**DT228 OOP Lab Test**

**Rules of the Test!**

* **This is an open book test. You can use any books including ebooks and webcourses.**
* **General Internet usage is not allowed. Any use of Google, Facebook chat messaging etc will result of a mark of 0.**
* **You must submit a ZIP file of your Visual Studio solution folder through webcourses ONLY at the end of the test.**
* **This is an individual test. No talking or collaboration permitted.**
* **You should appropriately comment your code.**

The file hnr1.abc contains a list of music scores in the ABC music notation language. Each tune in the file consists of a headers followed by the musical notes. Headers consist of a letter followed by a colon. For example T: indicates a tune title. Each tune **always starts** with the X: header. The number following X: is called the tune index number. Tunes can have multiple titles, but we are only interested in the first and second title (known as the alternative title). Load up the file in Notepad and see if you can understand how it is organised before attempting the test.

Create a new C# Console Application and place this file into the bin/Debug folder of your Visual Studio Solution. For example, if you named your solution Tunes, the file would go into the folder:

Tunes\Tunes\bin\Debug

**Part 1**

Create a Tune class with the following fields, properties, a default constructor and a ToString method:

* index (an int)
* title (a string)
* altTitle (a string)
* keySig (a string)
* timeSig (a string)

**Part 2**

In your Program class, declare a static list of type Tune. If you missed Friday’s tutorial, you can have a look at the sample code (ListExample) for an example of how to use a list. Alternatively, use an array. Write a method:

static void LoadTunes(string filename)

This method should load the file and parse it into the list of Tune objects you declared.

**Part 3**

Write a static method in your program class:

static void PrintTunes(string keyword)

This method should print any tunes whose title or altTitle contains the keyword. This should be case insensitive. If keyword is null or empty, all tunes should be printed.