

Web Technologies (ICDT6004) – Lecture 3

Templates and layout tags

Aims of lecture

- At the end of today's lecture students should be able to
 - create forms
 - validate fields using HTML5

The <form> tag

- The <form> tag is used to insert a form on a page.
- <form>...</form>
- Forms are used to capture information from the user and to pass to the server.
- A form has 3 common attributes: name, action and method
 - name: Specifies the name of a form
 - action: Specifies where to send the form-data when a form is submitted
 - method: Specifies the HTTP method to use when sending form-data – GET/POST

The <form> tag (2)

- `<form name="frm_login" action="checklogin.php" method="post">...</form>`
 - `frm_login`: the name of the form is `frm_login`
 - `checklogin.php`: the page that will process the data that is submitted
 - `post`: the data is sent to the `checklogin.php` by the post method

The <input> tag

- The <input> tag is one of the most used tags in a form.
- An <input> element can be of type text field, checkbox, password, radio button, submit button, and more.
- The <input> behaviour depends on the type attribute.

The <input> tag - Textfield

- <input type="text"> defines a one-line input field that a user can enter text into.

```
<form name="frm_login" action="checklogin.php"
method="post">
Name: <input type="text" name="txt_name"/>
</form>
```

- Predict the output of the above code.

The <input> tag – Password field

- <input type="password"> defines an input field where a user can enter masked text into.

```
<form name="frm_login" action="checklogin.php"
method="post">
Name: <input type="text" name="txt_name"/><br/>
Password: <input type="password" name="txt_pwd"/>
</form>
```

- Predict the output of the above code.

The <input> tag – submit button

- A submit button is used to send data to a server - <input type="submit">

```
<form name="frm_login" action="checklogin.php"
method="post">
Name: <input type="text" name="txt_name"/><br/>
Password: <input type="password" name="txt_pwd"/>
<input type="submit" value="login"/>
</form>
```

- Predict the output of the above code.

The <input> tag – submit button(2)

- The data on the form is sent to the page specified in the form's action attribute.
- In the above example all the form data is sent to the `checklogin.php` for processing.
- Usually a php/asp page does the processing of the form data.
- The value attribute of the submit button is the text that displays on the submit button.

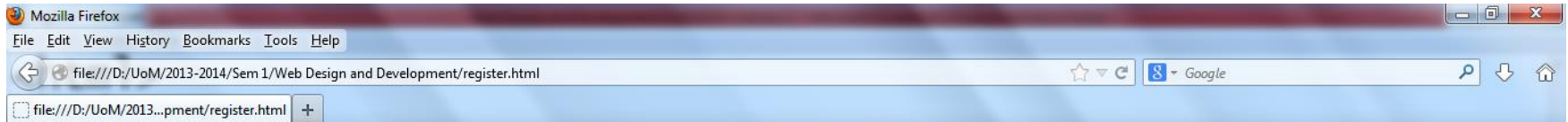
The <input> tag – reset button

- Resets all the fields on a page to their default values

```
<form name="frm_login" action="checklogin.php"
method="post">
Name: <input type="text" name="txt_name"/><br/>
Password: <input type="password" name="txt_pwd"/>
<input type="submit" value="login"/>
<input type="reset" value="reset"/>
</form>
```

- Predict the output of the above code.

Classwork 1 – Reproduce the following using HTML/HTML5



Please fill in the details below:

Username:

Password:

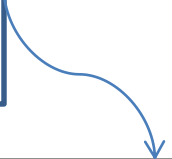
Confirm Password:

The <input> tag – radio buttons

- <input type="radio"/> defines a radio button.
- It is used in cases where only 1 choice can be made.

```
<input type="radio" name="gender" value="male">Male<br/>
<input type="radio" name="gender" value="female">Female
```

Output
produced
in browser



☐ Male
☐ Female

The <input> tag – Checkboxes

- <input type="checkbox"/> defines a checkbox.
- It is used in cases where 0 or more selections can be made.

Select modules you wish to register for:

```
<input type="checkbox" name="module1" value="Web Design">Web Design <br/>
```

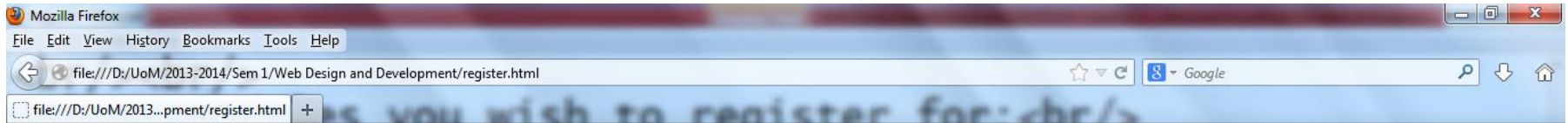
```
<input type="checkbox" name="module2" value="Programming">Programming <br/>
```

```
<input type="checkbox" name="module3" value="Database">Database <br/>
```

The <input> tag – the value attribute

- The value attribute is used differently for different input types:
 - For "reset", and "submit" - defines the text on the button
 - For "text" and "password" - defines the initial (default) value of the input field
 - For "checkbox" and "radio" - defines the value associated with the input (this is also the value that is sent on submit) and is required in both cases

Classwork 2 – Reproduce the following using HTML/HTML5



Online Module Registration

Student ID:

Level: ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5

Select modules you wish to register for:

- ☐ Web Design ☐ Programming
- ☐ Database ☐ Communications

New input type in HTML5

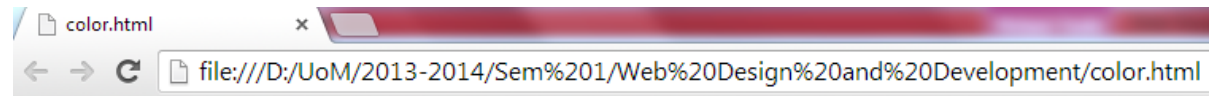
- HTML5 has several new input types for forms. These new features allow better input control and validation.
- **Note:** Not all major browsers support all the new input types. However, you can already start using them; If they are not supported, they will behave as regular text fields.

Examples

- color
- date
- datetime
- datetime-local
- email
- month
- number
- range
- search
- tel
- time
- url
- week

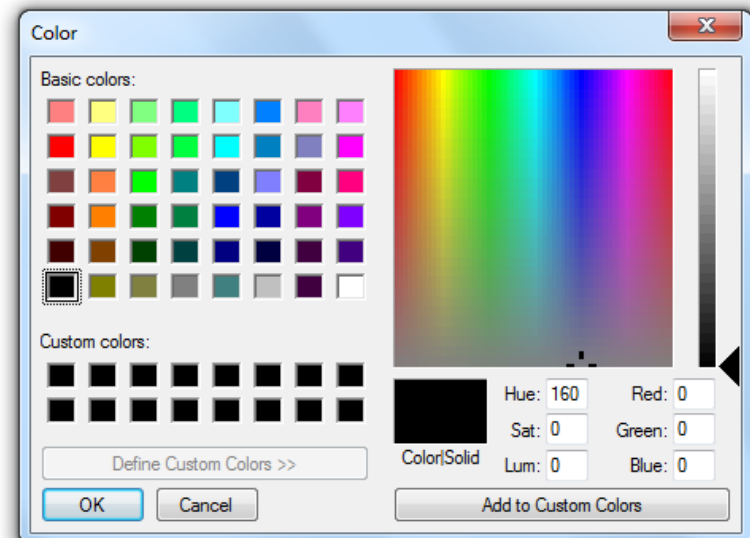
Input Type: color

- Select your favorite color: `<input type="color" name="favcolor">`



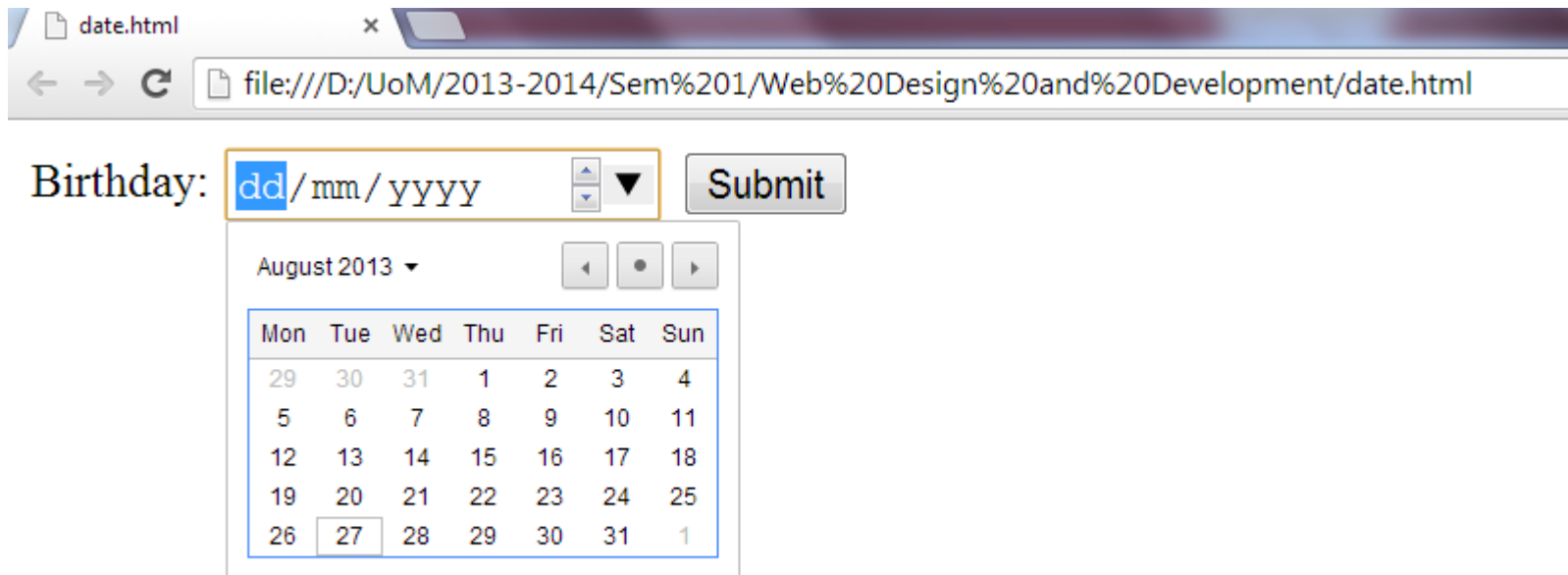
Select your favorite color:

Submit



Input Type: date

- Birthday: `<input type="date" name="bday">`



The screenshot shows a web browser window with a single tab titled "date.html". The address bar displays the file path: `file:///D:/UoM/2013-2014/Sem%201/Web%20Design%20and%20Development/date.html`. Below the browser window, the text "Birthday:" is followed by a date input field. The input field contains the text "dd/mm/yyyy" and has a small downward arrow icon to its right. A "Submit" button is located to the right of the input field. The date input field is currently open, showing a calendar for August 2013. The calendar has a header with the days of the week (Mon, Tue, Wed, Thu, Fri, Sat, Sun) and a grid of dates. The date 27 is highlighted.

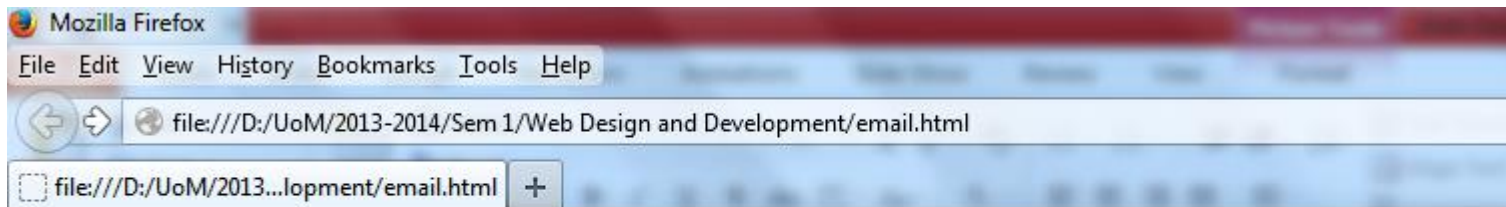
Birthday:

August 2013

Mon	Tue	Wed	Thu	Fri	Sat	Sun
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1

Input type: email

- The email type is used for input fields that should contain an e-mail address.
- E-mail: `<input type="email" name="email">`



E-mail: zmd|

Submit Query

Please enter an email address.

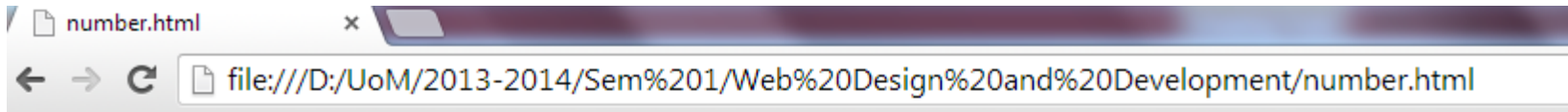
Note: `type="email"` is not supported in Internet Explorer 9 and earlier versions.

Input Type: number

- The number type is used for input fields that should contain a numeric value.
- Restrictions can be set on what numbers are accepted.
- The following attributes are used to specify restrictions:
 - [max](#) - specifies the maximum value allowed
 - [min](#) - specifies the minimum value allowed
 - [step](#) - specifies the legal number intervals
 - [value](#) - Specifies the default value

Input Type: number(2)

- Quantity (between 1 and 5): `<input type="number" name="quantity" min="1" max="5">`



Quantity (between 1 and 5):

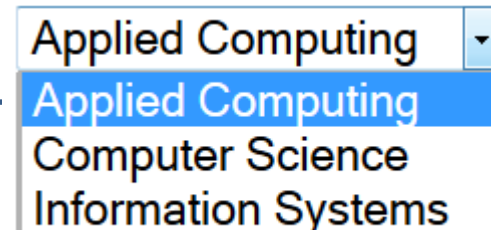
! Value must be less than or equal to 5.

Note: `type="number"` is not supported in Internet Explorer 9 and earlier versions.

The <select> tag

- The <select> tag is used to create drop-down lists - <select>... </select>
- The various options in the list are added using the <option>...</option> tag.

```
<select>  
<option> Applied Computing</option>  
<option>Computer Science</option>  
<option>Information Systems</option>  
</select>
```



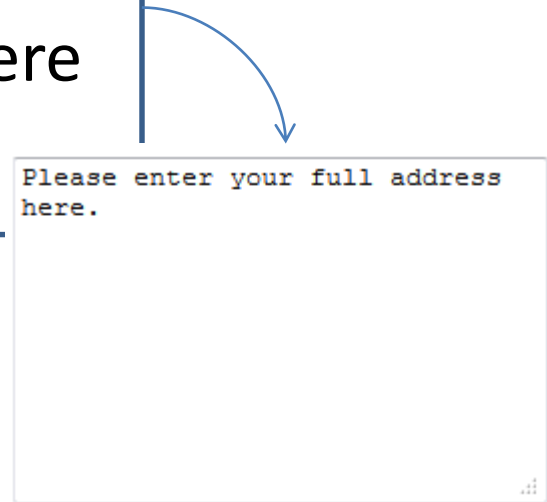
The <select> tag - Attributes

- Name – defines the name of the combo box
- Size – defines the number of options that are displayed by default, all other options can be accessed by scrolling
- Multiple – defines that more than one selection can be made at once.

The <textarea> Tag

- <textarea> is used in cases where the data to be entered spans over multiple lines.
- <textarea>...</textarea>

```
<textarea rows="10" cols="30">  
Please enter your full address here  
</textarea>
```

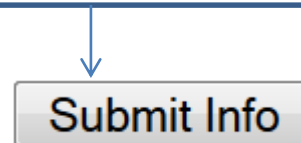


```
Please enter your full address  
here.
```

The <button> Tag

- Defines a button that can be clicked.
- Can contain either text or images.
- `<button type="button|submit|reset">`
- Type should always be defined since different browsers use different default values.

```
<button type="submit"> Submit Info</button>
```



New form elements

- HTML5 has the following new form elements:
 - `<datalist>`
 - `<keygen>`
 - `<output>`

HTML5 <datalist> Element

- The <datalist> element specifies a list of pre-defined options for an <input> element.
- The <datalist> element is used to provide an "autocomplete" feature on <input> elements. Users will see a drop-down list of pre-defined options as they input data.
- Use the <input> element's list attribute to bind it together with a <datalist> element.
- Note: not all browsers behave in the same manner.

HTML5 <datalist> Element (2)

- <input list="browsers">

<datalist id="browsers">

<option value="Internet Explorer">

<option value="Firefox">

<option value="Chrome">

<option value="Opera">

<option value="Safari">

</datalist>

HTML5 <datalist> Element (2)



Note. The `<datalist>` tag is not supported in Internet Explorer 9 and earlier versions, or in Safari.

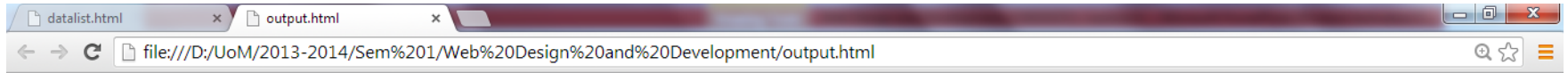
HTML5 <output> Element

- HTML5 introduced a new element <output> which is used to represent the result of different types of output, such as output written by a script.
- The <output> element represents the result of a calculation (like one performed by a script).
- You can use the **for** attribute to specify a relationship between the output element and other elements in the document that affected the calculation (for example, as inputs or parameters). The value of the for attribute is a space-separated list of IDs of other elements.

HTML5 <output> Element (2)

```
<form  
oninput="x.value=parseInt(a.value)+parseInt(b.v  
alue)">0  
<input type="range" id="a" value="50">100+  
<input type="number" id="b" value="50">=  
<output name="x" for="a b"></output>  
</form>
```


HTML5 <output> Element (3)



0 100 + = 100

New attributes

- HTML5 has several new attributes for `<form>` and `<input>`.
- New attributes for `<form>`:
 - `autocomplete`
 - `novalidate`

New attributes (2)

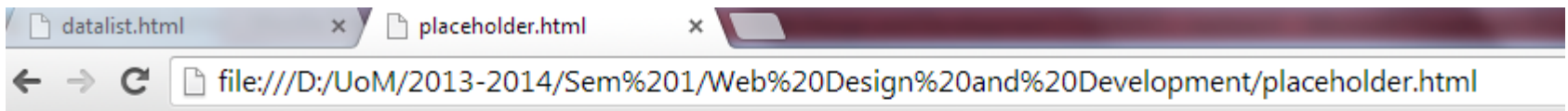
- New attributes for <input>:
 - autocomplete
 - autofocus
 - form
 - formaction
 - formenctype
 - formmethod
 - formnovalidate
 - formtarget
 - height and width
 - list
 - min and max
 - multiple
 - pattern (regexp)
 - placeholder
 - required
 - step

The placeholder attribute

- HTML5 introduced a new attribute called **placeholder**. This attribute on `<input>` and `<textarea>` elements provides a hint to the user of what can be entered in the field. The placeholder text must not contain carriage returns or line-feeds.
- This attribute is supported by latest versions of Mozilla, Safari and Chrome browsers only.

The placeholder attribute (2)

- Here is the simple syntax for placeholder attribute:
- `<input type="email" name="newinput" placeholder="email@example.com"/>`



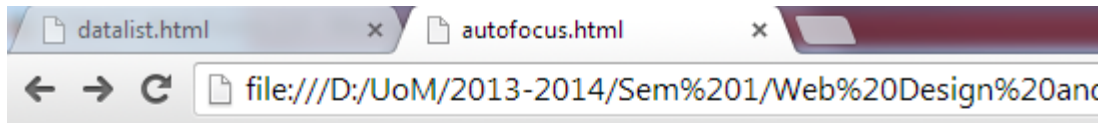
Enter email :

The autofocus attribute

- This is a simple one-step pattern, easily programmed in JavaScript at the time of document load, automatically focus one particular form field.
- HTML5 introduced a new attribute called **autofocus**.
- This attribute is supported by latest versions of Mozilla, Safari and Chrome browsers only.

The autofocus attribute(2)

- The attribute can be used as follows:
- `<input type="text" name="search" autofocus/>`



Enter email :

Try to submit using Submit button

submit

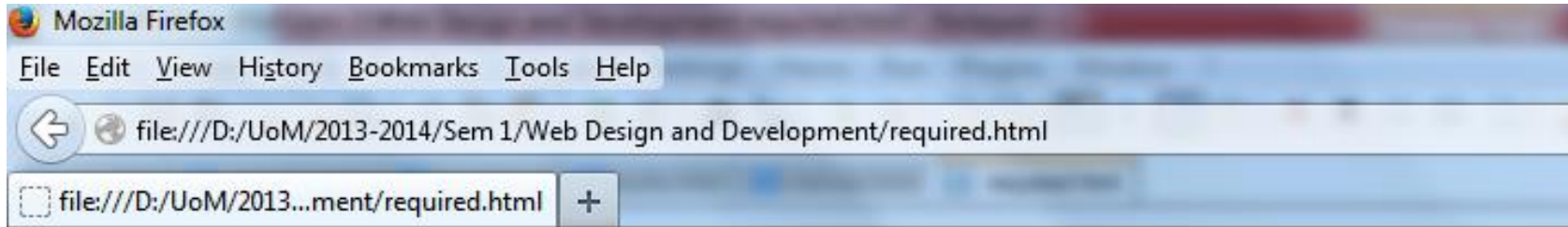
Validation using HTML5

- There are a number of features in HTML5 that can be used for validating fields.
- Examples include:
 - Validating email
 - Validating numbers
 - Validating blank
 - Validating telephone numbers

The required attribute

- Now you do not need to write JavaScript for client side validations like empty text box
- HTML5 introduced a new attribute called **required** – an empty textbox will not be submitted until a value is typed.
- `<input type="text" name="search" required/>`
- This attribute is supported by latest versions of Mozilla, Safari and Chrome browsers only.

The required attribute (2)



Enter search term(s)|

Please fill out this field.

Try to submit using Submit button

Search

Classwork

classworkhtml5.html x

file:///D:/UoM/2013-2014/Sem%201/Web%20Design%20and%20Development/classworkhtml5.html

Full name:

Email address:

Repeat email address:

Arrival date: ▼

Number of nights (rooms are \$99.00 per night):

Number of guests (each additional guest adds \$10.00 per night):

Estimated total: \$99.00

Promo code:

Classwork continued

- Implement the above web page containing a form given the following:
 - There is a placeholder for the full name text field with the value "Jane Doe"
 - Email and repeat email can only accept text in the format email
 - Arrival date only accepts valid dates
 - Number of nights should be in the range 1-30
 - Number of guests should be in the range 1-4

References

- <http://www.html5tutorial4u.com>
- <Http://www.w3schools.com>
- <http://www.html5rocks.com>

Questions?