**1. Describe how you intend to develop the module and provide the ability to run it in standalone mode**

The module is to be created such that it can analyse and, using the Momentum strategy, make choices to buy and sell stocks according to the data provided. The strategy will vary based on personal preference and, as such, we also require parameters. Finally, the module should ultimately be able to produce a result to a certain file. Therefore, to accompany the developed module, we will also require:

* the required file to be read in, in the correct format, that holds the input data
* A parameters file, that will hold the parameters required as per the user’s choice
* The path of a directory to output the resulting file and log file to.

The application will be readily available for download, packaged with a sample test file as well as the parameters file. These two input files will contain comma-separated value (CSV) data to be read in to complete the application input. The files are to be extracted into a specific location. Once this is done, the application will be run with the paths to the input file and the parameters file given as parameters for the application. The application will use the data read in from the files it is directed to in order to commit to the financial strategy the application is scripted to do.

The output data will be stored in another CSV file, since this holds the original format of the input. It is also universally used, and easily read in with applications such as Microsoft Excel. The log file produced will be in the form of a text (.txt) file. Again, this is readily legible by most text editing applications. Both these kinds of files are to be written out from the application once the results are produced.

Hence, provided the application within the module is provided with the input files (and their respective paths) in the module, and a path to create output to, the module will be able to function as a standalone application. Further refinement will determine what operating systems specifically will be supported.We will be aiming to cater for Windows and Linux OSs, by producing an executable (.exe) file. Whilst Windows provides full support for these applications, they can further be used in Linux if run through an application called “Wine”. (For further details on producing the standalone executable application, please see Section 4).

[FOR SECTION 4]

The module is to be written in Ruby for a number of reasons. Firstly, the parsing of information is made much easier using Ruby. It is easily achieved using the regex tools that Ruby provides. Secondly, it uses principles of Object Oriented Programming – one which the developers of the module are strongly familiar with. These advantages are all encompassed in another functionality that Ruby provides. The files provided for input are all of a comma-separated value format. Ruby furthers the ease of using these files by providing classes to read in CSV files. Each record is then stored as an object, with characteristics stored as per its description within the CSV file, further ensuring a simplified program to achieve the aim.

Lastly, it provides a number of gems that allows it to run as a standalone application for Windows i.e.