Wrap-up session

- Short tutorial & demo of MongoDB for those interested

- Hands-on help for installing Materials Project codes or mongoDB on your own systems

  - or any other questions you may have!

- `MPRester()` and `atomate` both use mongoDB
  - If you just want to use workflows, you only need:
    - a running mongoDB database
      - a basic understanding of query syntax
- But you can use mongoDB to store *any* kind of data
  - This is going to be a quick demo on how to do this
  - and how you can access your database *outside* `MPRester()` and `atomate`

Setting up MongoDB

- For testing and development, you can run mongoDB locally: installation instructions on mongodb.com
    - very easy installation on macOS via homebrew: `brew install mongodb`

- For production, several options:
    - mongoDB as a service, both mlab.com and mongodb.com offer 500 MB mongoDB databases free to get started
    - many paid services exist, e.g. you can run your own mongoDB server with one-click setup on DigitalOcean (5$/mo. for 20 GB)
    - your local HPC facility may be able to help

pymongo

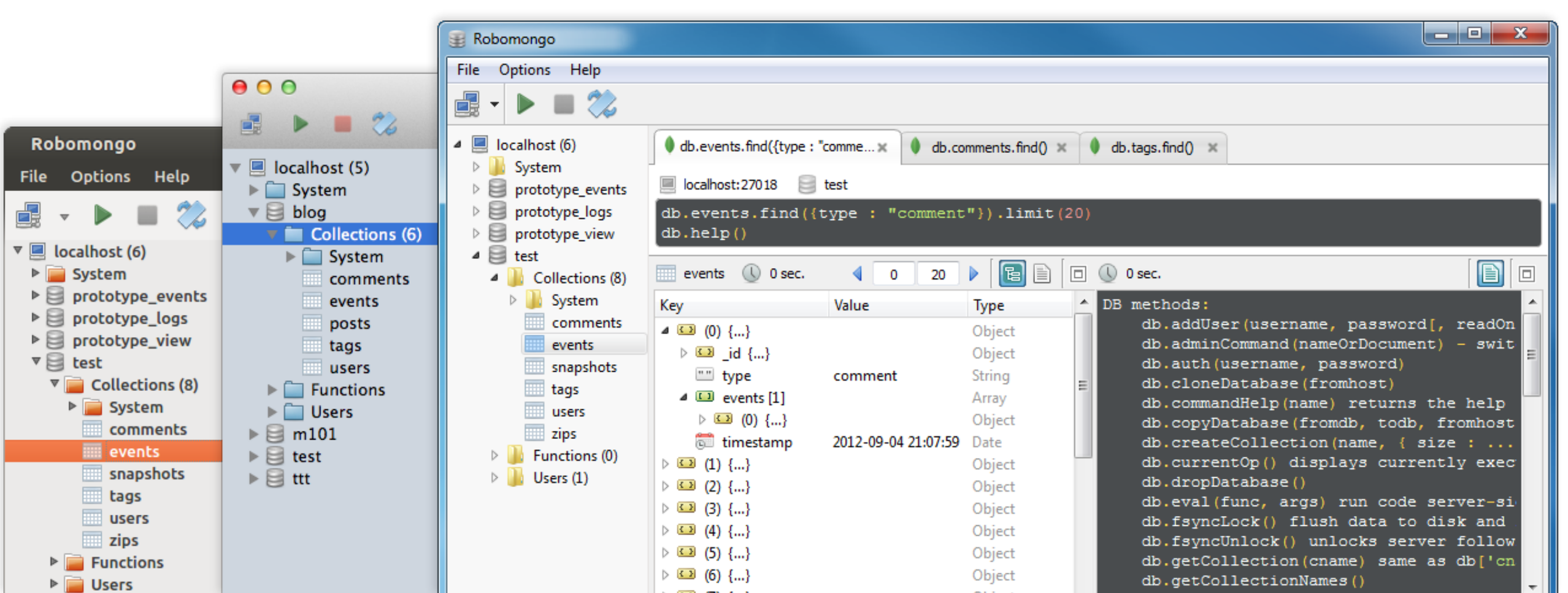
- `pymongo` is the standard way to interact with mongoDB via Python

- For now, we have a mongoDB instance already running on the Jupyter Hub

  - Go to `mongo-primer/mongo-primer.ipynb`

Graphical Interface

- Several graphical interfaces available to browse data:
  - Our demo is using Robo 3T (formerly Robomongo), robomongo.org



Questions?