Announcements

- Second program due Tuesday 4/29 at 10pm

HTML Forms

- Form provided by Jesse's beginning of the app

```html
<body>
  <form method="get" action="add_data.html" name="input">
    <label for="steps">Steps</label>
    <input type="number" min="0" name="steps">
    <input type="submit" value="Submit">
  </form>
</body>
```

- The form element contains all the boxes, buttons, etc.
- The action attribute specifies the URL to which the data will be sent.

HTTP get method

- `method="get"`
  - The default
  - Data gets sent in the URL itself
  - Limited size
  - Convention (that we are breaking): use for getting information from server, not changing information on server

HTTP post method

- `method="post"`
  - Data gets sent in HTTP request, after the header
  - Unlimited size
  - Use for big things like text boxes
  - Usually for all information changing server state
Input elements

- Used for short strings, numbers, buttons, checkboxes, dates, the final submit button, other stuff…
- name attribute specifies the variable name that will show up in wsgi date
- Only one in a group of radio buttons can be on, so they all have the same name attribute
- See example!

Couple more form elements..

- `<textarea>` element is used to enter large chunks of text.
- For drop-down menus, use the `<select>` element, with `<option>` elements inside it.

Labels

- Lets you link the label to the form element, for styling mostly.
- Put the label text, and the form element, together inside a `<label></label>` element.

Validating elements

- You can add a pattern attribute to input numbers and text.
- This lets the browser check the data.
- You still need to check the data when it gets to the server! Otherwise some malicious client could send bad data and get it into the database!

Patterns

- These are regular expressions, in Javascript syntax.
  - Hello matches Hello
  - Hello|Goodbye matches either one
  - [GATC] matches any of G, A, T, or C
  - [0-9] matches any digit
  - [a-z] | [A-Z] matches any letter
  - [0-9]+ is a string of one or more digits

HTML5 form validation

- What features are supported varies with browser
- eg. Firefox does not support number max and min but does support pattern
- Older browsers support nothing
- In general, input validation is done using Javascript in the browser (for immediate user feedback) AND on the server (to prevent unexpected browser requests from corrupting the database).