

# Assignment 3

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Learn to Code

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**Exercise Creating scripts for packages.** Create your first package with the reader and writer from the previous assignment. The package should be called "DataIO" standing for "Data Input Output". Apply following layout:

1. First line is function name
2. After function name, a commented section follows:
  - (a) DESCRIPTION: A 1-2 sentence description of what your method does
  - (b) INPUT: A detailed definition of your input with minimum description
  - (c) OUTPUT: A detailed definition of your output with minimum description
  - (d) End comment just states the author, year and potential comments about edits
3. Start the main program
4. Begin with assertions (ensure correct input)
5. Followed by main program (which is usually modularized, but here it is too simple, you will learn that later!)
6. End with return statement

Use the given R Markdown file for writing your code.

**Exercise Manual for scripts.** Now that you created your first script, you should write manuals to describe what your script does. The manual contains following sections:

- 1.

**Exercise Writing tests.** Tests are created in order to test both the script for intended input but also for ill posed input. This should ensure both correct working of your algorithm and the assertions to detect input for which the algorithm was not built. All in all, your algorithm should exactly do what it was intended for. Remember to test the output both for correct datastructure and correct values, when given correct input.