COMP 307 Assignment 2

Introduction

In this assignment you will create a web page (consisting of an HTML file and a collection of CSS, JavaScript, image files) that introduces yourself to the rest of the class. This will allow you to get to know your classmates, so you can find collaborators more easily for the upcoming group project. After the assignment deadline, I will assemble everyone's webpage into a single package and distribute it to everyone in the class.

Meta tags

Start by reading the Appendix below to learn about the 3 topics you can choose from for your final project.

You **must** add 3 meta tags inside the head element to indicate three pieces of information about yourself.

Project topic preference

Add **one** of the following tags to indicate your project preference:
<meta name="project" content="vodchat">
<meta name="project" content="game">
<meta name="project" content="marketplace">

Please do not pick the project topic that you think is the least amount of work. Pick a topic that interests you. I will later provide additional project requirements, and *I will do my best to ensure all 3 topics involve the same amount of work*.

You can change your mind about the project topic later, once you form a group with other classmates. What you indicate here is not considered a commitment to a project topic. It is just a preference.

Front-end, backend preference

The front-end involves coding HTML, CSS, and JavaScript, which all run in the browser. The back-end involves writing server-side code using the Django framework to generate dynamic resources.

Add **one** of the following tags to indicate whether you prefer to work more on the front-end or more on the back-end.
<meta name="preferred-role" content="frontend">
<meta name="preferred-role" content="backend">
<meta name="preferred-role" content="indifferent">

Morning person or night person

Indicate whether you are a morning person (likes to get up early), or a night owl (likes to work late at night).

Add **<u>one</u>** of the following tags
<meta name="work-schedule" content="morning">
<meta name="work-schedule" content="night">

Webpage format

Your web page needs to have the following content.

Profile

In the top section of your webpage, include:
- Your name
- A profile picture. If you don't wish to put a picture of yourself, feel free to use any picture as your profile picture
- A short description about yourself (i.e. career aspirations etc.)
- Your preferred method of contact so other classmates can contact you

Project Idea

Just below the profile section, indicate the project topic you prefer to work on, and write a concrete project description under this topic. For each project topic, you have some freedom to make some decisions about the project specifications, as indicated in the Appendix. Take this opportunity to brainstorm a bit and propose some ideas for your project. Also take this opportunity to discuss any technology or technical approach you think would be useful for achieving your proposed project idea, to the extent that you can. Note that for the project, the backend must be implemented using the Django framework, but for the frontend, you are free to use any library or framework.

An important goal of this section is to help you find other classmates who have similar ideas or interests for the course project. So please be as thoughtful as you can here and try to be concrete. Once you form your group, your project topic, as well as your project specification may change. This is a brainstorming activity. You are not making any commitments here.

Extra content

Below the project idea section, feel free to include any additional content that you want your classmates to see.

Additional requirements

Your webpage must make use the following tags, in addition to the meta tag as mentioned above. Feel free to use them where ever you think would be appropriate on your web page.
- <title>

- `<img>`
- `<ul>`, `<li>`
- `<header>`, `<article>`, `<section>`, `<footer>`
- `<p>`
- `<table>`, `<tr>`, `<td>`

You must also style your HTML elements using CSS, and you must make use of the following CSS properties. Again, feel free to use them where ever you think would be appropriate.

- padding, margin
- background-color
- font-size, font-family

You must write good quality code and follow good practices regarding the coding style as described here. You should assume that you will always be graded based on the quality of your code – for this assignment and for all future assignments and projects.

What to submit

Submit a single zip file onto MyCourse that contains the following

- index.html – this html file is your web page. **Do not include any other .html files**
- Any images index.html uses
- Any external CSS or JavaScript files index.html uses (optional)

Appendix: Project Topics

Topic 1: Chat for Video on Demand (VOD)

Key requirements:

- Allow users to upload videos that can be viewed by other users
- Allow any user to *attach* a comment to a specific time during video playback
- When any user watches a video, comments will appear at the time they are attached
- Allow users to upvote/downvote comments, which affects the way comments are displayed (i.e. highly upvoted comments are displayed more prominently)

You are free to:

- Decide how the comments are displayed. Twitch shows comments on the right, but this is not the only way to do it. For example, the Chinese video platform https://www.bilibili.com/ overlays comments on top of the video, and scrolls them across the video as the video plays

Relevant technology:

- Video API: https://developer.mozilla.org/en-US/docs/Web/HTML/Element/video

Topic 2: Multiplayer Game in the Browser

Key requirements:

- Use canvas or SVG for rendering game graphics
- Allow two or more users to play together over the internet (the two players are not using the same computer, so their game state needs to be synced across the network)

- Allow game progress to be saved
- Use websocket to ensure efficient communication of the game state

You are free to:

- Design your game
- Design how progress saving works (progress only saved for one primary player vs save state involving multiple players)

Relevant technology:

- Canvas: https://developer.mozilla.org/en-US/docs/Web/API/Canvas_API
- SVG: https://developer.mozilla.org/en-US/docs/Web/SVG/Element/svg

Topic 3: Online marketplace for buy and sell

Key requirements:

- Allow any user to upload products to sell, modify listing information, track inventory count as items get purchased
- Allow any user to buy products that are in stock
- Integrate with 3rd party API for payment processing (i.e. Stripe or Paypal)

You are free to

- Decide what kinds of product users may buy/sell – it could be very general like Ebay or focused on a specific type of product. If you choose a specific type of product, feel free to add features that cater your marketplace to that kind of product (i.e. a marketplace specifically for computers might allow seller to enter attributes such as CPU, memory size, and brand into the listing)