CSE479
Web Programming

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Exercise

Topic 1-5

Exercise 1

- Find out the semantics and structural markup from the following code snippet. How can you use those tags to develop your front-end.

```html
<!DOCTYPE html>
<html>
<body>

<h1> About quotations: </h1>
<p>Here is a quote from WWF's website:</p>

<blockquote cite="http://www.worldwildlife.org/who/index.html">
For 60 years, <u> WWF </u> has worked to help people and nature thrive. As the
world's leading conservation organization, <u> WWF </u> works in nearly <b>
<i>100 </i> </b> countries. At every level, we collaborate with people around
the world to develop and deliver innovative solutions that protect communities,
wildlife, and the places in which they live.
</blockquote>

<img src=
"https://images.ctfassets.net/f7mllxtajclq/2XKsrpkvmULVvimNYZzy4l/d12fb0690868d
85f0a9b578190fb5f55/WWF_LandingPg.png" height=250px weight=300px>

</body>
</html>
```

About quotations:

Here is a quote from WWF's website:

> For 60 years, <u>WWF</u> has worked to help people and nature thrive. As the world's leading conservation organization, <u>WWF</u> works in nearly *__100__* countries. At every level, we collaborate with people around the world to develop and deliver innovative solutions that protect communities, wildlife, and the places in which they live.

Exercise 2

- Write a code to create the following list using html-

Sashimi
  Sliced raw fish that is served with condiments such as shredded
  daikon radish or ginger root, wasabi and soy sauce
Scale
  A device used to accurately measure the weight of ingredients
  A technique by which the scales are removed from the skin of a fish
Scamorze
Scamorzo
  An Italian cheese usually made from whole cow's milk (although it
  was traditionally made from buffalo milk)

My Favorite Cartoon series and their characters:

- Simpsons:
  - Homer
  - Marge
- Family Guy:
  - Peter
  - Lois

Exercise 3

Use three semantic markups in the code snippet. Among those, one should help to preserve the spaces of the paragraphs

```
<!DOCTYPE html>
<html>
<body>
<p>
This paragraph
contains a lot of lines
in the source code.
</p>

<p>
This paragraph
contains      a lot of spaces
in the source      code.
</p>

<p>
The number of lines in a paragraph depends on the size
of the browser window. If you resize the browser window,
the number of lines in this paragraph will change.
</p>
</body>
</html>
```

Exercise 4

In the code snippet, we can see there are two paragraphs. However, when we execute the code, it shows that due to applying some unknown CSS code to the HTML, the appearances of those two paragraphs are different. **Explain** the reason behind different appearances in the two paragraphs. **Provide** a solution so that we can add some more properties to both paragraphs. If we want to add a third paragraph having a similar attribute of the second paragraph, how can we do that?

```html
<body>

<div>
  <h1>text formatting</h1>
  <p id="par1">This text is styled with some of the text formatting properties. The
heading uses the text-align, text-transform, and color properties.
  The paragraph is indented, aligned, and the space between characters is specified.
The underline is removed from this colored
  <a target="_blank" href="tryit.asp?filename=trycss_text">"Try it Yourself"</a> link.
</p>
  <p id="par2"> This is another paragraph </p>
</div>

</body>
```
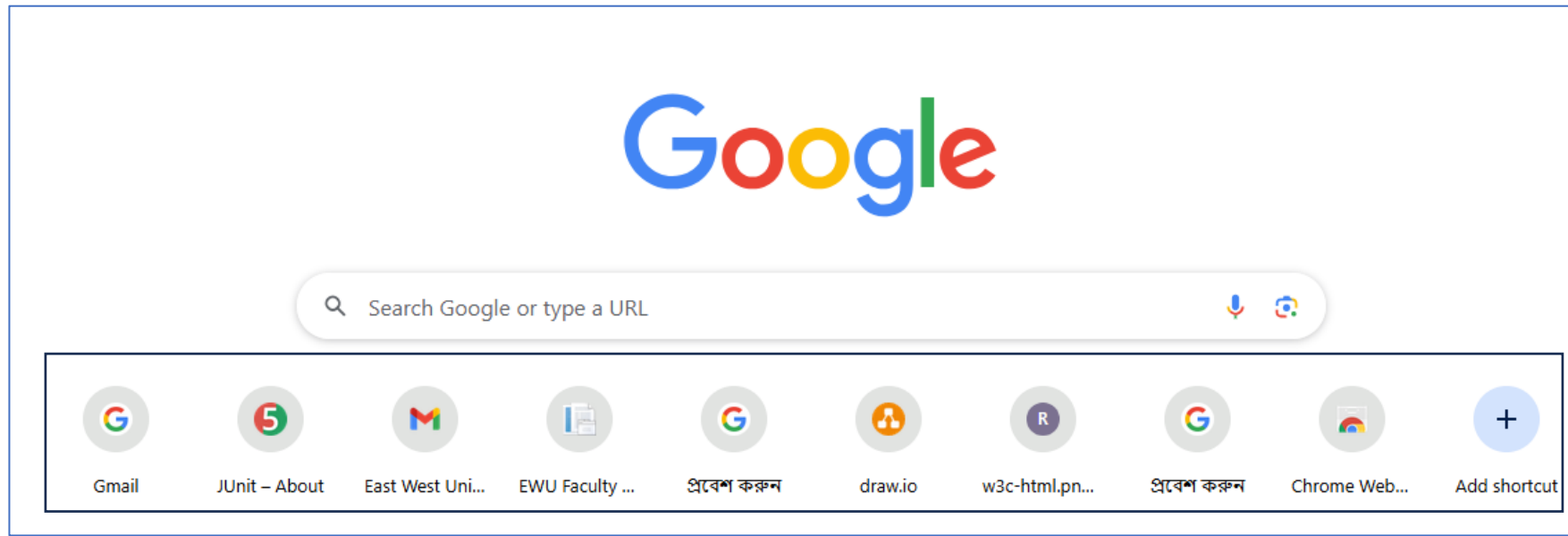
Exercise 5

The following image is a screenshot of the Google homepage. However, if someone clicks on the images marked by a rectangle, the browser redirects the page to some specific webpages. How can you implement this code? **Explain your code plan.**

Exercise 6

Write a code to create the following table using html.
If we want to add a border, what should be your plan?

A basic HTML table

Company	Contact	Country
Alfreds Futterkiste	Maria Anders	Germany
Centro comercial Moctezuma	Francisco Chang	Mexico

Group	1	2
ID	2020-1-60-999	2020-1-60-888
	2020-1-60-998	2020-1-60-887
	2020-1-60-998	2020-1-60-886

Exercise 7

Write a code to create the following form using html-

Imagine a website for e-commerce (Like Daraz), where every customer needs to create an account to be a registered user. One must provide account info(security question, password, email id). There are some personal info(date of birth, gender, name, NID) which may or may not be provided. Finally, they must provide contact info(postcode, current address, mobile no, city) to complete the form. Now **Design** a form using the appropriate level, hints, input fields, and appropriate input flow. Do not forget to provide appropriate elements in the margin that complies with the website GUI design.

Exercise 8

Write a code to create the form using html-

Student Proforma

My favorite Web language:

- ○ HTML
- ○ CSS
- ○ JavaScript

My favorite programming task:

- ☐ Front-End Development
- ☐ Back-End Development
- ☐ Database Development

My current passion: Academia ▼

Academia
Industry
Research
Entrepreneurship

My Name:

Mr. John Doe

My ID:

2025-1-60-123
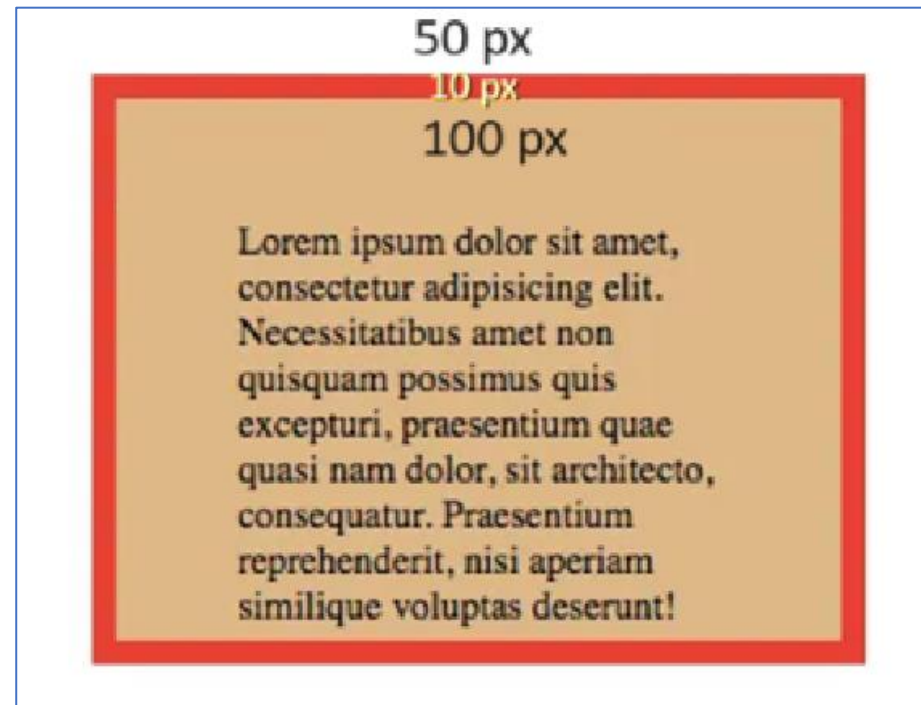
Submit Reset

Exercise 10

The image on the right is a representation of a webpage. **Apply** your idea of the Box Model in CSS to render the following output. Note that, the measurement is provided along with the image. You need to provide the necessary CSS code.

Exercise 11

In the screenshot, we can see different styles in the item markers of the lists. How can we implement different style in the same tag? Explain. It would be nice if you provide any example as well.

My Favorite Drinks:

In unordered lists:

- ○ Coffee
- ○ Tea
- ○ Orange Juice

- ▪ Coffee
- ▪ Tea
- ▪ Orange Juice

In ordered lists:

  I. Coffee
  II. Tea
  III. Orange Juice

  a. Coffee
  b. Tea
  c. Orange Juice

Exercise 12

Check the following output:

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Enter your name: [   ] [transform]

When you "transform" button, a function is triggered to transform your name to upper case. It will also greet you.

It will react like this after you enter the input-

CSE479 Midterm Exam

Enter your name: [NTN   ] [transform]

When you "transform" button, a function is triggered to transform your name to upper case. It will also greet you.

Hi NTN !!!

Good Afternoon! Hope you are acing your CSE479 mid!

Now **write** your answer on achieving this kind of changes in HTML element using JavaScript.

Exercise 13

Read the following code snippet carefully-

```javascript
class Date{
    constructor(amount, unitPrice){
        this.amount = amount;
        this.unitPrice = unitPrice;
    }
    calculateDatePrice(){
        console.log(`Total price of ${this.amount} kg date is: BDT `);
    }
}
```

Create a `PremiumDate` class that inherits from Date. Be sure to add a `discount` property and a `calculateDiscount` method to this new class where you will calculate the price after the discount and log the output. Create another class named `RegularDate` and override the method `calculateDatePrice` from the parent class so that it shows the total price in the log. Show the use of `getter` and `setter` in the new classes. Now add the codes to show the outputs of 6 kg `PremiumDate` having a unit price of BDT 1800 and 10 kg `RegularDate` having a unit price of BDT 850.

Exercise 14

Convert the following function into IIFE-

```javascript
function calculateCGPA(CGP, credit) {
    let sumCGP = 0.0;
    let sumCr = 0;
    for (var i = 0; i < CGP.length; i++) {
        sumCGP += CGP[i]*credit[i];
        sumCr += credit[i];
    }

    return sumCGP / sumCr;
}

let value = calculateCGPA([3,3.5,4],[3,3,4]);
console.log(value);
```

Exercise 15

Convert the provided function into an anonymous and arrow function.

```
4 ▾ function findNegPos(number){
5 ▾     if (number >= 0) {
6 ▾         if (number == 0) {
7               console.log("The number is zero");
8 ▾         } else {
9               console.log("The number is positive");
10          }
11 ▾    } else {
12          console.log("The number is negative");
13      }
14  }
15
16  findNegPos(-12);
```

Exercise 15

The provided code snippet showed the use of "prototype" in JavaScript. So, write down the console output of the code snippet.

```javascript
function Person(first, last) {
    this.first = first;
    this.last = last;
    this.fullName = function () {
        return this.first + ' ' + this.last;
    };
    this.fullNameReversed = function () {
        return this.last + ', ' + this.first;
    };
}
const simon = new Person("Simon", "Willison");
console.log(simon.greet());

Person.prototype.greet = function () {
    return this.first + ' says hi.';
};
console.log(new Person('Delvin', 'Thomas').greet());
```

Exercise 16

Suppose you need to access the second and third "div" to add a new "p" element based on some real-time data. However, you only know the id of the first "div". Explain how you can implement the solution.

```
<div id = "div1">
  <h2>London</h2>
  <p class = "p1">London is the capital city of England.</p>
  <p>London has over 13 million inhabitants.</p>
</div>

<div >
  <h2>Oslo</h2>
  <p>Oslo is the capital city of Norway.</p>
  <p class = "p1">Oslo has over 600.000 inhabitants.</p>
</div>

<div>
  <h2>Rome</h2>
  <p class = "p1">Rome is the capital city of Italy.</p>
  <p>Rome has almost 3 million inhabitants.</p>
</div>
```