Web Programming
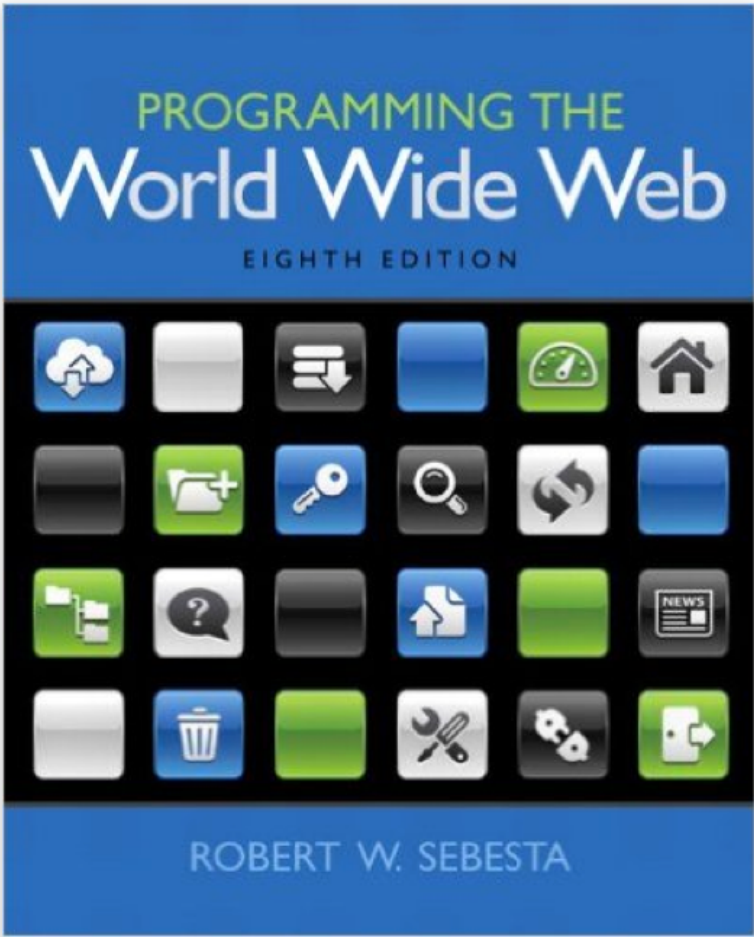# HTML Forms

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Forms

- A group of UI controls that accepts information from the user and sends the information to a web server

- Today: how to make forms

- Server-side processing of forms comes later

Programming the World Wide Web (8th Edition) 8th Edition

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[   ]

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[   ]

Birthday

[Day]   [Month ⇕]   [Year]

Gender

[I am... ⇕]

Mobile phone

[🇳🇴 ▾]   +47

Form

- In between **<form>** and **</form>**
  - **action** is the address where the form is sent
    - required attribute, but can be set empty

```
<form action="">

</form>
```

Form attributes

- **`action`** — URL of server-side processing script

- **`id`** — unique identifier for the form

- **`method`** — values: GET (default) or POST
  - How is form data sent to the web server
  - In the URL (GET) or in the body of the request (POST)

- **`name`** — name of the form
  - Form could be easily accessed in JavaScript

- **`autocomplete`** — values: on (default) or off
  - Shall the browser use autocomplete to fill the form fields (HTML5)

The input element

- **`<input>`** is used for several different types of controls (text, password, radio, checkbox)

- Obligatory attributes
  - **`type`** — determines the type of control (text, checkbox, radio, etc.)
  - **`name`** — to identify the form control uniquely (sent back to the server when the form is submitted)

- There are additional optional attributes depending on the type

Text input

- **`<input type="text" name="…" />`**
- Attributes
  - **`size`** — width in terms of characters
  - **`maxlength`** — maximum number of characters the user may enter
  - **`value`** — sets the default (initial) value for the field

```
Zip code: <input type="text" name="zip" maxlength="4" />
```

Zip code: [   ]

Password input

- **`<input type="password" name="…" />`**
- Attributes
  - **`size`** — width in terms of characters
  - **`maxlength`** — maximum number of characters the user may enter
  - **`value`** — sets the default (initial) value for the field
- Password is hidden only on the screen, it is not sent securely to the server (!)

```
Password: <input type="password" name="pw" />
```
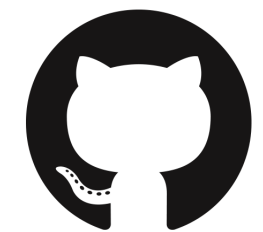
Password: •••

Submit button

- **<input type="submit" />**
- Attributes
  - **value** — the text that appears on the button
  - **name** — name of the button

```
<input type="submit" value="Awesome" />
```
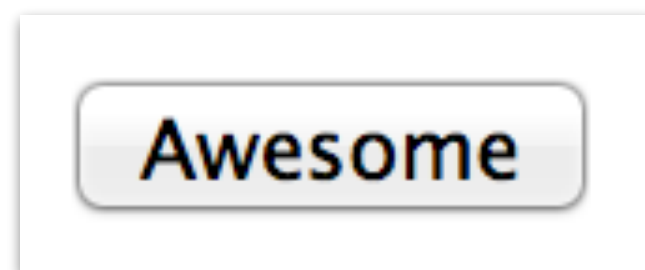
Exercise #1

exercises/html/forms

Email input

- **<input type="email" name="…" />**
- Attributes
  - **size** — width
  - **maxlength** — maximum number of characters the user may enter
  - **value** — sets the default (initial) value for the field
- Browsers without HTML5 support for element will render it as text input

```
Email address
<input type="email" name="email" size="20" maxlength="35"/>
```

Email address

Number input

- **`<input type="number" name="…" />`**
- Attributes
  - **`size`** — width
  - **`min`** — minimum value
  - **`max`** — maximum value
  - **`step`** — increments
  - **`value`** — sets the default (initial) value for the field

```
Quantity:
<input type="number" name="points" size="3" min="0" max="100" step="10" value="30">
```

Quantity: 30

Radio button

- Let the user select **only one** of a limited number of choices

- **`<input type="radio" name="…" value="…" />`**
  - Each option should have the same **name**
  - Value of value is sent to the server for the selected option
  - **checked** indicates which option should be selected initially

```
Preference:
<input type="radio" name="pref" value="male" /> Male
<input type="radio" name="pref" value="female" /> Female
```

Preference: ◯Male ◯Female

Checkbox

- Let the user select **zero or more** of a limited number of choices

- **<input type="checkbox" name="…" value="…" />**
  - Each option should have a different **name**
  - Value of **value** is sent to the server for the selected option
  - **checked** indicates if the option should be checked initially

```
Preference:
<input type="checkbox" name="pref1" value="male" /> Male
<input type="checkbox" name="pref2" value="female" /> Female
```

Preference: ☐ Male ☐ Female

Textarea

- **`<textarea name="…">…</textarea>`**
- Attributes
  - **`cols`** — width (measured in characters)
  - **`rows`** — height (number of rows)
- Closing tag is mandatory!
- Content of the tag is the initial input value

```
What do you think?
<textarea name="comment" cols="40" rows="3"></textarea>
```

What do you think?

Dropdown list

- Let the user select a **single option** from a dropdown list

- **\<select name="…">…\</select>**

- Each option is **\<option value="…">…\</option>**

  - Value of value is sent to the server for the selected option

  - **selected** can be used to set the default option

```
<select name="age">
    <option value="1">–18</option>
    <option value="2" selected>18–35</option>
    <option value="3">35–50</option>
    <option value="4">50–</option>
</select>
```
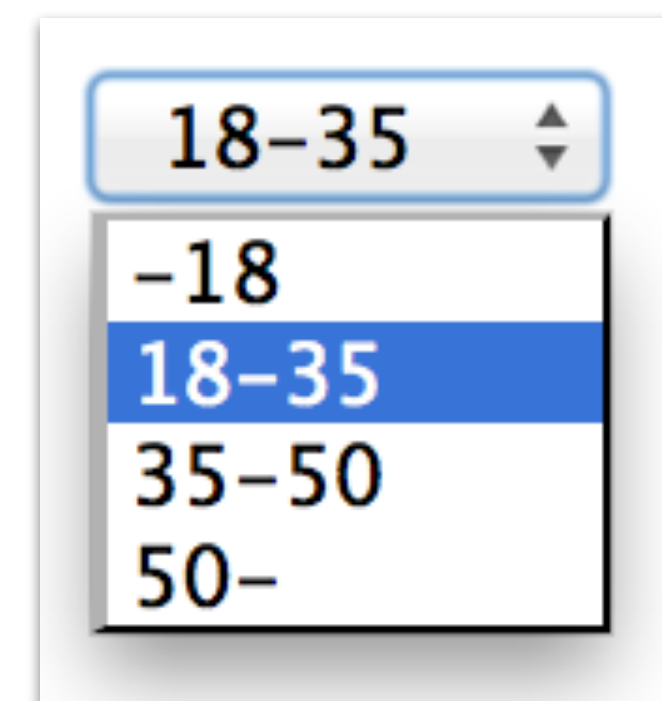
Multichoice select list

- Let the user select **multiple options** from a list

- **<select name="…" multiple>…</select>**

- Each option is **<option value="…">…</option>**
  - Value of value is sent to the server for the selected option
  - **selected** can be used to set the default selection(s)

```
<select name="age" multiple>
    <option value="1">-18</option>
    <option value="2" selected>18-35</option>
    <option value="3">35-50</option>
    <option value="4" selected>50-</option>
</select>
```
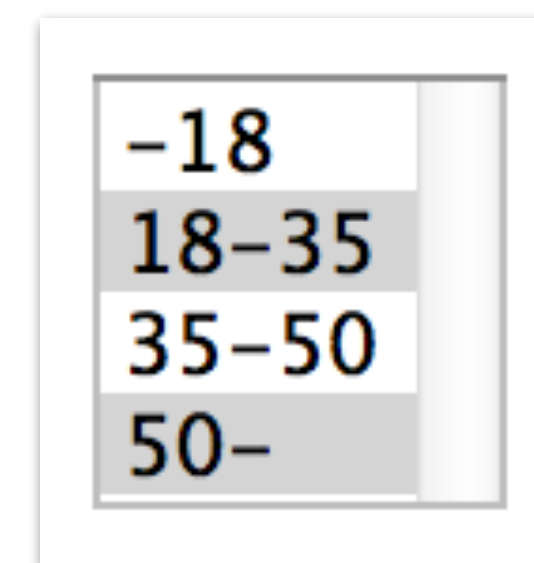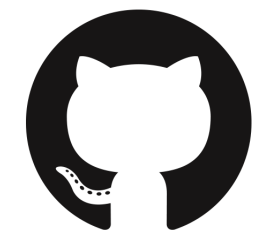
Image button

- An image can also be used as submit button
- **<input type="image" src="…" alt="…" />**
  - **src** — required, the filename or URL of the image
  - **alt** — alternative text to be displayed
  - **height**, **width** — image dimensions

```
<input type="image" src="images/next.jpg" width="100px" alt="Submit" />
```

Exercise #2

 https://github.com/kbalog/web-programming/tree/master/
exercises/html/forms

Hidden form variables

- To pass on information that is not entered by the user

- Not shown on the page, but sent along to the server the same way as any other variable

```html
<input type="hidden" name="secret" value="nosecret" />
```

Global attributes

- **`disabled`** — the field is not usable, content cannot be copied from it

- **`readonly`** — the content cannot be changed, but a user can tab to the field and copy content from it

- **`required`** — the input field must be filled out before submitting the form

Labeling form controls

- **`<label>`** can be used in two ways
  - Wrapped around both the text description and the form input

    ```
    <label>Name: <input type="text" name="name" /></label>
    ```

  - Kept separate from the form control and using the **`for`** attribute
    - The **`for`** attribute of the **`<label>`** tag should be equal to the **`id`** attribute of the related element to bind them together

    ```
    <label for="name">Name</label>
    <input type="text" name="name" id="name" />
    ```

    Name [   ]

Placeholder text

- placeholder="…" — specifies a short hint that describes the expected value of an input field
  - The hint is displayed before the user enters a value into the field
  - Works for the following
    - input types: text, search, url, tel, email, password
    - textarea

```html
<input type="text" name="name" size="20" placeholder="Firstname, lastname" />
```
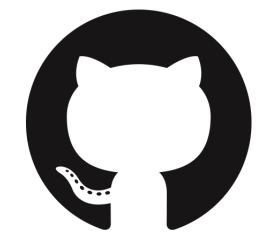
Name Firstname, lastname

Grouping fields

- **<fieldset>…</fieldset>**
    - Used for grouping related elements in a form
    - **<legend>** can be used inside to provide a caption (optional)

```html
<fieldset>
    <legend>Delivery address</legend>
    <label>City: <input type="text" name="city" size="10" /></label>
    <label>Zip: <input type="text" name="zip" size="4" /></label>
    <label>Street: <input type="text" name="street" size="20" /></label>
    <label>House no: <input type="text" name="houseno" size="4" /></label>
</fieldset>
```

Exercise #3

https://github.com/kbalog/web-programming/tree/master/
exercises/html/forms

Styling forms with CSS

- Form elements can be styled just like any HTML element

- Typical layout

label	input
label	input
label	input
	SUBMIT

Styling forms with CSS
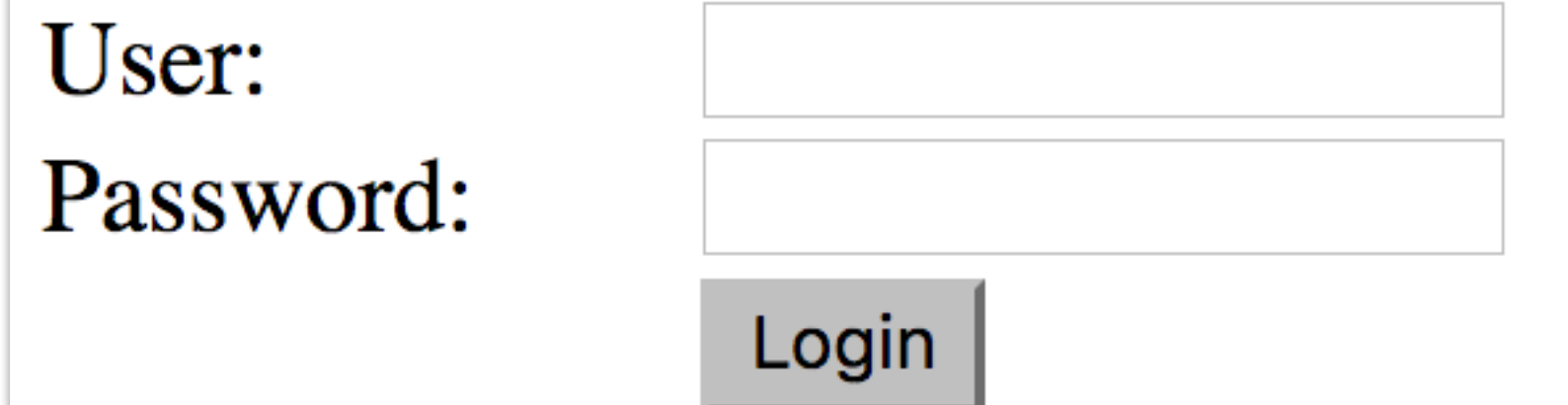
HTML

```html
<form action="">
    <label for="username">User:</label>
    <input type="text" name="username" id="username"/>
    <label for="password">Password:</label>
    <input type="password" name="pw" id="password"/>
    <input type="submit" value="Login"/>
</form>
```

CSS

```css
label {
    float: left;
    clear: left;
    width: 100px;
}

input {
    display: block;
    …
}
```
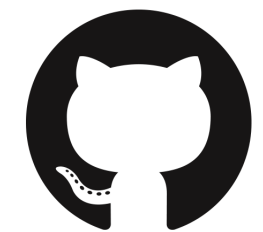
Exercise #4

https://github.com/kbalog/web-programming/tree/master/exercises/html/forms

More HTML5 input types

- Date
- URL
- Search
- Color
- …

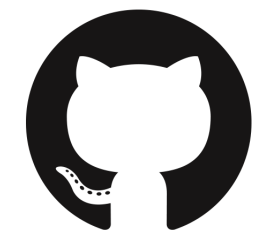- See http://www.w3schools.com/html/html_form_input_types.asp

Exercise #5

 https://github.com/kbalog/web-programming/tree/master/ exercises/html/forms

References

- http://www.w3schools.com/html/html_form_input_types.asp

- https://html5test.com/