



Special Topics in Design I
(Prototyping in IOT)
DSL 810

Topic 1
Website Development

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Website Design for Course Mgmt

- Why? Useful skill, Portfolio, digital repository for others, Course Management.
- What?

[HTML](#)

[HTML + CSS template provided by us Smart Fan](#)

[HTML + CSS template of your choice Self stabilizing box](#)

[HTML + Javascript](#)

Anything else (HTML+CSS+Javascript, Markdown, PHP, Perl, Git)

- Image and video compression
- Video editing.



HTML



CSS



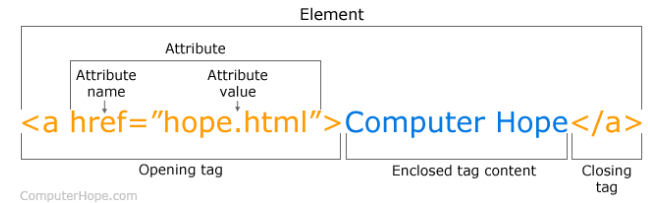
JS



Website building (HTML)

- [HTML](#)
- Download a text editor:
<https://www.sublimetext.com/3>
- <https://www.w3schools.com/> [Fab Tutorial](#)
- Let's make our own hello_world.html, accessing files/images a folder up or down.
- <https://wordhtml.com/>
- [HTML template](#) Let's do this!
- [Example](#) for the template
- Download MAMP, WinSCP
- [IITD user web page advice](#)
- Those who already know this, please refer to [Fab Academy Project Mgmt Video](#)

Breakdown of an HTML Tag



Website using our HTML CSS template

- Download [HTML CSS template.zip](#)
- Move HTML_CSS_template folder to MAMP/htdocs
- Please open "Template Document.docx"
- Understanding the template files
- Editing the template
- Revising the tags



Editing the HTML CSS files

index.html

- This is the home page
- Open index.html in sublime text editor
- Change prefix from designer, add name, change images (optional)

about.html

- Add picture in images folder, edit src attribute of img tag
- Bookmarking

assignment.html

- Create a new file from assignment_template.html, say assignment1.html
- Bookmark table of contents and add content.
- assignments_nav.html, project_proposal.html, project_final.html

Uploading Files on Server

Testing files on local server

- Open MAMP, click Apache Server
- localhost/filename.html in browser
- Once satisfied, upload to WinSCP

IITD vs Epizy

- Epizy size limit per file of 10 MB (not bad)
- With Epizy, website is publicly available
- IITD website on IITD Wi-Fi only (B. Tech. and Masters)

Epizy account creation

- <https://infinityfree.net/>, Client area, register
- Click on Control Panel and approve.

Understanding CSS

CSS examples

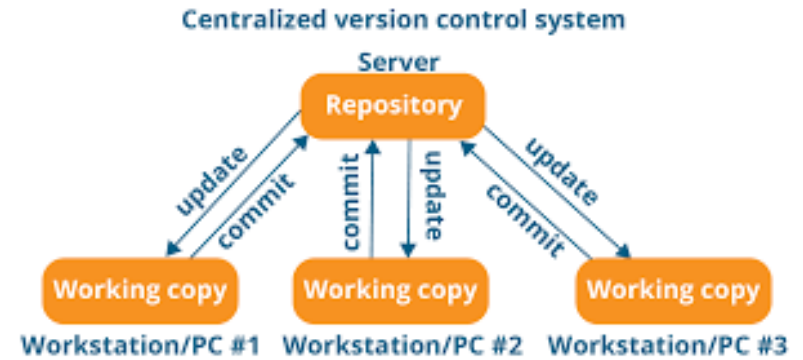
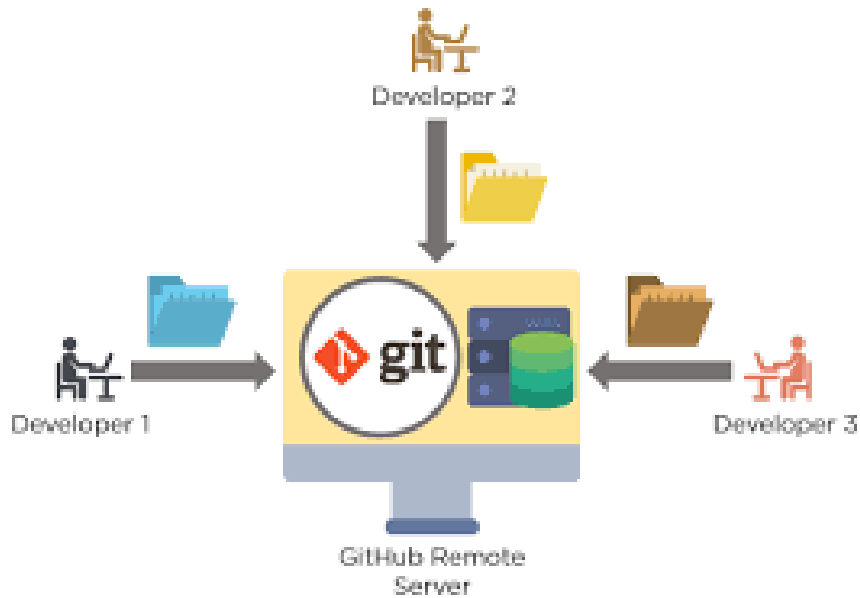
- Style tag
- CSS Syntax
- CSS Selectors
- CSS Colors
- CSS Backgrounds
- CSS Margins
- CSS 2D Transforms

Relating to HTML+CSS website template

- [Link HTML and CSS](#)
- format.css
- [href attribute](#) for bookmarking
- index2.html, about.html, assignments_nav.html
- [HTML + CSS template example](#) View source for this assignment

Any HTML+CSS website template

- [Free CSS templates](#)
- Page 7, Aqueous
- header, footer – change in every document
- [Fab on HTML+CSS](#) [Other templates](#)
- [Bootstrap](#)



Version control

- For version control, you can use www.github.com
- [My git website](#), [Github code](#)
- [Git tutorial](#), [Gitbash](#), IITD proxy?

HTML + Javascript

Javascript examples

- Change HTML content, HTML attribute, CSS style
Let's try!
- Javascript in head, body, external file, external folder
- Script tag, Javascript function, comments, variables, Javascript dates (Display a clock)

Games in Javascript

- [Zodiac sign Finder](#)
- [Reflex tester](#)
- [Other games](#) Let's get our feet wet.

Other free Javascripts

- [Text effects](#), Neon lights text, [Falling Text](#)
- Mouse Cursor Effects
- [Background effects](#)
- Mix codes.
- Learnt a bit of Javascript.
- View source code in different browsers
- Learnt about free code on internet, Stand on shoulders of giants, Give credit.

HTML



CSS



JS





Website Design for Course Mgmt

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- [HTML + Javascript](#)
- Image and video compression
- Video editing.

Compressing images for the web

- Resize them in Paint, ImageJ, GIMP
- Web.whatsapp.com for compressing images
- <https://compressjpeg.com/> to batch compress them
- Download imagemagick
- Steps:
 - 1) Create a folder, say compress_images (Do it in a folder where permissions to write there: C:/Users/jay)
 - 2) On command prompt: cd compress_images
 - 3) Place images to be compressed in this folder.
- Commands to compress images one by one:
magick -quality 20 home_web.jpg home_web_cmp.jpg
magick home_web.jpg -resize 20% home_web_resized.jpg



Batch compress images with Imagemagick

Advice to make a bat file (say
compress_all.bat)

Batch file contents:

```
@echo off  
for %%f IN (*.jpg) DO magick -quality 20 "%%f" "%%f"
```

compress_all.bat file place in C:/Windows or
System Path.

Run compress_all in the folder where images are
kept.

```
magick mogrify -format jpg *.png
```

```
magick mogrify -format jpg *.jpeg
```

Image compression of 10 times of more can
be achieved. Important for web.

Creating and uploading videos

- ffmpeg (downloaded with imagemagick)
[Advice1](#) [Advice2](#)
- `ffmpeg -i input_file.extension -b:v 1024k output_file.extension`
- Create a youtube account – uploading videos, embed videos in website template



Video editing

- Important for project presentations
- [Storyboard](#), script, voiceover.
- Download Kdenlive video editor
- [Example](#) [Example2](#) [Example3](#)
- [Powerpoint for animation](#) (Thanks to Gouri)
- [Video in video](#)
- [Inshot](#)



Adobe Premiere Pro CC

TITLE: EASY LICENSING by SONGIFY

FRAME 01



ACTION

POLICE CAR SPEEDS TOWARD CAMERA

Time Duration

VOICEOVER

EVER WANTED TO USE YOUR FAVORITE SONG AS A SOUNDTRACK?

FRAME 02



ACTION

POLICE ARRIVES AT YOUR HOUSE.

VOICEOVER

COP: YOU'RE COMING WITH ME BUSTER.
HERO: WAIT, WHAT?

FRAME 03



ACTION

COP SPEAKING

VOICEOVER

YOU SHOULD HAVE USED SONGIFY!

Summary

- Website design and development (Sublime text)
- Local testing of the website (MAMP)
- Uploading files on a web server (WinScp, epizy)
- Worked with HTML or HTML-CSS template for the class
- Compressing images and videos (imagemagick)
- Video editing (Kdenlive)
- Advanced learning (Fab Academy [Notes](#) [Video](#))

I just need
the main ideas



Assignment 1



- [Assignment](#)
- Suggest to document as you work from now on.

Announcements



- Skillsets wise most of you are at beginner level for the contents of this course so we would carry everyone along.
- Announcements on Moodle + WhatsApp group for now.
- Thanks for filling the google form. Others please fill too.
- Those who are registered but not on WhatsApp group, please share your WhatsApp number.

