File Output Utility

Requirements

Create a Java utility class to perform file output. The idea is that this class can be imported onto any Java application that needs to include file output. Thus our utility needs to be able to create a `PrintWriter` object and include a "get" method whereby this objet can be returned to some other class where it can be used for file output. We will also need a mechanism for the user to specify a file name and location for the output file (a file path), This can be achieved using an instance of the `JFileChooser` class in the `javax.swing.*` package. We will also need an application class with which to test out utility.

Notes

We have seen how we output to the screen using the `system.out` screen output object which is contained within the class `System`. An alteranative more generic approach is to create an instance of the `PrintWriter` "stream" class, which can be used in conjunction with the the `print` and `println` methods contained in the `printWriter` class (as opposed to those methods with the same name contained in the `PrintStream` class). We can use exactly the same approach to output to a file by replacing the `System.out` object with an alternative "output to file" object. The Java class `FileWriter` contained in the `java.io` package includes a constructor (with a single argument that must be a string) that creates such an object. The argument is the name of the file which we wish to write to (if there is no such file then Java will create one). Thus if we wish to (say) write to a file called `myFile` then we would have to create an instance of the class `FileWriter` (lets call it `file`) as follows:

```
FileWriter file =
            new FileWriter("myFile");
```

We now have an "output to file" object called `file` which we can use to create a `PrintWriter` object:

```
PrintWriter fileOutput =
            new PrintWriter(file);
```

which can be used as follows:

```
fileOutput.print("Halo World");
```

or:

```
fileOutput.println("Halo World " +
            "Again");
```

Thus to write to a file we replace the `System.out` stream object with an appropriate "file output" stream object. We create such an object using the `FileWriter` class constructor as shown above. However, the class `FileWriter` does not contain the instance methods print and `println` which we would like to use. These are contained in the `PrintWriter` class, thus we have also create an instance of this class.

Contact:
The Department of Computer Science
The University of Liverpool
Liverpool L693BX
Tel: 0151 725 4275
Email: general-enquiries@csc.liv.ac.uk
WWW: http://www.csc.liv.ac.uk