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 `index.*`'s contents as the request result back to the requesting browser.
  - 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 *desired_file.html*'s contents as the request result back to the requesting browser.
  - 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 `index.*`'s contents as the request result back to the requesting browser.
- 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 *looky.html*'s contents as the request result back to the requesting browser.
  - 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