# Department of Computing

**CS344: Web Engineering**

**Class: BSCS – 5AB**

# Lab 2: HTML5 tags

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# Lab 2: HTML5 Introduction

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# Lab 2: Introduction to HTML5 Elements

## Introduction

Purpose of this lab is to get familiarize with html5 tags.

## Objectives

The objective of the lab is to provide a hands on experience on html and to allow students to develop basic HTML pages using the following elements

* Forms
* New Form elements in html5
* fieldset tag
* Embed tag
* Audio tag
* Video tag
* div tag

## Tools/Software Requirement

The software includes Notepad / Notepad ++ and DreamWeaver

## Description

For creating webpages through HTML you will be required to follow the following steps.

* Open Notepad/Notepad++/DreamWeaver and start your HTML tags/code.
* Save your text file with .html extension.
* Double click the file saved and you will see your webpage in a browser.

## Pitfalls

* Any exceptions or errors leading to non-execution of submitted code.
* Failure to maintain scoring
* Failure to automate the enemies or respond correctly to the user input.

## Deliverables

Students will be evaluated between 0 and 10 and must upload the following on LMS:

1. Description document.
2. Screenshots of the final output
3. Source code used

# HTML Introduction

## What is HTML?

HTML is the standard markup language for creating Web pages.

* HTML stands for Hyper Text Markup Language
* HTML describes the structure of Web pages using markup
* HTML elements are the building blocks of HTML pages
* HTML elements are represented by tags
* HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
* Browsers do not display the HTML tags, but use them to render the content of the page

**New Features**

introduces a number of new elements and attributes that can help you in building

modern websites. Here is a set of some of the most prominent features introduced in

HTML5.

 New Semantic Elements: These are like <header>, <footer>, and <section>.

 Forms 2.0: Improvements to HTML web forms where new attributes have been

introduced for <input> tag.

 Persistent Local Storage: To achieve without resorting to third-party plugins.

 WebSocket : A next-generation bidirectional communication technology for web applications.

 Server-Sent Events: HTML5 introduces events which flow from web server to the

web browsers and they are called Server-Sent Events (SSE).

 Canvas: This supports a two-dimensional drawing surface that you can program with JavaScript.

 Audio & Video: You can embed audio or video on your webpages without resorting to third-party plugins.

 Geolocation: Now visitors can choose to share their physical location with your web application.

**The <input> element in HTML4**

HTML4 input elements use the type attribute to specify the data type.HTML4 provides

following types −

**Type Description**

**text** A free-form text field, nominally free of line breaks.

**Password** A free-form text field for sensitive information, nominally free of line

breaks.

**checkbox** A set of zero or more values from a predefined list.

**radio** An enumerated value.

**submit** A free form of button initiates form submission.

**file** An arbitrary file with a MIME type and optionally a file name.

**hidden** An arbitrary string that is not normally displayed to the user.

**select** An enumerated value, much like the radio type.

**textarea** A free-form text field, nominally with no line break restrictions.

**button** A free form of button which can initiates any event related to button.

Following is the simple example of using labels, radio buttons, and submit buttons −

...

<form action="http://example.com/cgiscript.pl" method="post">

<p>

<label for="firstname">first name: </label>

<input type="text" id="firstname"><br />

<label for="lastname">last name: </label>

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HTML5

<input type="text" id="lastname"><br />

<label for="email">email: </label>

<input type="text" id="email"><br>

<input type="radio" name="sex" value="male"> Male<br>

<input type="radio" name="sex" value="female"> Female<br>

<input type="submit" value="send"> <input type="reset">

</p>

</form>

...

### The <video> element

The [**<video>**](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/video) element allows you to embed a video very easily. A really simple example looks like this:

<video src="rabbit320.webm" controls>

<p>Your browser doesn't support HTML5 video. Here is a <a href="rabbit320.webm">link to the video</a> instead.</p>

</video>

The features of note are:

[**src**](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/video#attr-src)

In the same way as for the [<img>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/img) element, the src attribute contains a path to the video you want to embed. It works in exactly the same way.

[**controls**](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/video#attr-controls)

Users must be able to control video and audio playback (it's especially critical for victims of [epilepsy](https://en.wikipedia.org/wiki/Epilepsy#Epidemiology).) You must either use the controls attribute to include the browser's own control interface, or build your interface using the appropriate [JavaScript API](https://developer.mozilla.org/en-US/docs/Web/API/HTMLMediaElement). At minimum, the interface must include a way to start and stop the media, and to adjust the volume.

**The paragraph inside the <video> tags**

This is called **fallback content** — this will be displayed if the browser accessing the page doesn't support the <video> element, allowing us to provide a fallback for older browsers. This can be anything you like; in this case we've provided a directly link to the video file, so the user can at least access it some way regardless of what browser they are using.

# Lab Tasks

## Task A (div)

* You must use div tag in this lab.

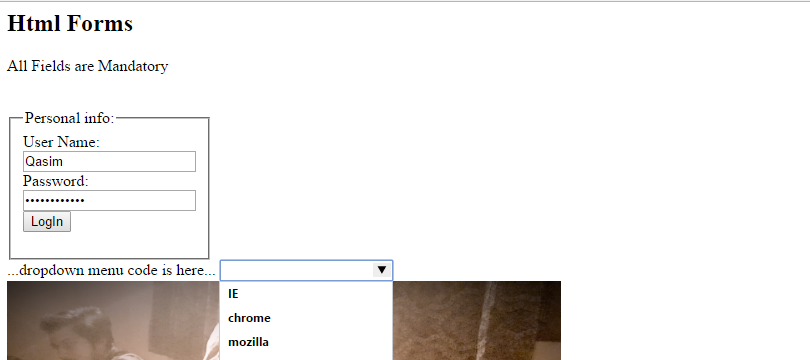
## Task B

* Form should include the following elements
* First Name, Last Name, gender (radio button), e-mail & password and a drop down menu (datalist) for semester select.
* Add cnic and perform a check on its format (hint : regex or pattern).
* Also add phone number and perform a check on its digits as well. (it should not exceed 11 digits)
* Use the html-5 range tag also i.e use it for experience.
* Use date and number input types for birthday and mobile number in your form.
* Finally, a Submit button to submit the form.

**Task C**

* Use video tag to create a video player the video should be auto played.
* Use audio tag to create audio player.
* Use embed and play any flash file.

**Example:**

****