CS 251: Outlab 02: [Presentation] HTML, CSS, JavaScript, Inkscape

- Handed out: 7/31 Due: 8/3 11pm
- Please write (only if true) the honor code. If you used any source (person or thing) explicitly state it. You can find the honor code on the web page.

Overview

The goal of this lab is to make you get a grip on the basics of HTML pages on the Internet.

Pre-tasks

Look up `http://www.w3schools.com/` to get started with HTML, CSS and JS. Similarly look up `http://inkscape.org/doc/basic/tutorial-basic.html` to get started with Inkscape.

The Tasks

The purpose of this task is to able to present your work on a web page You might have seen a gazillion web pages; wait, we are not going to make a super duper page. We will do just enough to get the basics of a web page. A modern web page has these principal components: CSS, Images, Javascript, and Forms. We won't do forms yet but we will do other stuff.

1. Basic Web page stub: This page will have the following components
   - The landing page will be a template for all things to come. It is essential that you also place links to your lab group. See Figure 1. This page will be named `index.html`

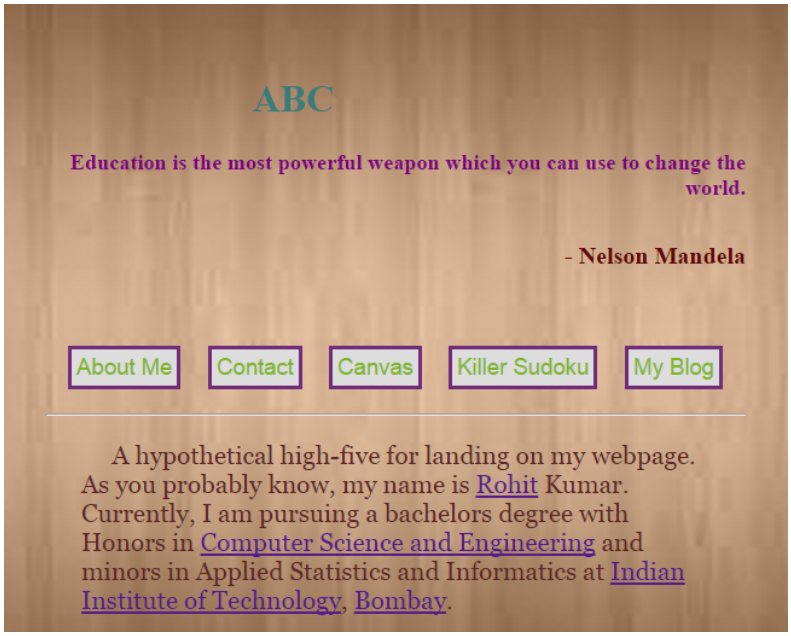


Figure 1: A starting web page

- The next page will be an "About me" page (check Figure 2). It will introduce you to the audience: Where are you from? What are you doing at IITB? Anything you want to say about yourself. Name this page `aboutMe.html`

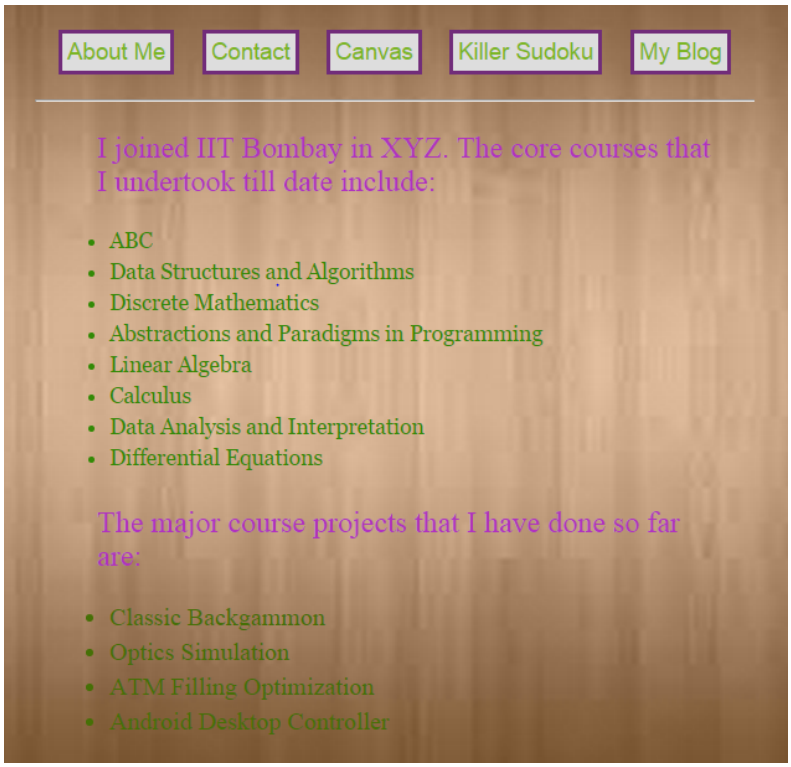


Figure 2: About me page

- Make another page called `group.html` where put the details (i.e., name and roll number) of you group members. Also, put a picture of each group member. Clicking on the image must open their personal webpages. Note: This page, i.e., `group.html` has to be the same for the group.
- After you get the basics working, simply move your entire directory (folder) to another folder. Does everything work as well? If not, rework the links.
- Your pages must contain and use sensibly at least the following html tags : <title>, <head>,<body>, , <p>, <ul>,<ol>, <img>, <a href>, <a name>
  Feel free to use more.

How we will score you: This section has 30 marks.

`Note:` Moving the folder should not result in any error. If it does, you get a zero here.

2. CSS: A basic guideline is to separate content and form. The markup language originally tells us the browser what to write, and ALSO how to mark them up, i.e., display. This is considered bad practice. Instead, the Cascading Style Sheet (CSS) is the preferred way to decorate a page.

   Learn to style the html elements by using inline styling, included style blocks in the same html file and separate style file. Style one html element each a) inline, b) using a style block within in the html file and c) using a separate CSS style file. The style file must be called `index.css`. Use the same stylesheet for all webpages in this task.

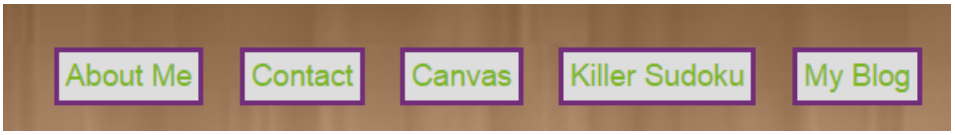


Figure 3: Note how CSS has been used to beautify these buttons

How we will score you: This section has 30 marks

- The style elements should be confined only to aboutMe.html page so that it is easier for us to grade. Only this page will be checked for decorations.
- 10 each for the three parts mentioned above.

3. Javascript: A web page like the one you have so far is pretty static. We want to be able to interact with the web page. One way of doing this is using JavaScript. This is a long topic but we want to do the real basics.

   - Create a new page called contactMe.html. Introduce the <script> tag to enable JavaScript, and create a hover functionality on this page. Create a button. If you hover on the button, your contact information should be revealed to the users and the color of the element should change. Feel free to place whatever little or large information here, we won't worry about the content. However, on taking the mouse away from the element, the contact information should disappear. Your code should be in a file called `index.js`. There might be a variety of ways of making this feature happen, be minimalistic.

   How we will score you: This section has 10 marks.

4. Canvas: This is a relatively new HTML5 feature. Create a file called `mycanvas.html` that has a HTML Canvas. This canvas should contain a simple drawing of, say, a leaf. It should have **at least 3** vector elements (not an image).

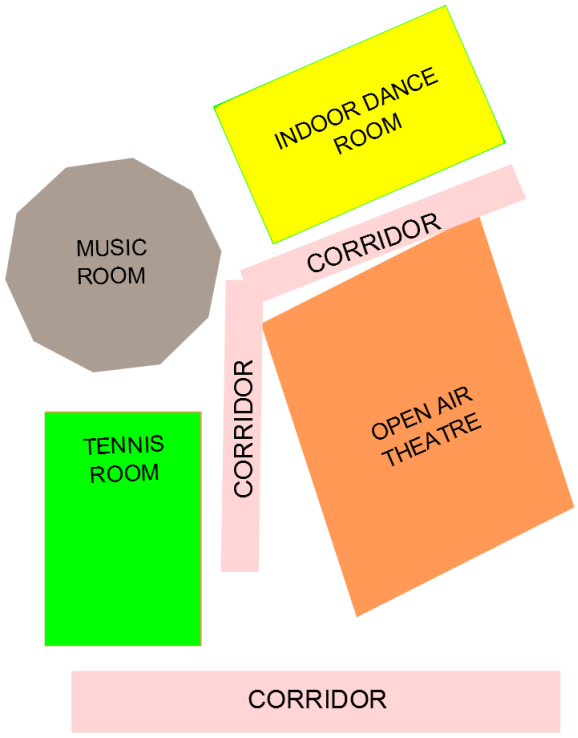
   For inspiration take a look at `http://davidwalsh.name/canvas-demos`.

   How we will score you: This section has 20 marks.

5. Inkscape: A picture is worth a 1000 words, and these days no document is considered good unless you have pictures (Contrast images vs pictures vs graphic art). Now pictures like the one you have created above are all fine, but to create more complex ones in vector format you need a tool like Inkscape. In this task, you will be using Inkscape to make a model of the student activity center (SAC).

   - Make a diagram indicating the layout of the ground floor of SAC. You may have to visit the SAC for this :)
   - Indicate corridors and rooms properly
   - Display this image on the web page. Name the image as `sac.png`

   An example is shown below. This example is very crude so do not to copy the exact design but be creative!



How we will score you: This section carries 30 marks.

- Here we want a basic 2D schematic like the one shown. You probably want to show what facilities are there in the room. This part carries 15 marks. You should create this file in a the svg vector format and upload the vector file also.
- We are expecting something interesting here such as a 3D projection (e.g. isometric). Apart from it, at least one thing should be shown (e.g., when clicked). For example, I'd like to see the whole building so that we know where Tennis Room is and where Dance Room is. Or you click a part of the image and something interesting should happen. See `http://www.cse.iitb.ac.in/page191?Building=KR&floor=0` and `http://www.cse.iitb.ac.in/page191?Building=KR&floor=1` for inspiration. This part carries another 15 marks.

6. Challenge question. Will be posted later. Watch this space.