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Notebooks to document workflow, a possible component in Virtual Research Environments

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Over the last few years, in the context of data analysis, the so-called *notebooks* have become increasingly popular, as in the article published in Nature in 2014: "Interactive notebooks: Sharing the code." These notebooks can be defined as interactive computational environments that combine:

1. code fragments that can be executed,
2. text for the description of the application and
3. figures or animations illustrating some aspects of the data or the results.

The idea is to describe a whole procedure, from data to results, in a unique document that can be shared, along with the data, among scientists. This is sometimes referred to as "*Data Story Telling*", "*Computational Narratives*" or "*Digital Playground*".

After presenting the state of the art of the existing notebooks solutions and comparing their features of interest, we illustrate the workflow description with an application of the DIVAnd interpolation tool using a jupyter notebook. They contain the code fragments corresponding to different steps of the data analysis as well as a human readable description of these steps, allowing the user to follow the procedure without having to refer to a manual.