the series "Breaking Bad", 46 minutes, season 4, episode 12
- the movie "Back to the Future", 116 minutes, genre "science-fiction"

Submission Within the deadline indicated above, each student must submit

- A zipped archive (`Homework1_StudentId.zip`) with source code (`Homework1_StudentId.cs`) and compiled file (`Homework1_StudentId.exe`) should be uploaded on moodle and
- All the classes which *could* be on a single file `Homework1_StudentId.cs`, where `StudentId` is your identifier (numero di matricola).

Submission steps

1. access the web page of the course on moodle:
   `https://elearning.unipd.it/dicea/course/view.php?id=792`
2. click on *Homework1* in the *Homeworks* section
3. click on *add submission*
4. upload the zipped archive through the available form
5. click on *Edit submission* to modify, if needed, your submission
6. click on *Submit assignment* to submit the homework; once the assignment is submitted you will not be able to make any more changes

If an error occurs during the submission, send the zipped archive via email to `emanuele.dibuccio@unipd.it` and `michele.schimd@unipd.it`