# callgraph Documentation

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# Contents:

This package provides an API, and a command-line interface, to combine a set of Jupyter notebooks into a single notebook.

The provided functions combine a Jupyter notebook that contains a set of prompts, and copies of this notebook that answer the prompts, into a single notebook that lists all the answers after each prompt.

This is intended for use in a classroom setting, to collect assignment submissions into a notebook that can be quickly reviewed. The notebook can include student names, or it can be anonymous for use in classroom review. In the latter case, functionality exists to remove duplicate answers, and to sort answers by length.

CHAPTER 1

# Installation

```
pip install nbcollate
```

# CHAPTER 2

## Command-Line Usage

```
nbcollate assignment.ipynb student-*.ipynb
```

Creates the file assignment-collated.ipynb from the `student-*` files in test/files.

```
nbcollate assignment.ipynb student-*.ipynb --label
```

Same as above, but labels each student with a name derived from the notebook file name.

```
nbcollate --help
```

CHAPTER 3

# Contributing

## 3.1 Set Up

Install *pipenv* <*https://docs.pipenv.org/*>. Then:

```
pipenv install
pipenv shell
```

## 3.2 Test

```
pytest
```

## 3.3 Release

```
tox
bumpversion release
flit publish
git push --tags
```

# CHAPTER 4

# Related Projects

classroom-tools contains scripts related to using GitHub and Jupyter in education It includes a command-line interface to an older version of this code. That script will eventually be modified to use this package.

A web application with similar functionality is at olin-computing/assignment-dashboard. That application caches the state of GitHub in a local database, and provides a web interface for inspect completion status by student or by question, and for browsing the original and collated notebooks.

CHAPTER 5

# Acknowledgements

This package is inspired by original work paulruvolo/SoftDesSp16Prep by Paul Ruvolo at Olin College, extended at osteele/assignment-tools.

CHAPTER 6

# License

MIT

# CHAPTER 7

# API

Collate Jupyter classroom assignment and submission notebooks

nbcollate.**nbcollate**(*assignment_nb*, *answer_nbs*, *, *ids=None*, *labels=None*, *clear_outputs=False*)
Create a notebook based on assignment_nb, that incorporates answers from answer_nbs.

**Parameters**

- **assignment_nb** (*Notebook*) – A Jupyter notebook with the assignment.
- **answer_nbs** (*object*) – A dict or iterable whose values are notebooks with answers. If this value is a dict, its keys are ids and its values are the corresponding notebooks.
- **labels** (*[str]*) – If non-empty, this should have the same length as answer_nbs. A header is placed before each run of cells from a notebook in answer_nbs.
- **ids** (*bool*) – If non-empty, this should have the same length as answer_nbs. Each cell from an answer notebook has metadata nbcollate_source set to the element from ids.
- **ids** – If true, cell output is cleared.

**Returns** Notebook

**Return type** A Jupyter notebook

nbcollate.**nb_clear_outputs**(*nb*)
Clear the output cells in a Jupyter notebook.

**Parameters** **nb** (*Notebook*) – a Jupyter notebook

nbcollate.**remove_duplicate_answers**(*nb*)
Modify a notebook to remove duplicate answers within each section.

**Parameters** **nb** (*Notebook*) – A Jupyter notebook. This is modified in place.

nbcollate.**sort_answers**(*nb*)
Sort the answers within each section by length, and then alphabetically.

**Parameters** **nb** (*Notebook*) – A Jupyter notebook. This is modified in place.

nbcollate.**get_answer_tuples**(*nb*)
Return a set of tuples (student_id, prompt_title) of answered prompts.

**Parameters** **nb** (*Notebook*) – a Jupyter notebook

nbcollate.**Notebook**
A Jupyter notebook, represented as nbformat.NotebookNode from the nbformat package.

# Python Module Index

## n

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