CSE1500 – Web Technology

Assignment One: HTML and CSS

Learning Activities and Goals

This assignment intends to use your front-end development skills. You will develop a web-based system or website using HTML and CSS (only basic CSS, and you don't need to use Javascript or JQuery at the moment). To do well, I urge you to review the class content.

Note: For this assignment, you must implement the first FOUR requirements (2 for each group member). We will evaluate you against these requirements. You can implement other requirements (in italics) if you want, but we will not assess you against these requirements. For the final assignment, you must implement the remaining requirements as well. We will ask you which ones to implement later.

Also, all the signup pages must include the following fields and other fields specific to the projects (you have to think project specific fields yourself based on requirements). The standard fields you must include are user ID, password, name, address, country, ZIP code, email, sex, language, and about/bio.

Project Catalog

Here are some project ideas from which you can choose. We feel that each of the following projects requires the same amount of time and energy, although it is difficult to quantify this in practice.

Project 1: Mentoring application

You will build a mentoring app that enables youth and students to connect with online mentors for assistance with various issues, such as mental stress or academic support.

1. There should be a sign-up and sign-in feature for both mentors and mentees.
2. The mentors can provide available slots for meetings that will be displayed next to their profile picture when a mentee searches for a mentor (for example, available on Thursday at 9:00 AM and Friday at 10:00 AM).
3. Mentees should be able to search for mentors based on their skills or job category, company, review scores, and location.
4. The mentees will first book the meeting from the website. The booking will be confirmed when the mentors accept the meeting request. In the meeting request, the mentors will enter the purpose of the meeting and select the available dates (as mentioned in point 2).
5. *This project's mode of communication between mentors and mentees is a simple text-based chat.*

6. *Mentees will receive reward points after each successful meeting.*
7. *Mentees can vote for mentors (upvotes) and provide reviews for them (score out of five and description).*
8. *The application will send a simple push notification 15 minutes before the meeting in a browser.*

Project 2: Goal-setting application

In this project, your primary responsibility will be to design a web-based application that enables users to set goals to achieve their targets.

1. There will be a sign-up and sign-in feature
2. Users should be able to create a goal using a SMART framework (see it here: https://en.wikipedia.org/wiki/SMART_criteria). For each goal, a user can write the name of the goal, the description related to the SMART, and the due date.
3. They should be able to see the list of goals that have already been created.
4. Once they have set a specific goal, they should be able to break it down into achievable targets. The targets can be numeric (e.g., drink eight glasses of water), boolean (e.g., when completion can be described in simple "done/not done" terms), monetary (e.g., saving X$ of money per week), or task-related.
5. They should be able to modify, update and delete their goals.
6. *They should be able to see the progress of their goals using a simple dashboard (you can use a progress bar, Gant charts, burn-down charts, or any other suitable formats).*
7. *User should be able to set notifications (notification's text and timings). In our case, you can send simple alerts on the browser application. We will learn about the notifications later (in this assignment, you dont need to code notifications, except the user interface, if you think it is the most important UI element).*

Project 3: Car-sharing application

In this project, you're going to implement a Car-sharing website that will allow users around the world to share car journeys.

1. There will be a sign-up and sign-in feature for drivers and passengers.
2. Passengers should be able to enter the start and end destinations (for example, Eindhoven to Delft) in the main interface.
3. Once the start and the destination places are entered, the system needs to show the path on Google Maps.
4. Once the passenger clicks on the search button, the website will look for all trips going from Eindhoven to Delft (for all trips going from any location within 10 KM radius from Eindhoven to any location within a 10-mile radius from Delft). Since this is an HTML/CSS assignment, you will hard code these, but in the future, we will learn how to retrieve the data and display it on the page dynamically.
5. *The drivers can add their trips (regular or one-off), modify, update and delete them.*

6. *The passengers can also save their trips to access them later. They can also update the trips or delete them.*
7. *The passenger should be able to change the radius tolerance in KM if they like.*
8. *The system should also display a list of available cars, including the departure and arrival information, a picture of the vehicle, distance in KM, the exact date and time of departure, and the total number of seats available and price per seat. Some trips can be "regular" and some can be "one-off".*
9. *The passenger should be able to see the driver's information (e,g, gender, phone number, etc.). The driver's information will be shown only to registered users.*
10. *The system should be able to process payments (again in a sandbox setting)*
11. *The passenger should be notified of a trip through a notification an hour before the ride.*

Project 4: E-commerce website

For this project, you will implement any e-commerce platform that enables people to buy or sell items online.

1. Users (both suppliers and customers) should be able to register and sign in securely.
2. Sellers can place items in a system by entering item details (name, description, quantity, price per item, etc.) under specific categories (books, films, etc).
3. Customers must have an adequate search mechanism for easy and quick access to particular products (e.g., filtering based on suppliers, price range, and reviews/star ratings).
4. There will be a shopping cart so that customers can add a specific number of items and check out. For this assignment, you dont need to implement the checkout process.
5. *Customers should be able to view their past orders.*
6. *Once the order has been placed, you can send a dummy date and time to customers and send a notification one hour before the delivery of the item (on a browser)*
7. *Customers and suppliers should be able to update their details, such as addresses.*
8. *You need to show strategic data and graphs for administrators and suppliers about the popular items in each category and age group (keep this simple!).*
9. *There will be a feedback mechanism (descriptive reviews and star ratings) so that customers can give feedback on the product or service they have purchased.*

Deliverables

List of Requirements

After choosing a project, the following step is to sit down with a classmate and list the requirements in a table with classmates' names who will complete them. In simple words

Requirement Number	Description	Contributor Name

Site Map

The next step is to think of your application as a (UX) site map (it is different than an XML or HTML-based site map that Google uses to crawl websites). A user experience (UX) sitemap is a map of the various pages on your website. It's sometimes called an information architecture (IA) diagram or content outline. You can get inspiration by looking at different types of site maps: https://octopus.do/sitemap/resource/sitemap-template.

You can use any online tool that you love. Here is a list of a few tools:

1. https://octopus.do/
2. https://lucid.co/
3. https://miro.com/templates/sitemap/

Wireframing

Next, you must design your website before coding it in HTML and CSS. In this deliverable, you need to create your main web pages either using paper and pen techniques (taking snapshots afterward) or to use digital tools, such as Balsamiq (https://balsamiq.com/), Figma (https://www.figma.com/), Excalidraw (https://excalidraw.com/) or others.

Here are some nice videos that explain how to create a wireframe:

- https://www.youtube.com/watch?v=qpH7-KFWZRI
- https://www.youtube.com/watch?v=KdfO_e0yK-g
- https://www.youtube.com/watch?v=PmmQjLqJQIY

The Value of Wireframes [adopted form: http://bit.ly/3EZc5Ak]

Wireframes serve multiple purposes by helping to

- Connect the site's information architecture to its visual design by showing paths between pages
- Clarify consistent ways for displaying particular types of information on the user interface
- Determine intended functionality in the interface
- Prioritize content through the determination of how much space to allocate to a given item and where that item is located

Actual Website

Now you will code your website using HTML and CSS. You don't need to use Javascript at the moment. We will test your skills in Javascript in the next assignment. Here is an excellent video that explains how to structure an HTML website and various ways you have for defining a file path to reference some resources in your web documents: https://www.youtube.com/watch?v=G5Ozk5ahXrg

Assignment submission

1. Please submit your assignment in a **single ZIP** with the name of your project containing all the deliverables (requirements table, sitemap, wireframes, and actual web design in HTML and CSS). Please create separate folders for each deliverable within the main folder.
2. Also, convert your code and deliverables into a **single PDF file** so that the teaching team can assess them using a software tool.
3. At the root of your primary folder, **add a text file containing the link to your live website** hosted on the GitHub pages.

Good Luck :)