DGIN 5201
Digital Transformation
Lecture 5

Lec 4: Password Protection

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Previous Lecture

- Notes: no copy-and-paste, touch typing
- SSH connection, elements of public-key cryptography
- Example 2: Applicant registration, printable form
- .htaccess file and directory index

Notices etc.

- A1: e1 and e2 postponed
- Some Emacs important Emacs commands:
    - `C-x C-s` — save
    - `C-x C-c` — quit
    - `C-z` — suspend to the command line
    - `fg` — go back from the command line
    - A useful tutorial:
      https://www2.lib.uchicago.edu/keith/
      tcl-course/emacs-tutorial.html

Example e3: Password Protection

- Let us make a copy of our e2 site

- First, go back to the directory above e2:
  ```
  cd ../..
  ```

- Use command pwd to check your directory

- Copy e2 to e3 as an exact copy:
  ```
  rsync -av e2/ e3/
  ```

- Check the new site e3 in the browser

- rsync is a very useful utility for copying directory structures
  - it works locally as well as over ssh
  - it copies incremental differences, which is important if two sites are large and mostly equal
  - it may preserve permissions if we use option -a

Example 3: Simple Password Protection

- `cd` to e3 directory and let us prepare a password
- In a locally-only readable file `pw` (rw-------) we can save a password for our reference: `dt dt5201`
- Prepare the password for the site using the command:
  ```
  htpasswd -bc .htpasswd dt dt5201
  ```
- Make the file `.htpasswd` all-readable and check its contents
- Prepare the file `.htaccess` and make it all readable:
  ```
  AuthType Basic
  AuthName dgin5201
  AuthUserFile /users/webhome/<your_csid>/dgin5201/e3/.htpasswd
  AuthGroupFile /dev/null
  <Limit GET POST>
  require user dt
  </Limit>
  ```
- Check that site is password-protected

Summary of e3

- Files and permissions copied from e2
- `pw` file with permissions `rw-------`
- `.htpasswd` file with permissions `rw-r--r--` and appropriate content set up with the `htpasswd` command
- `.htpasswd` file with permissions `rw-r--r--` and content set up for password protection as given in class

Concepts Review: Example 3

- `rsync` command, `-av` options
- `htpasswd` command, password saved as hash
- Using `.htaccess` for password-controlled access

Unix-style Customization

- Unix-style customization is typically text-based
- Example: bash customization
  - aliases: rm, mv, cp, em
  - .profile and .bashrc files
- Example: Emacs customization
  - .emacs file
- Earlier example: Apache customization
  - .htaccess, .htpasswd files

Example e4: Introducing a Form

- With `rsync` copy e3 to e4, update .htaccess file
- Change the table part of `index.html` to:

```
<form>
<table>
<tr><th align=right>First and last name:</th>
<td><input type="text"></td></tr>
<tr><th align=right>Email:</th>
<td><input type="text"></td></tr>
<tr><th>Area of Interest (DB, HI, DS):</td>
<td><select><option>DB</option><option>HI</option>
  <option>DS</option></select></td></tr>
 </table>
 </form>
```

- Check the page and see that this is usable fillable form, which can be printed

Concepts Review: Example 4

- Creating fillable form in HTML: `<form>`...`<form>`
- `<input type="text">`
- `<select><option>op1</option>`...`</select>`

Summary of e4

- Files set up as in e3
- `index.html` modified to make a usable fillable form