

HAS Tools:

Building command line interfaces with python

November 1, 2024

Logistical notes

- Homework 7 is now posted, due Nov 8
 - To keep us on schedule this assignment will not have in class work time
 - Except for today
- Next week: Forecast assignment 2 will be released
- Today: demo of building command line interfaces
- Also today: Fixing any other codespaces that need help

Reminder: The terminal

- Provides a text interface to interact with the computer
- Can be used to manage files and run code via scripts
- In Codespaces/VS Code you can get a terminal with `<ctrl> + ~`

```
-bash ㉿#2
INS (base) CourseMaterials24 >>> cowsay "So, how do we use the terminal anyway? Let's start with some
common commands, and discuss what the overall layout of this terminal looks like."

/ So, how do we use the terminal anyway? \
| Let's start with some common commands, |
| and discuss what the overall layout of |
| this terminal looks like.              |
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INS (base) CourseMaterials24 >>> pwd
/Users/bzq/has_tools/CourseMaterials24
INS (base) CourseMaterials24 >>> ls .
README.md          cheat_sheets       slides
admin              coding_modules     verde_example_data.tsv

INS (base) CourseMaterials24 >>> cd coding_modules/
INS (base) coding_modules >>> ls
module_1_intro_to_python    module_4_geospatial_data
module_2_numpy_and_matplotlib  module_5_data_visualization
module_3_pandas_and_data_handling

INS (base) coding_modules >>> cd module_1_intro_to_python/
INS (base) module_1_intro_to_python >>> ls
1_customizing_matplotlib.ipynb

INS (base) module_1_intro_to_python >>> cd ../../
INS (base) coding_modules >>> cd module_5_data_visualization/
INS (base) module_5_data_visualization >>> ls
1_customizing_matplotlib.ipynb

INS (base) module_5_data_visualization >>> cd ../../
INS (base) CourseMaterials24 >>> ls
README.md          cheat_sheets       slides
admin              coding_modules     verde_example_data.tsv

INS (base) CourseMaterials24 >>> head verde_example_data.tsv
# ----- WARNING -----
# Some of the data that you have obtained from this U.S. Geological Survey database
# may not have received Director's approval. Any such data values are qualified
```

Let's move over to codespaces to build an example

Tutorial and docs:

- <https://docs.python.org/3/library/argparse.html>
- <https://docs.python.org/3/howto/argparse.html>