Setting up your nrs-projects web directory

We have the access to create web pages on `nrs-projects` that you should be able to access from the web. This walks through the basics for setting this up.

Fun facts, part 1

- `nrs-projects` is set up so that individual users may put files they'd like accessible from the web into a subdirectory, in their home directory, whose name is **`public_html`**

- For the web server process to access a file, it must be:

  - in this `public_html` directory or in a subdirectory of `public_html`

  - at least **world-readable**

  - in a subdirectory such that EVERY directory in its path is at least **world-executable**

Set up your `public_html` directory

To start, make sure that you have a `public_html` directory in the right location, set up with appropriate permissions. The following steps should make sure this is the case:

- Use `ssh` to connect to your account on `nrs-projects-ssh.humboldt.edu`

- Make sure that your **home directory** is world-executable. (**~** is a nickname for your home directory.):

    `ls -ld ~`

  - IF the permissions you see end in `--x` (for example, `drwx--x--x`) **or** `r-x`, then you are fine.

  - IF **NOT**, use this command to make your home directory **world-executable**:

    `chmod 711 ~`

  - Now verify that your home directory's permissions end in `--x`:

    `ls -ld ~`

- See if you have a `public_html` directory. To see if you have this directory, use the command:

    `ls -ld ~/public_html`

  - IF you get a message back complaining that "`ls: cannot access public_html: No such file or directory`", then you need to create this directory. Do so using this command:

    `mkdir ~/public_html`

  - Now verify that it has been created:

    `ls -ld ~/public_html`

- When you just tried:

  ```
  ls -ld ~/public_html
  ```

  ... CHECK to see if IT is world-executable -- that is, check that its permissions end in either `--x` (for example, `drwx--x--x`) **or** `r-x`

  - IF they don't, make it world-executable with the command:

    `chmod 711 ~/public_html`

  - Now again do:

    ```
    ls -ld ~/public_html
    ```

    ...and verify that it is now world-executable (that its permissions end in `--x`)

Fun Facts, part 2

- IN GENERAL: Say that there is an nrs-projects user whose username is *ab123*.

  When a URL (Uniform Resource Locator) **starts** with:

  `https://nrs-projects.humboldt.edu/~ab123`

  ...then nrs-projects' web server process looks inside *ab123*'s `public_html` directory for a file.

  - WHICH file? That depends on what follows!

- if NOTHING follows -- if the URL is indeed JUST

  `https://nrs-projects.humboldt.edu/~ab123`

  - ...then the web server process looks for a file with the special name **`index.html`** (or `index.php`) within *ab123*'s `public_html` directory, and tries to send that as its result.

  - NOTE that `index.html` must be world-readable! You can make it so using:

    ```
    cd ~/public_html      # make sure you are in public_html
    chmod 644 index.html
    ```

- if a plain file name follows -- if the URL is something like:

  `https://nrs-projects.humboldt.edu/~ab123/desired_file.html`

  - ...then the web server process looks for a file named *desired_file.html* within *ab123*'s `public_html` directory, and tries to send that as its result.

  - NOTE that *desired_file.html* must be world-readable! You can make it so using:

    ```
    cd ~/public_html      # make sure you are in public_html
    chmod 644 desired_file.html
    ```

- if a SUBDIRECTORY path name follows -- if the URL is something like:

  `https://nrs-projects.humboldt.edu/~ab123/subdir1/subdir2`

- ...then the web server process looks for a file with the special name `index.html` (or `index.php`) within *ab123*'s `public_html/`*subdir1*/*subdir2*, and tries to send that as its result.

- NOTE that *subdir1* must be world-executable,

  subdir2 must be world-executable, AND

  `index.html` within *subdir2* must be world-readable! You can make these so using:

`cd ~/public_html`	# make sure you are in `public_html`
`chmod 711 `*subdir1*	# make *subdir1* (within `public_html`) world-executable
`cd `*subdir1*	# change directory to *subdir1* (under `public_html`)
`chmod 711 `*subdir2*	# make *subdir2* (within *subdir1*) world-executable
`cd `*subdir2*	# change directory to *subdir2* (within *subdir1*)
`chmod 644 index.html`	# make `index.html` (within *subdir2*) world-readable

- if a relative path name for a plain file follows -- if the URL is something like:

  https://nrs-projects.humboldt.edu/~*ab123*/*subdir1*/*subdir2*/*looky.html*

  - ...then the web server process looks for a file named *looky.html* within *ab123*'s `public_html/`*subdir1*/*subdir2*, and tries to send that as its result.

  - NOTE that *subdir1* must be world-executable,

    subdir2 must be world-executable, AND

    looky.html within *subdir2* must be world-readable! You can make these so using:

`cd ~/public_html`	# make sure you are in `public_html`
`chmod 711 `*subdir1*	# make *subdir1* (within `public_html`) world-executable
`cd `*subdir1*	# change directory to *subdir1* (under `public_html`)
`chmod 711 `*subdir2*	# make *subdir2* (within *subdir1*) world-executable
`cd `*subdir2*	# change directory to *subdir2* (within *subdir1*)
`chmod 644 `*looky.html*	# make *looky.html* (within *subdir2*) world-readable