Notebook Tutorial

OS Practice CSC 420 Spring 2022

README

1. This is an Org-mode notebook to get you started with interactive notebooks for `bash` scripting. This is really easy in Linux, a little more difficult in MacOS, and really rather painful (but still works) in Windows.
2. Simply work through the sections below and follow the instructions **minutely**. Let me know if anything is not working.
3. `[ ]` Each time you see the `[ ]` symbol after a bullet point or number, you have something to do. When you're done, go to the top of the paragraph and check it off with `C-c C-c` (That's two times CTRL+c). Do it now if you read and understood this!
4. `[ ]` Since you're on Linux, setup and using the notebook is easy:
   - Run code blocks with `C-c C-c`
   - Add additional code blocks as you please but `#+name:` them
   - `bash` in the header of the code block automatically finds `/usr/bin/bash`
   - Successful execution produces a named `#+Results:` section, which you can delete because it can be recreated
   - Check this task if you got it.
5. `[ ]`

   Here is a named code chunk. The name is 1 like the `bash` command that it contains. Run the code block by putting your cursor anywhere on the block (boundary is OK) and type `C-c C-c`.

   ```
   whoami
   ```

6. If this worked, you should see the following output below 1[1], and then you can check the task off. The code below is not a codeblock, by the way, but only an example.

   ```
     #+RESULTS: codeblock
   : pi
   ```

7. `[ ]` To create a code block, you can type `<s` followed by the <TAB> key. This will expand and you only have to add `bash` after `#+begin_src` to turn it into a mini shell program~
8. `[ ]` That's all there is to it! To test your new found powers:
   1. create a `bash` code block below
   2. name the code block `pwd`
   3. add the statement `pwd` inside the block
   4. run the block with `C-c C-c`
   5. check off this task if successful.
9. `[ ]` To close, see how documentation and code work together in Emacs. Weave this entire notebook by pressing the key sequence: `C-c C-e h o`.
10. `[ ]`

    Lastly, take a look at the meta data at the top of this file. They occur in every notebook and you should copy them if you created your own. I have copied them here. Let's look at them one by one.

```
#+TITLE: Notebook Tutorial
#+AUTHOR:Marcus Birkenkrahe
#+SUBTITLE:OS Practice CSC 420 Spring 2022
#+STARTUP:overview hideblocks
#+OPTIONS: toc:nil num:nil ^:nil
#+PROPERTY: header-args:bash :exports both
#+PROPERTY: header-args:bash :results output
```

  - The first three lines establish title, author, subtitle
  - The `#+STARTUP:` line folds sections and codeblocks upon entry
  - The `#+OPTIONS:` line suppresses printing a TOC
  - The `#+PROPERTY:` lines set arguments for the codeblocks

11. `[ ]` This should open the file as an HTML file in a browser. If it worked, check it off, save this file with `C-x C-s` and move on to bigger and better things. Otherwise let me know.

Footnotes:

[1] This does not just look like a link, it is a link. You can click on it with your mouse, or follow the link with `C-c C-o`. If you're reading this footnote, you can also click on the footnote label to get back to the text (or jump with `C-c C-o`).

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