QUICK TIP...

THE "SECURITY HACK" AT THE END OF THIS PRESENTATION IS SOMETHING THAT **EVERYONE** SHOULD KNOW!

GETTING INFORMATION FROM USERS

HTML FORMS

WEBDEV@RGU

- HTML Forms
- Form Presentation
- Form Elements
    - Input Types
    - Input Attributes
- Form Security

OVERVIEW

HTML FORMS

PURPOSE OF HTML FORMS

- Capturing user input
  - registering user information
  - entering username and password for login
  - posting status updates to social networks
  - submitting a search query
  - taking a questionnaire
- Transmitting user input elsewhere
  - send to client side JavaScript for validation
  - send to server side process (PHP, Java, JavaScript)

FORM

PRESENTATION

A SIMPLE HTML FORM

BASIC FORM ELEMENTS

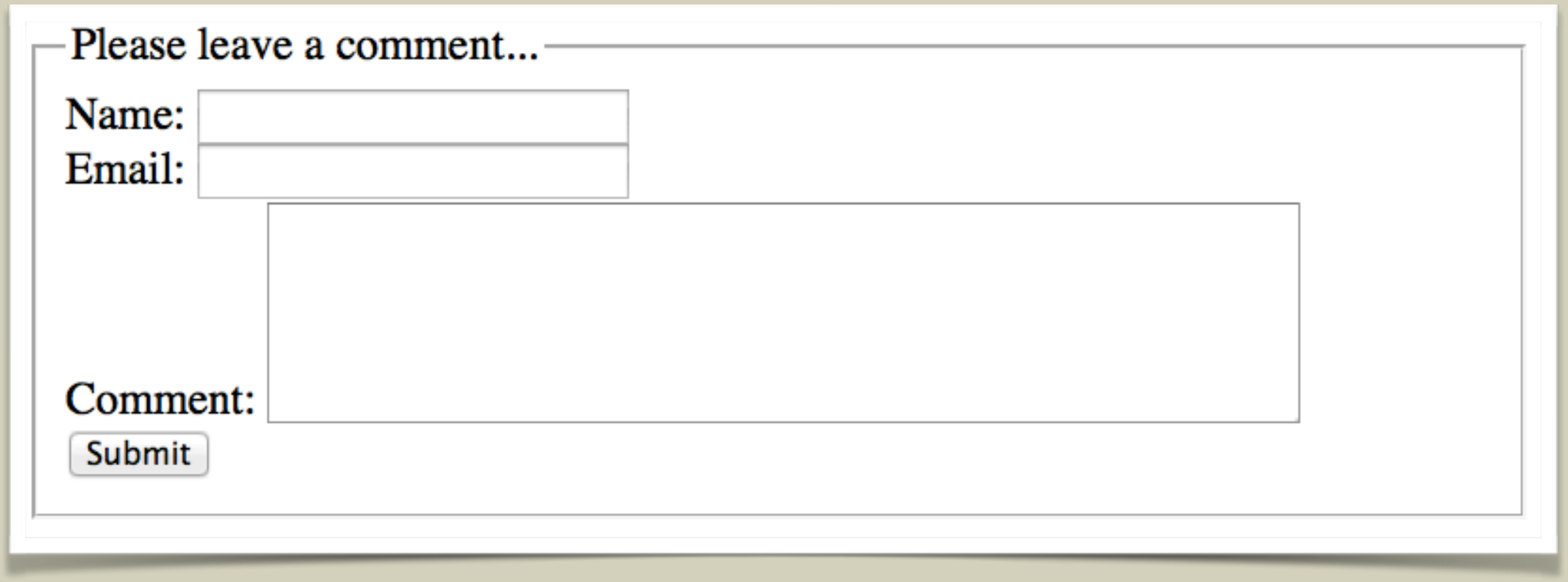
- The form tag contains all the input elements
  - <form> … </form>
- Input elements can be of <input type=“” />
  - Text/password/file or textarea
  - Radio button or Checkbox
  - Select boxes
- All input elements should be given a form label
  - Improves accessibility if using a screen reader
  - <label> … </label>
- Fieldsets can be used to graphically group input elements together
  - <fieldset> … </fieldset>

```
<form>
    <fieldset>
        <legend>Please leave a comment...</legend>
        <label for="name">Name:</label>
        <input type="text" name="name" value="" />
        <label for="email">Email:</label>
        <input type="text" name="email" value="" />
        <label for="comments">Comment:</label>
        <textarea name="comments" cols="45“ rows="5">
        </textarea>
        <input type="submit" value="Submit" />
    </fieldset>
</form>
```

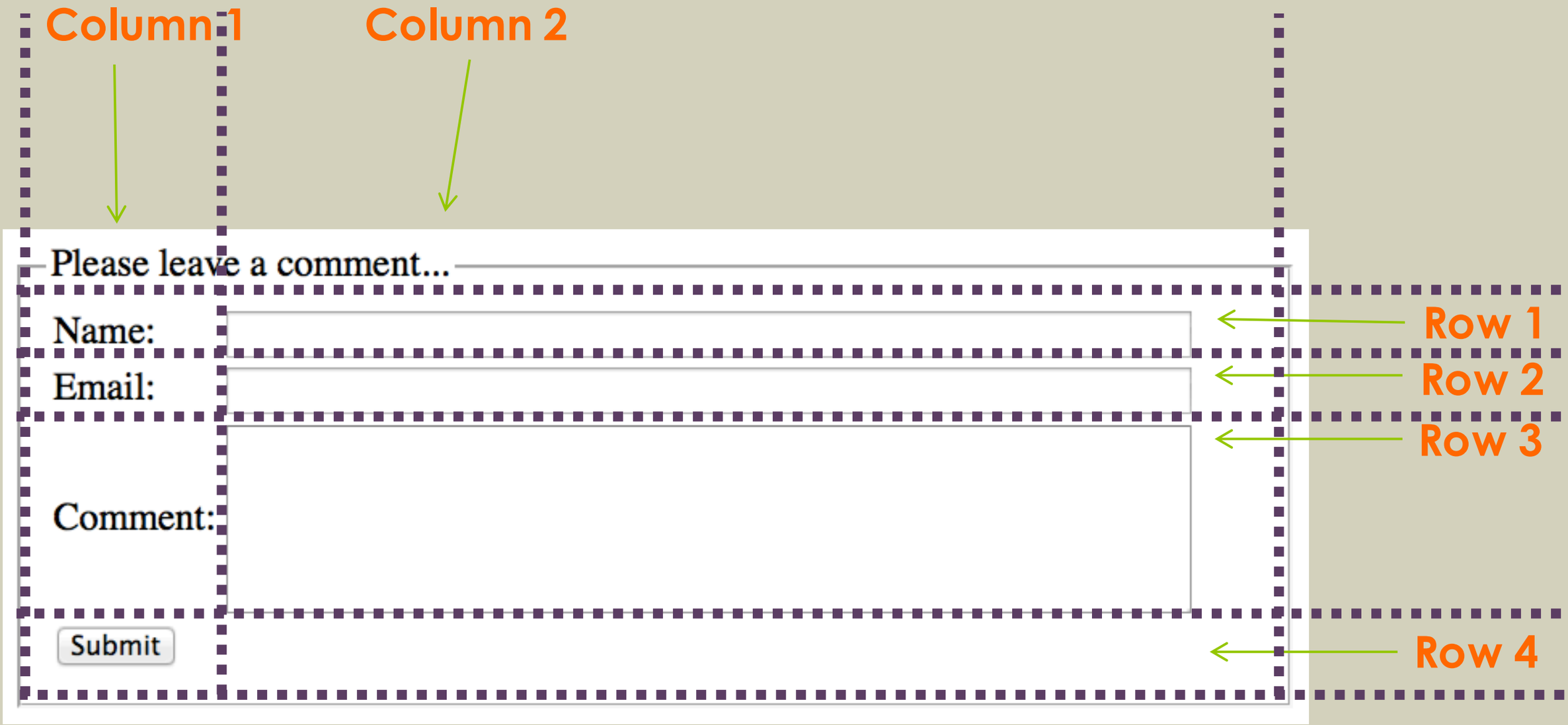
- Best practice is to use CSS
- However, tables are still used a lot for layout of form elements
    - better than a messy form

FORM PRESENTATION

```
<form>
    <fieldset>
        <legend>Please leave a comment...</legend>
        <label for="name">Name:</label>
        <input type="text" name="name" value="" />
        <br>
        <label for="email">Email:</label>
        <input type="text" name="email" value="" />
        <br>
        <label for="comments">Comment:</label>
        <textarea name="comments" cols="45" rows="5"></textarea>
        <br>
        <input type="submit" value="Submit" />
    </fieldset>
</form>
```



```
<style> input, textarea {width: 400px;} </style>
<form>
    <fieldset>
        <legend>Please leave a comment...</legend>
        <table>
            <tr>
                <td><label>Name:</label></td>
                <td><input type="text" name="name" value="" /></td>
            </tr>
             <tr>
                <td><label>Email:</label></td>
                <td><input type="text" name="email" value="" /></td>
             </tr>
            <tr>
                <td><label>Comment:</label></td>
                <td><textarea name="comments" cols="45" rows="5">
                    </textarea></td>
            </tr>
            <tr>
                <td colspan=2><input type="submit" value="Submit" /></td>
            </tr>
        </table>
    </fieldset>
</form>
```


Column 1
Column 2
Please leave a comment...
Name:
Email:
Comment:
Submit
Row 1
Row 2
Row 3
Row 4

- Best practice is to use CSS
- However, tables are still used a lot for layout of form elements
    - better than a messy form
- Next week we will look at CSS in a lot more detail so that you can get the hang of it.

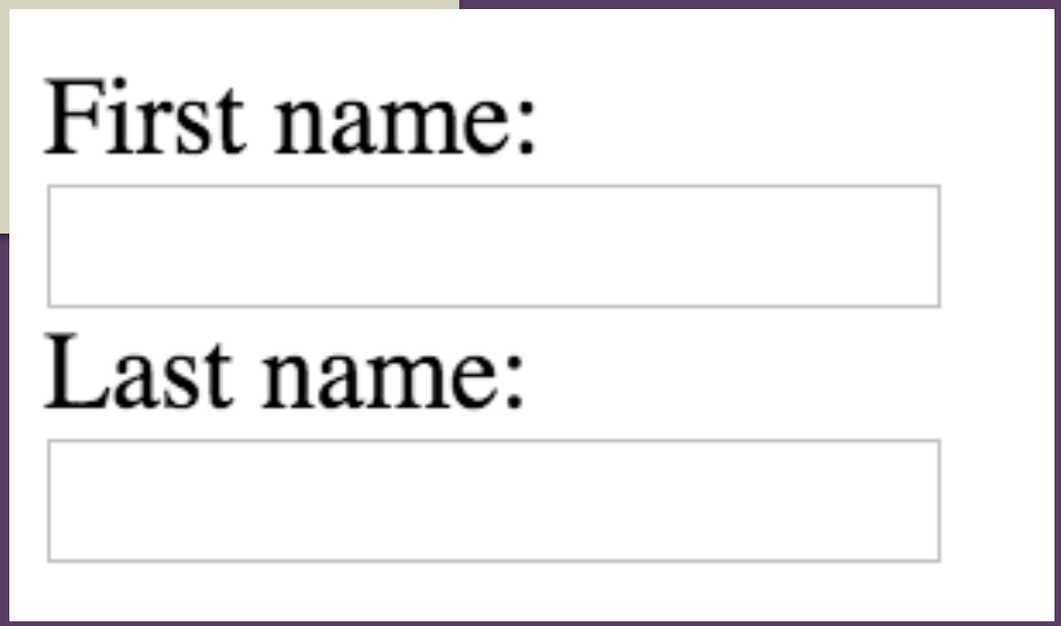
FORM PRESENTATION

FORM ELEMENTS

INPUT TYPES

- Provides simple text input

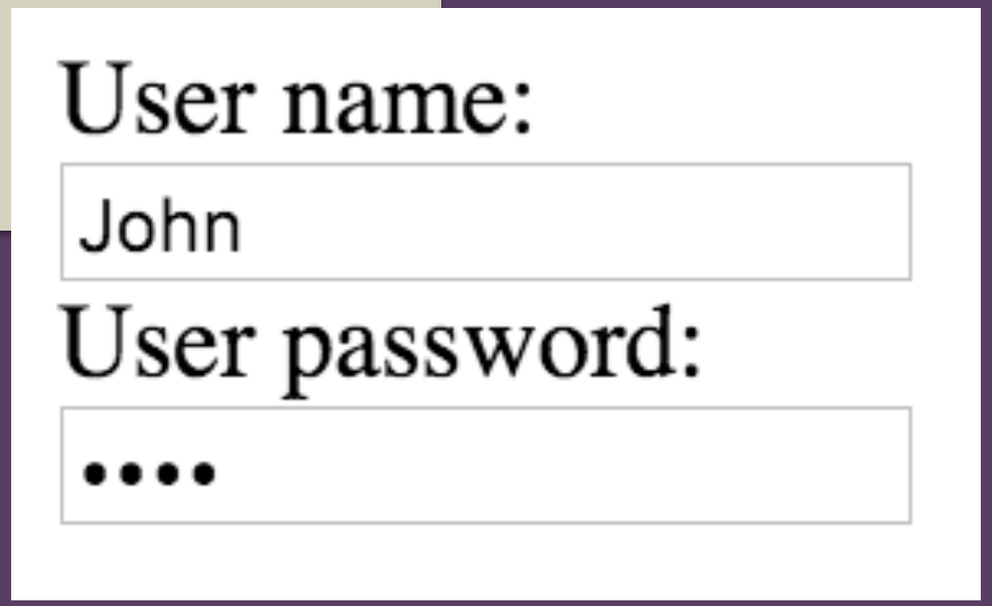
```
<form>
  <label for="firstname>First name:</label><br>
  <input type="text" name="firstname"><br>
  Last name:<br>
  <input type="text" name="lastname">
</form>
```



TEXT

- Provides text input that is hidden from the user

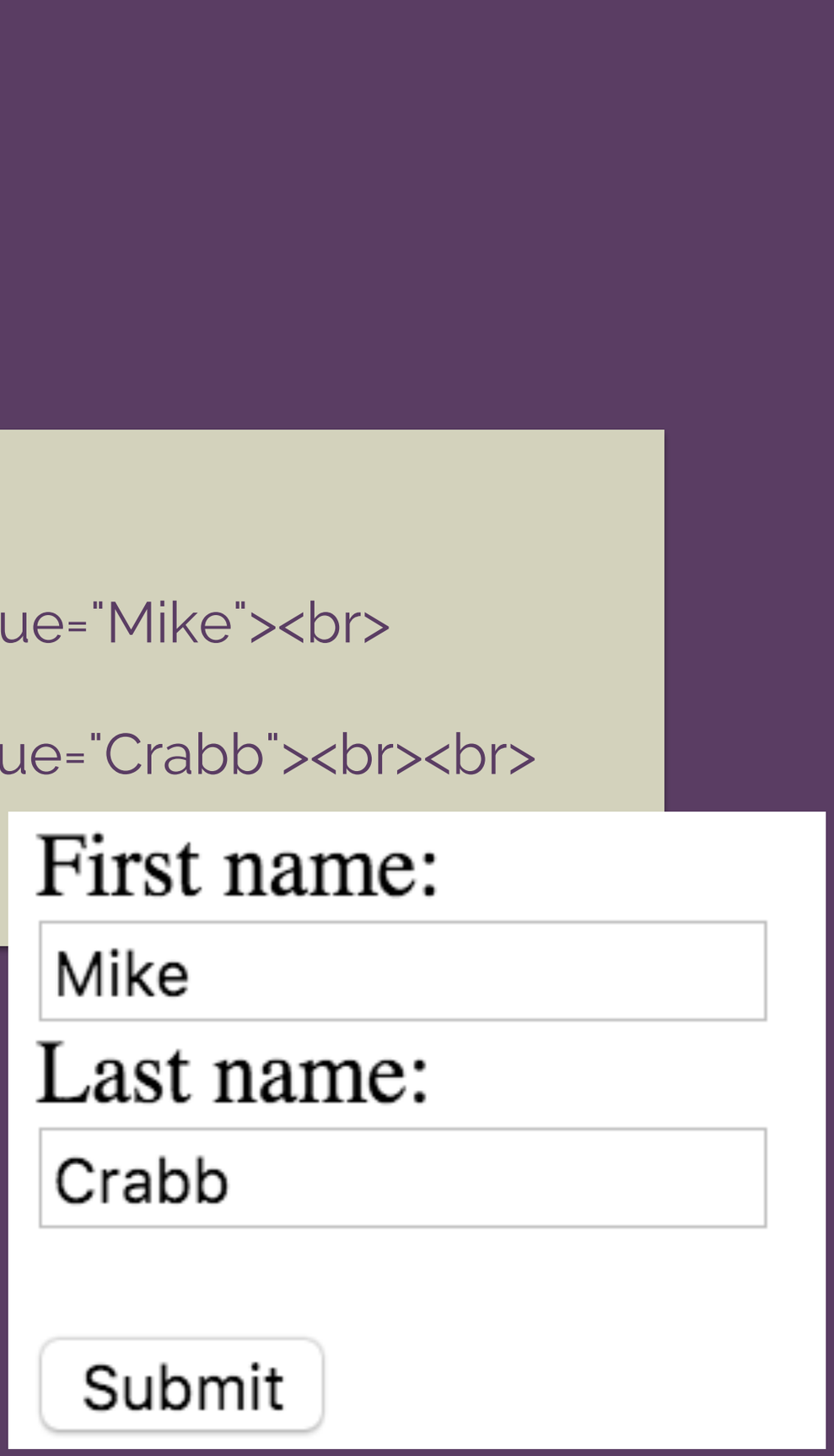
```
<form>
  User name:<br>
  <input type="text" name="username"><br>
  User password:<br>
  <input type="password" name="psw">
</form>
```



PASSWORD

- Submit button for forms

```
<form action="action_page.php">
  First name:<br>
  <input type="text" name="firstname" value="Mike"><br>
  Last name:<br>
  <input type="text" name="lastname" value="Crabb"><br><br>
  <input type="submit" value="Submit">
</form>
```



SUBMIT

- The <input type="date"> is used for input fields that should contain a date.

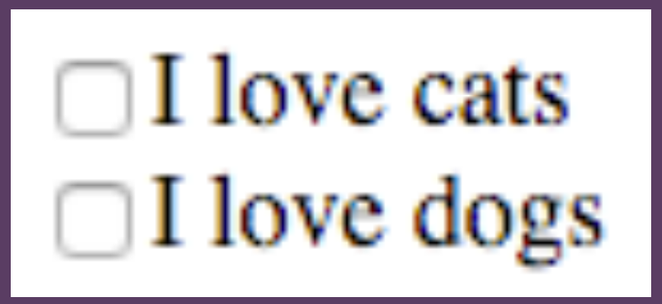
```
<form>
  Birthday:
  <input type="date" name="bday">
</form>
```

DATE

CHECKBOXES

- Provides for a selection of zero or more items from a list of options

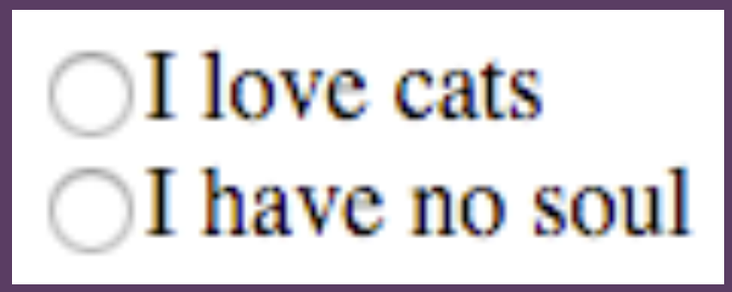
```
<input type="checkbox" name="pets" value="loveCats">I love cats <br>
<input type="checkbox" name="pets" value="loveDogs">I love dogs
```



RADIO BUTTONS

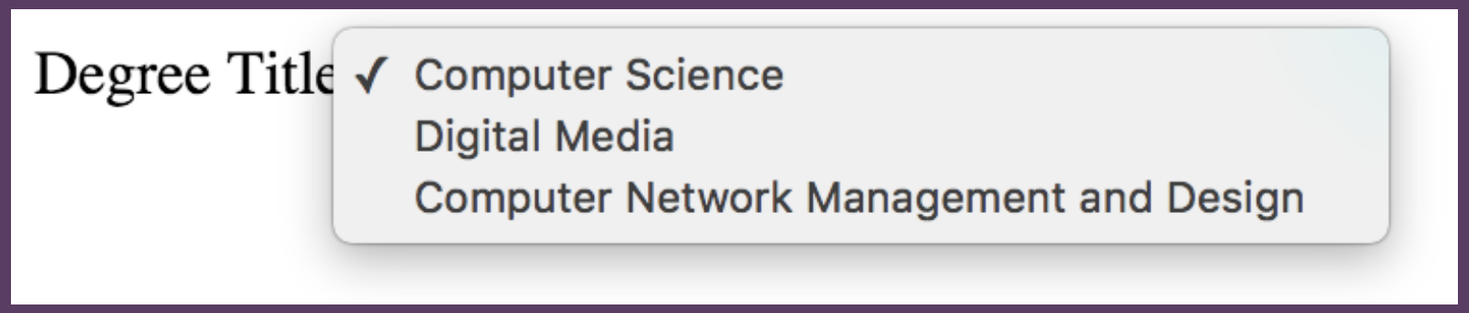
- Provides for only one selection from a list of options

```
<input type="radio" name="cats" value="loveCats">I love cats <br>
<input type="radio" name="cats" value="hateCats">I have no soul
```



- Choose from a list of options
  - use the <select> tag
  - list <options>

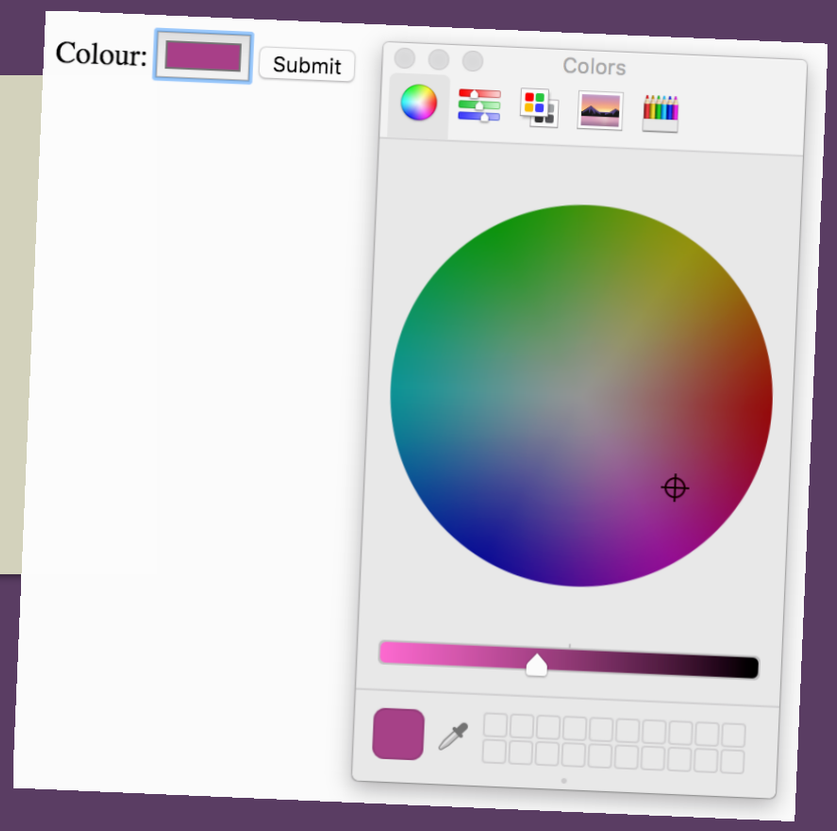
```
<label for="degreeTitle">Degree Title:</label>
<select name="degreeTitle">
    <option value="cs">Computer Science</option>
    <option value="dm">Digital Media</option>
    <option value="cnmd">Computer Network Managem
</select>
```



SELECTION (DROP DOWN) BOX

- Provides for only one selection from a list of options

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

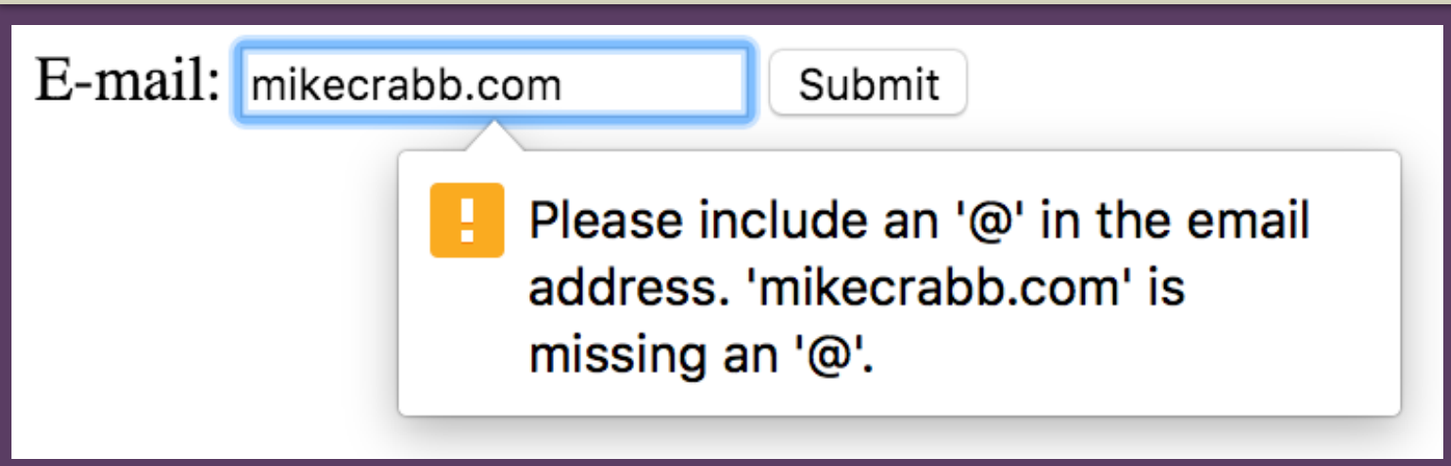


Select your favorite color: Submit

COLOUR

- Provides for only one selection from a list of options

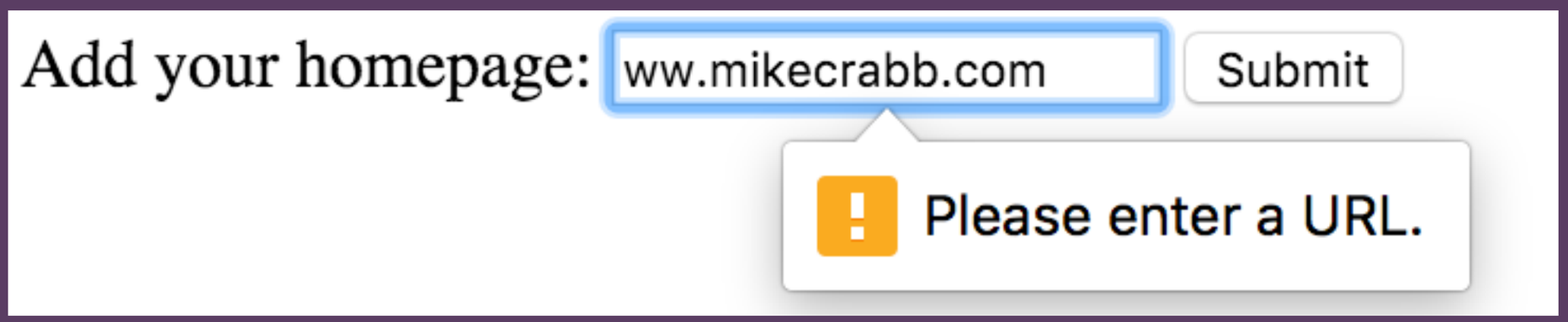
```
<form>
  E-mail:
  <input type="email" name="email">
  <input type="submit">
</form>
```



EMAIL

- Provides for only one selection from a list of options

```
<form>
  Add your homepage:
  <input type="url" name="homepage">
</form>
```



URL

EMAIL check input is valid email address (something@something.something)

URL check input is valid web address (http://www.something.something)

RESET Clears everything on the page

COLOR Select a colour

american spelling

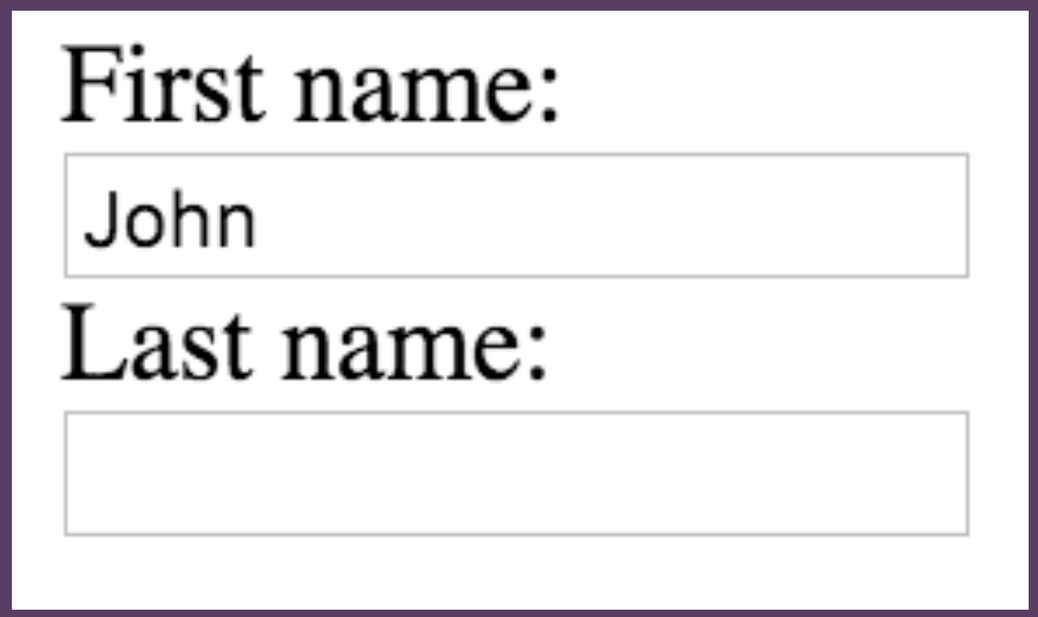
HTML5 FORM IMPROVEMENTS

FORM ELEMENTS

INPUT ATTRIBUTES

- The value attribute specifies the initial value for an input field:

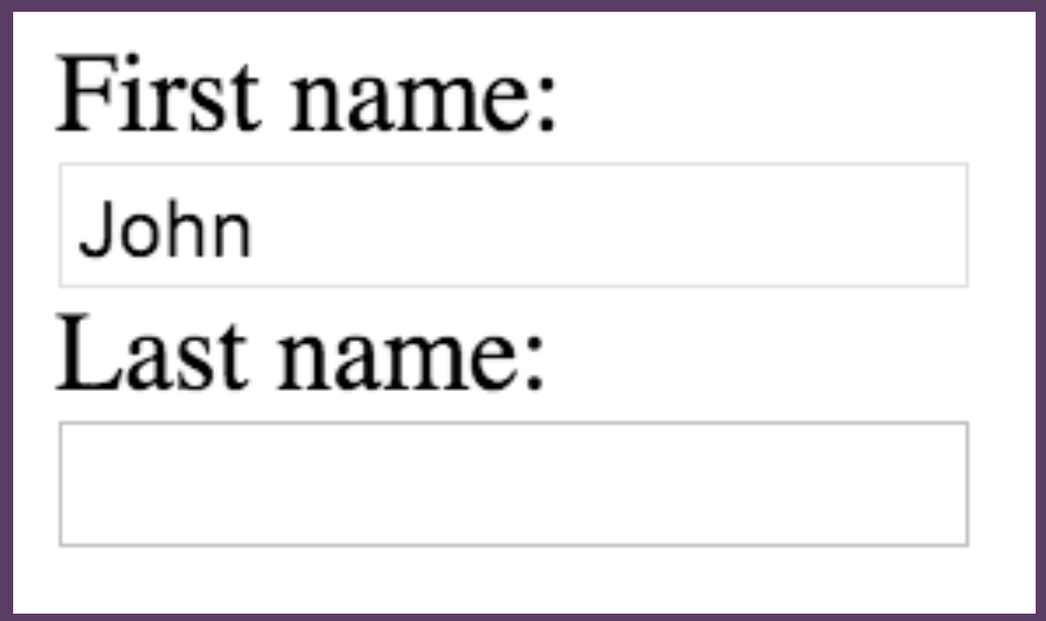
```
<form action="">
First name:<br>
<input type="text" name="firstname" value="John">
<br>
Last name:<br>
<input type="text" name="lastname">
</form>
```



VALUE

- The readonly attribute specifies that the input field is read only (cannot be changed)

```
<form action="">
First name:<br>
<input type="text" name="firstname" value="John" readonly>
<br>
Last name:<br>
<input type="text" name="lastname">
</form>
```



READ ONLY

- The disabled attribute specifies that the input field is disabled.
- A disabled element is un-usable and un-clickable.
- Disabled elements will not be submitted

```
<form action="">
First name:<br>
<input type="text" name="firstname" value="John" disabled>
<br>
Last name:<br>
<input type="text" name="lastname">
</form>
```

DISABLED

- The size attribute specifies the size (in characters) for the input field

```
<form action="">
First name:<br>
<input type="text" name="firstname" value="John" size="40">
<br>
Last name:<br>
<input type="text" name="lastname">
</form>
```

First name:

John

Last name:

SIZE

- The maxlength attribute specifies the maximum allowed length for the input field:

```
<form action="">
First name:<br>
<input type="text" name="firstname" maxlength="10">
<br>
Last name:<br>
<input type="text" name="lastname">
</form>
```

MAXLENGTH

- The autocomplete attribute specifies whether a form or input field should have autocomplete on or off

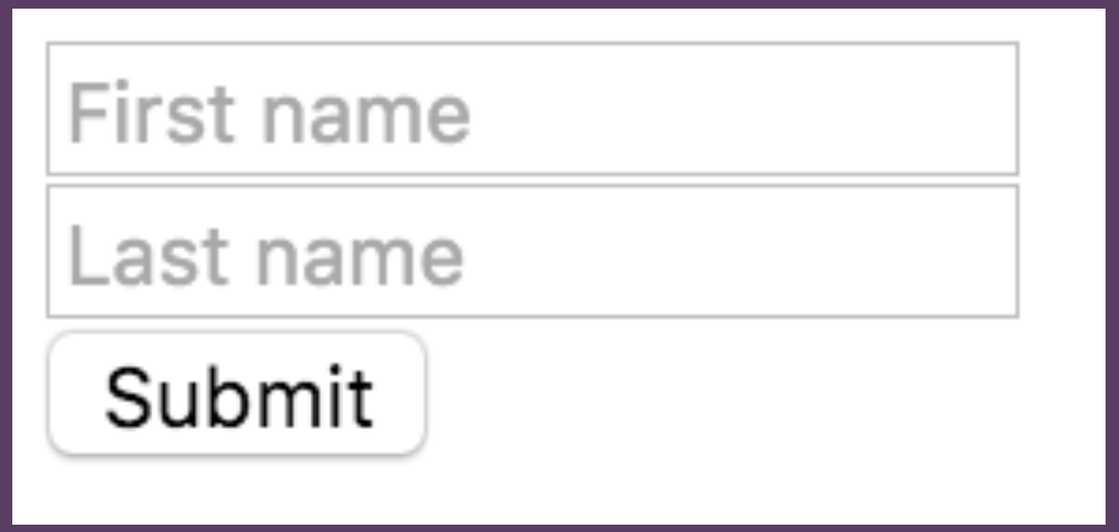
```
<form autocomplete="on">
  First name:<input type="text" name="fname"><br>
  Last name: <input type="text" name="lname"><br>
  E-mail: <input type="email" name="email"
autocomplete="off"><br>
  <input type="submit">
</form>
```

AUTOCOMPLETE

PLACEHOLDER

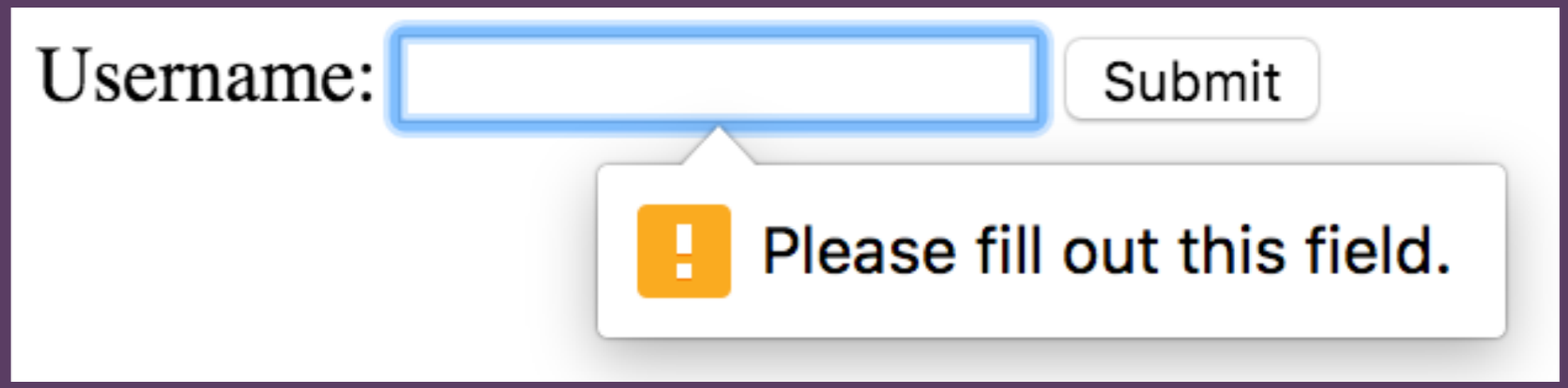
- The placeholder attribute specifies a hint that describes the expected value of an input field (a sample value or a short description of the format).

```
<input type="text" name="fname" placeholder="First name">
```



- When present, it specifies that an input field must be filled out before submitting the form.
- The required attribute works with the following input types: text, search, url, tel, email, password, date pickers, number, checkbox, radio, and file.

Username: <input type="text" name="username" required>



REQUIRED

This one is important

FORM SECURITY

- Forms can be quite insecure when we are using them, we need to make sure that the right data is being seen by the right people
    - and that no-one can get access to the really sensitive data!

For example…here's how to find our a password on an unsecured computer

PS - DON'T DO THIS ONE SOMEONE ELSES COMPUTER - YOU'll GET INTO A LOT OF TROUBLE!!

FORM SECURITY

I'VE VISITED A WEBSITE AND HAVE PUT IN MY USERNAME AND PASSWORD INTO THE BOX PROVIDED. LET'S SAY THAT NOW I HAVE TO STEP AWAY FROM MY COMPUTER FOR 5 SECONDS...

campusmoodle.rgu.ac.uk:

https://campusmoodle.rgu.ac.uk/login/index.php

RGU CAMPUSMOODLE
ROBERT GORDON UNIVERSITY

MY MOODLE | Library | Study Skills | Careers

Username myFakeName

Password ••••••••••••••

Remember username

Log in

For help logging into RGU services click here.

Cookies must be enabled in your browser

1:10

RGU ROBERT GORDON UNIVERSITY ABERDEEN

User Policy and Data Protection

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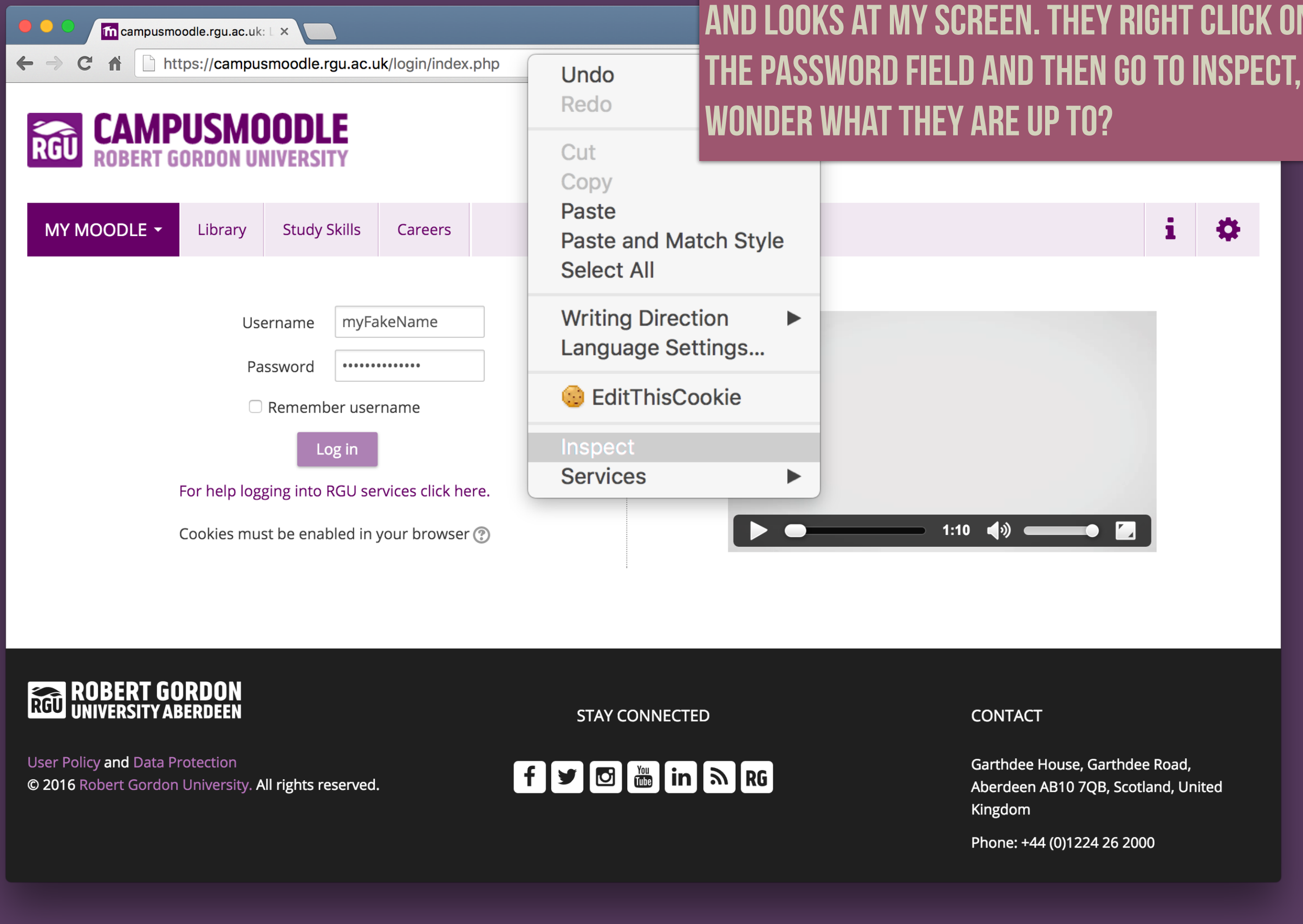
STAY CONNECTED

CONTACT

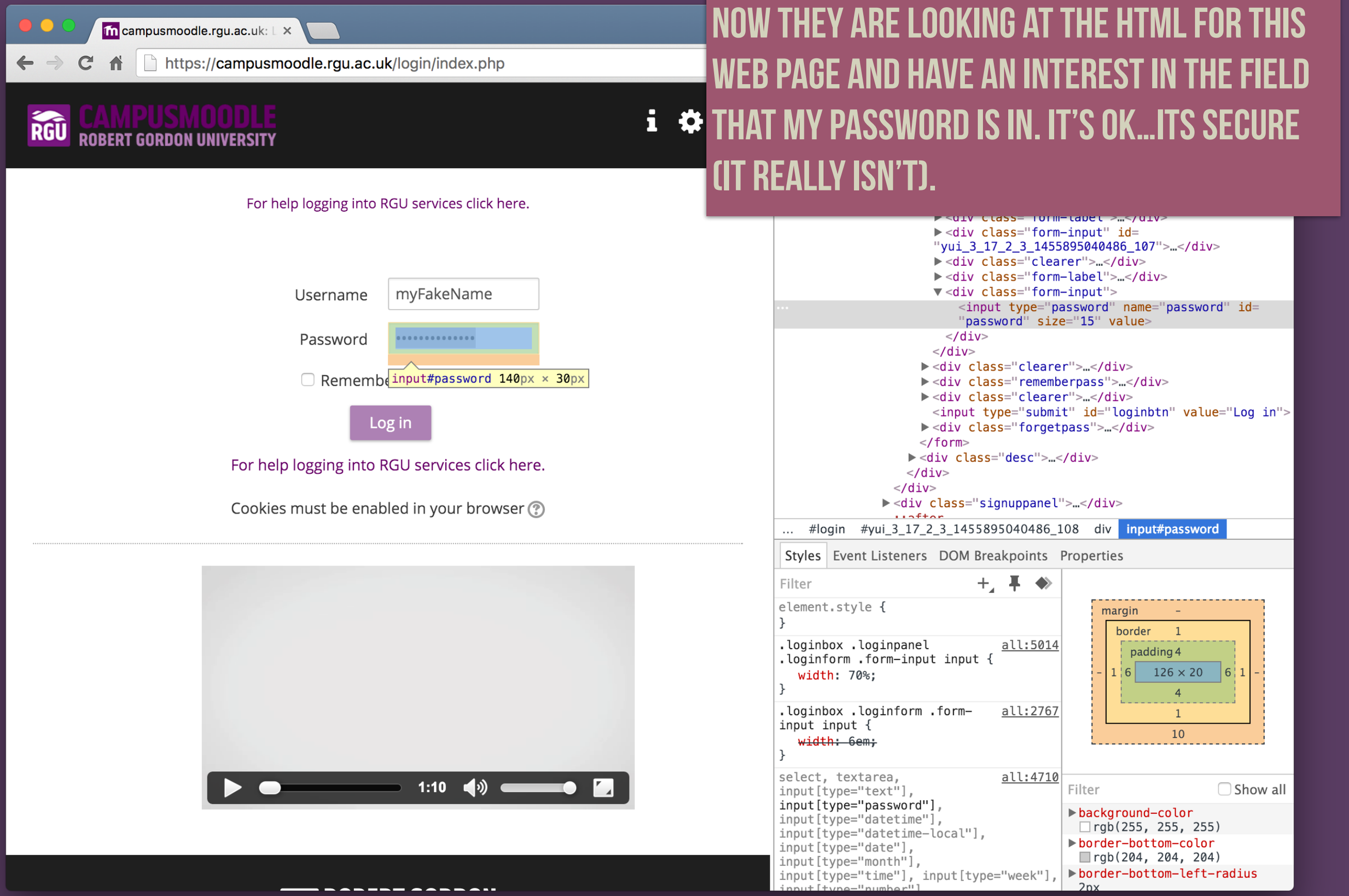
Garthdee House, Garthdee Road, Aberdeen AB10 7QB, Scotland, United Kingdom

Phone: +44 (0)1224 26 2000

SOME UNSAVOURY CHARACTER COMES ALONG AND LOOKS AT MY SCREEN. THEY RIGHT CLICK ON THE PASSWORD FIELD AND THEN GO TO INSPECT, I WONDER WHAT THEY ARE UP TO?



NOW THEY ARE LOOKING AT THE HTML FOR THIS WEB PAGE AND HAVE AN INTEREST IN THE FIELD THAT MY PASSWORD IS IN. IT'S OK...ITS SECURE (IT REALLY ISN'T).



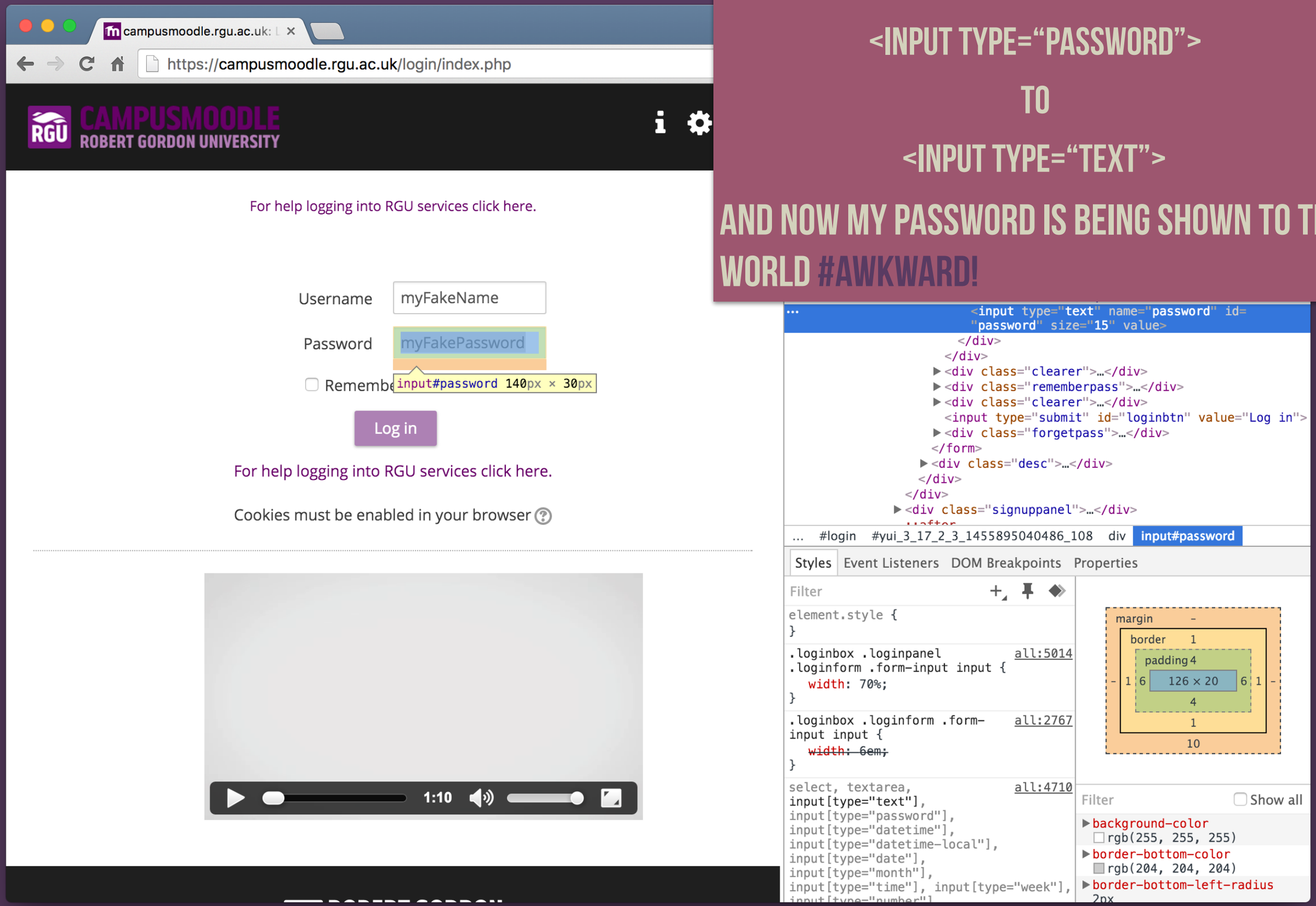
THEY CHANGE THE FORM ELEMENT FROM:

<INPUT TYPE="PASSWORD">

TO

<INPUT TYPE="TEXT">

AND NOW MY PASSWORD IS BEING SHOWN TO THE WORLD #AWKWARD!



- HTML Forms
- Form Presentation
- Form Elements
    - Input Types
    - Input Attributes
- Form Security

RECAP

GET IN TOUCH!

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