Hessisches Kompetenzzentrum
für Hochleistungsrechnen

1 Shell commands

0. Preliminaries

   - Download the init script on your computer or a HPC cluster (login with local documentation)
     - Copy the `init_hands_on.sh` to a new directory.
     - Make it executable and run it. It will create a directory named `shell_tutorial` with some sample data for this exercise.
     - You can also use it set the `shell_tutorial` directory back to its original state.

1. Absolute and Relative Paths, Change and Create Directories

   - Familiarize yourself with the given environment.
     - Can you visualize the hierachy of the given filesystem?
   - Create a new directory `c`.

2. Copy, Move, Rename, and Delete Files and Directories

   - Copy the file `copy_me` to the new directory `c`.
     - *Hint*: You can use a command to locate the file instead of searching for it manually.
   - In `B` there is a file called.

     `this_is_a_long_filename.do_I_seriously_need_to_type_this_ridiculously_long_filename`

     Rename it to `no.txt`!
     - *Hint*: Try using the tabulator key on your keyboard when typing this long filename.
   - Move `fileX` from `A1` to `c` and `fileY` to `A`.
   - Then remove the directory `A1` (and all its remaining content).
     - *Hint*: You only need to issue one command for this.

3. Searching Text Patterns in Files

   - Locate the file `large_file` and find the "actual useful information" in it. The information might help finding the hidden secret.
     - You can just search for the word "information" within the file.
     - There is a hidden secret. Find it!

4. Further Exercises

   - Copy a file from the cluster back to your local machine using either the `scp` or `rsync` command.
   - Please ask further questions about using the shell and shell scripting :-).

2 Shell scripting

- Write a shell script that renames `file1, file2 ...` to `file1.txt file2.txt ...` .
  - Execute the init script again to reset the state of the `shell_tutorial` directory.
  - Navigate to the `A/A1` directory. The files you are asked to rename are located there.
  - *Hint*: Consider using an appropriate control structure inside the shell script.
- **Advanced**: Retrieve the extension to use from an environment variable.