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# ipython2cwl

*Release 0.1*

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IPython2CWL is a tool for converting [IPython](#) Jupyter Notebooks to [CWL](#) Command Line Tools by simply providing typing annotation.

```
from ipython2cwl.iotypes import CWLFilePathInput, CWLFilePathOutput
import csv
input_filename: 'CWLFilePathInput' = 'data.csv'
with open(input_filename) as f:
    csv_reader = csv.reader(f)
    data = [line for line in csv_reader]
number_of_lines = len(data)
result_file: 'CWLFilePathOutput' = 'number_of_lines.txt'
with open(result_file, 'w') as f:
    f.write(str(number_of_lines))
```

IPython2CWL is based on [repo2docker](#), the same tool used by [mybinder](#). Now, by writing Jupyter Notebook and publish them, including repo2docker configuration, the community can not only execute the notebooks remotely but also to use them as steps in scientific workflows.

- Install ipython2cwl: `pip install python2cwl`
- Ensure that you have docker running
- Create a directory to store the generated cwl files, for example cwlbuild
- Execute `jupyter repo2cwl https://github.com/giannisdoukas/cwl-annotated-jupyter-notebook.git -o cwlbuild`



# CHAPTER 1

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## Indices and tables

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