< CS Discoveries 2018   /   Web Development

Lesson 6: Lists

Web Lab

Overview

Students are introduced to ordered and unordered lists in HTML and work through a few levels in which they use the <ul>, <ol>, and <li> tags. They then go back to their project, where they add a new HTML page. Inside the new page, they write the HTML to display a recipe, top ten list, or any other content that uses the new tags that they have learned.

Purpose

This lesson introduces list elements, which are different from the previous elements in that they involve nested tags. Students should understand that the list item elements (
) go inside the list elements (or).

Students also continue to work on their projects, adding a new HTML page. Students are free to choose the content of this page, but it should include some type of list. Right now there is no way for users to navigate from one project page to another, but students will learn more about how to link the pages together in Lesson 9, right before they publish their project.

Agenda

Warm Up (10 minutes)
    Quick Share
Activity (40 minutes)
    Web Lab: Lists
Wrap Up (10 minutes)
    Journal

View on Code Studio

Objectives

Students will be able to:

- Use the <ol>, <ul>, and <li> tags to create ordered and unordered lists in an HTML page.
- Create and name a new HTML page.

Preparation

☐ Have student journals (or project sketches) ready if they will use them to generate ideas for their lists page.

Introduced Code

- `<ul></ul>`
- `<ol></ol>`
- `<li></li>`

Teaching Guide

Warm Up (10 minutes)

Quick Share

🎤 *Remarks*

> In the last lesson, we looked at different types of content that we would or would not want to share with the world. Today you'll create an entirely new page for your project, and you'll need to think about the content of that page, but you'll also be using a new structure: lists.

Prompt: Take a few minutes to brainstorm some content that you would like to share with the world that you think could be structured as a list.

💬 **Discuss:** Students should brainstorm individually, then share with partners, then finally share with the whole class.

Prompt: Sometimes we use numbers to order our lists. Which of these lists do you think should be numbered, and which should not be numbered?

Discuss: Allow students to share their ideas for when numbering is appropriate.

🎤 *Remarks*

> In HTML, there are two types of lists, ordered lists, which have numbers, and unordered lists, which have bullets. We're going to learn how to make both types of lists today so that you can use this structure in your project.

💬 Discussion Goal

Goal: The goal of this discussion is to allow students some time to think about how lists are used, and to think about the difference between ordered and unordered lists before seeing them in HTML. Some possible lists students might come up with might be lists of their favorite things, top 10 lists, a shopping list, etc.

When students are discussing whether lists should be ordered or unordered use examples to highlight the difference. For example a list of finishers in a race should probably be ordered, while a grocery list probably does not need to be. Return to this discussion later in the lesson if need be.

Activity (40 minutes)

Web Lab: Lists

💡 **Group:** Place students into pairs.

Circulate: Helps students as they work through the first set of levels. Keep track of when pairs make it to Level 5.

💡 Teaching Tip

Pair Programming: More on Pair Programming can be found in the **Computer Science Discoveries Curriculum Guide**.

🖥 Code Studio levels

Lesson Overview 🖥   Student Overview

Lists   🌐 2   🌐 3   🌐 4   ▦ 5   *(click tabs to see student view)*

Lists in HTML 📖   Teacher Overview   Student Overview

View on Code Studio

Review

Bring the class back together after all students have completed the previous level. You can track their progress in your Teacher Panel for that level. Review what students have learned about lists in the level progression. The previous level provides an opportunity to review both types of lists and how some common errors can affect how the list is displayed.

Students can also use this time to update their HTML tag lists with `<ul>`, `<ol>`, and `<li>`.

Expanding Your Website   📄 7   *(click tabs to see student view)*

Expanding Personal Website   🌐 8   *(click tabs to see student view)*

Wrap Up (10 minutes)

Journal

Prompt: Have students update the "HTML Tags" page in their journals with the tags they learned in this lesson.

Prompt: Have students reflect on their development of the **five practices of CS Discoveries** (Problem Solving, Persistence, Creativity, Collaboration, Communication). Choose one of the following prompts as you deem appropriate.

- Choose one of the five practices in which you believe you demonstrated growth in this lesson. Write something you did that exemplified this practice.

- Choose one practice you think you can continue to grow in. What's one thing you'd like to do better?

- Choose one practice you thought was especially important for the activity we completed today. What made it so important?

Standards Alignment

View full course alignment

CSTA K-12 Computer Science Standards (2017)

▶ **AP** - Algorithms & Programming

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