

HTML Structure

Textbook

HTML Structure

How is a website built?

A website is an HTML file, meaning that the file ends in .html. Just like a person has a head and body, an HTML file has a [head](#) and [body](#)! The head is at the top, then the body.



The main tags on an HTML page are:

`<html> </html>` These tags wrap all remaining HTML code.

`<head> </head>` The [head](#) tags are the first tags placed inside the `<html></html>` tags. The **head** contains elements that don't show on the page, such as the title (as seen in the browser tab). The head also contains links to other CSS files, Javascript files, and other resources

`<body> </body>` The [body](#) tags hold most of your code—especially code you want displayed in the browser.

- Quick tip: As you browse developer forums, you may see references to something called DOM

(Document Object Model). This is a quick way to understand the order and structure of your code.

Coding HTML is like building a sandwich! The opening and closing tags are the bread of the sandwich and everything that goes in between tags is like the meat and cheese.

Here's an example of a basic website HTML structure (without notes):

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8     <h1>Hello World!</h1>
9   </body>
10 </html>
```

Try it!



Indenting

[Indenting](#) means pressing the tab key. Before we get any further, take a minute to look at the indented formatting used on the code above. Notice that some of the HTML tags are indented more than others. This is done to help you and others understand your code.

In HTML, indenting is important for the programmer, not the computer. The computer will still understand your code if you put everything on the same line, but this would make it hard for you and other programmers to read and understand.

Get in the habit of indenting the correct way. Organizing your code to make it readable is a practice used in every coding language.

Child Element/Parent Element

HTML has tags that are called [child element](#) and [parent element](#). A child element is a tag that is inside another tag. The tag that has other tags inside of it is a parent element.

Each time you [nest](#) a child HTML element inside a parent HTML element, you place it between the opening and closing tags of the parent element.



Checkpoint

HTML Structure

Create an HTML document similar to the example shown. Use correct HTML structure with doctype, html, head, and body tags.

Inside the body section add **two header tags** to fill up your webpage.

Requirements:

- HTML Structure with only one Doctype Tag (just an opening).
- Head tags.
- HTML tags and Body tags.
- Header tags inside body.
- HTML Structure with only one complete html tag (opening and closing).
- HTML Structure with only one complete body tag (opening and closing).

Questions (10)

1. What are the three main tags in an HTML file?

MULTIPLE CHOICE

Choose the correct answer:

- A. <head><body><foot>
- B. <html><title><body>
- C. <html><body><foot>
- D. <html><head><body>

2. How do you indent a piece of code?

MULTIPLE CHOICE

Choose the correct answer:

- A. Press the enter key.
- B. Press the tab key.
- C. Press the delete key.
- D. Press the shift + return key.

3. Which tag contains code that links your HTML file to other files like CSS or JavaScript?

MULTIPLE CHOICE

Choose the correct answer:

- A. <head>
- B. <body>
- C. <foot>
- D. <doctype>

4. What makes a piece of code a child of a parent element?

MULTIPLE CHOICE

Choose the correct answer:

- A. A child element is between the opening and closing tags of its parent.
- B. A child element has the same tagName as the parent element.
- C. A child element is on the same line as the parent element.
- D. A child element is coded below the parent element.

5. What is the purpose of the <head> tags in an HTML page?

Choose the correct answer:

- A. They display content on the page.
- B. They hold most of the code for the website.
- C. They contain links to CSS and JavaScript files.
- D. They define child elements.

6. Why is it important to indent HTML code?

Choose the correct answer:

- A. It helps the computer understand the code.
- B. It makes the code more beautiful.
- C. It helps programmers and others read and understand the code.
- D. Reducing file size.

7. What do child elements and parent elements refer to in HTML?

Choose the correct answer:

- A. The order in which elements appear in the code.
- B. Elements that are nested inside other elements.
- C. Elements with a higher precedence in styling.
- D. Elements that have special attributes.

8. Debug the following code:

Code to Debug:

```
1 <!DOCTYPE html>
2 <html>
3   <body>
4
5   </body>
6
7   <head>
8     <h1>Hello World!</h1>
9   </head>
10 </html>
```

9. Debug the following code:

[DEBUG CODE](#)

Code to Debug:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <h1>Hello World!</h1>
5   </head>
6
7   <body>
8
9   </body>
10 </html>
```

10. Debug the following code:

[DEBUG CODE](#)

Code to Debug:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8     <h1>Hello World!</h1>
9   </body>
```

Challenges (7)

1. Website Paleontology

Paleontology is the study of ancient fossils. Setting up your website structure is a lot like putting all the bones in place. The bones need to be in place before the rest of the website can be filled out. Like an archaeologist putting a dinosaur skeleton together, they need to get the bones in place before they can see what the animal used to look like.

If you are using Voyage, make a new file and save so that your previous code doesn't go away!

With this clean slate, put the "bones" in place. If you are using Launchpad, continue on to the requirements below.

Include your `<!DOCTYPE html>` tag, `<html>`, `<head>`, and `<body>` tags.

Inside the `<body>` tag, include **two header tags** that include information about dinosaurs.

Make sure to use the word `dinosaurs` somewhere in one of your headers.

Style them with **font-family** and **color** styling.

Example Output:

Dinosaurs are the kings of reptiles!

They lived millions of years ago.

Requirements:

- Structure the website with doctype, html, head, body, and header tags.
- Include styling for your two header tags.
- Include the word `dinosaurs` in one of your header tags.
- HTML Structure with only one Doctype Tag (just an opening).
- HTML Structure with only one complete html tag (opening and closing).
- HTML Structure with only one complete body tag (opening and closing).

2. Pirate Website Structure

Let's clean up and organize some code! Create a new file or erase your previous code.

Include the appropriate structure tags (**doctype**, **html**, **head**, and **body tags**). Put the following tags inside the website in the appropriate places.

```
<h3>Pirates of the Dark Sea</h3>
```

```
<h4> They patrol the shores to guard their precious treasure. </h4>
```

```
<h4>Sailors be warned!</h4>
```

Make sure to style your headers in something that gives the idea of a pirate!

Example Output:

Pirates of the Dark Sea

They patrol the shores to guard their precious treasure.

Sailors be warned!

Requirements:

- Correct HTML structure.
- Include the heading tags from the instructions.
- Style each heading tag to give the idea of a pirate.
- HTML Structure with only one Doctype Tag (just an opening).
- HTML Structure with only one complete html tag (opening and closing).
- HTML Structure with only one complete body tag (opening and closing).

3. Atlantis Website Structure

Let's put the correct structure into this website about Atlantis. Create a new file. In the new file, include the appropriate structure tags (**doctype**, **html**, **head**, and **body tags**).

Put the following tags inside the website in the appropriate places.

```
<h3>Atlantis the Legend</h3>
```

```
<h4> Atlantis was a society that was supposedly buried in the ocean.</h4>
```

```
<h4>Do you believe it is real? </h4>
```

Make sure to style your headers in something that gives the idea of Atlantis!

Example Output:

Atlantis the Legend

. Atlantis was a society that was supposedly buried in the ocean.

Do you believe it is real?

Requirements:

- Correct HTML structure.
- Include the header tags about Atlantis.
- Add some styling to the header tags. (color, font, etc)
- HTML Structure with only one Doctype Tag. (just an opening)
- HTML Structure with only one complete html tag. (opening and closing)
- HTML Structure with only one complete body tag. (opening and closing)

4. Star Wars Website

Create a new file with all the appropriate structure tags (**doctype**, **html**, **head**, **body**).

Put the following Star Wars quotes inside the body tag.

```
<h1>The force will be strong with you.</h1>
```

```
<h2>Luke, I am your father!</h2>
```

```
<h3>I have a bad feeling about this.</h3>
```

Example Output:

The force will be strong with you.

Luke, I am your father!

I have a bad feeling about this.

Requirements:

- h1 Tag Quote.
- h2 Tag Quote.
- h3 Tag Quote.
- HTML Structure.
- HTML Structure with only one Doctype Tag. (just an opening)
- HTML Structure with only one complete html tag. (opening and closing)
- HTML Structure with only one complete body tag. (opening and closing)

5. Sports Formation

Sports have a form of organization to them, whether it be formations, positions, rules, or more!

Create an HTML file that contains the proper html structure tags. Your website should also include at least **1 h1 tag** and **2 h2 tags** that contain information about the structure involved with your sport.

If you aren't familiar with any sports, feel free to ask a classmate or do some research about one that may interest you!

Example Output:

Soccer has 3 positions: offense, midfield, defense!

Offense is responsible for scoring goals

Midfield is responsible for helping both offense and defense in their jobs, with lots of running and passing!

Defense is responsible for preventing the other team from scoring and need to communicate a lot

Requirements:

- Include the proper structure tag declarations.
- Include at least 1 h1 tag.
- Include at least 2 h2 tags.
- HTML Structure with only one Doctype Tag. (just an opening)
- HTML Structure with only one complete html tag. (opening and closing)
- HTML Structure with only one complete body tag. (opening and closing)

6. Human Skeleton

Just like us humans, HTML files have a skeleton as well! Create an html file with the proper structure tags (**doctype**, **html**, **head**, and **body tags**).

Place the following tags in order from the top of the head to the bottom of the foot

h1: **Skull** , h2: **Sternum** , h3: **Femur** , h4: **Tibia** , h5: **Talus** .

Example Output:

Skull

Sternum

Femur

Tibia

Talus

Requirements:

- Declare the proper HTML structure types.
- Include the proper header tags provided in the instructions.
- HTML Structure with only one Doctype Tag. (just an opening)
- HTML Structure with only one complete html tag. (opening and closing)
- HTML Structure with only one complete body tag. (opening and closing)

7. Avengers Website Structure

Create a new file with all appropriate structure tags (**doctype**, **html**, **head**, **body**).

List your top **5** favorite Avengers using h1 tags and style each tag with different colors based on each Avenger. (ex: Captain America (styled in blue)).

Example Output:

Iron Man

Captain America

Hulk

Black Widow

Black Panther

Requirements:

- 5 header tags with your 5 favorite avengers styled with different colors.
- HTML Structure.
- HTML Structure with only one Doctype Tag. (just an opening)
- HTML Structure with only one complete html tag. (opening and closing)
- HTML Structure with only one complete body tag. (opening and closing)

Games (4)

1. HTML Structure Order

Put the code bits in order for correct HTML structure

Full Screen

Audio

Instructions

Answer Key

Pause

Clear All

Check Matches

Attempts: 0

<html>

<!DOCTYPE html>

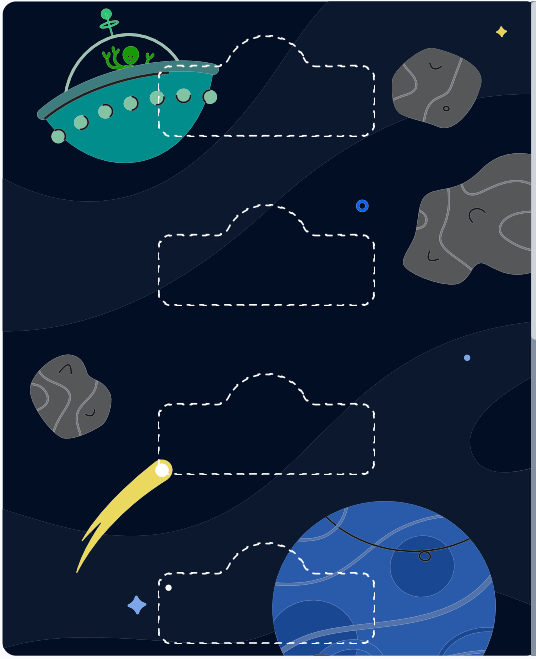
</html>

<body>

<head>

</head>

</body>



2. HTML Structure Memory

Find the pairs of tags that go together!

Full Screen

Audio

Instructions

Answer Key

Pause

Flips: 0

1<div>

2<div>

3<div>

4<div>

5<div>

6<div>

7<div>

8<div>

<div>

<div>

<div>

<div>

<div>




<div>

<div>

<div>

<div>

<div>



3. HTML Structure Matching

Match the following opening tag to its correct closing tag.

Full Screen

Audio

Instructions

Answer Key

Pause

Clear All

Check Matches

Attempts: 0

<html>

<head>

<body>

</html>

</body>

</h5>

<h5>

<h1>

</h1>

</head>



4. HTML Structure Typing

Practice your typing skills with coding keys! Type in the following code.

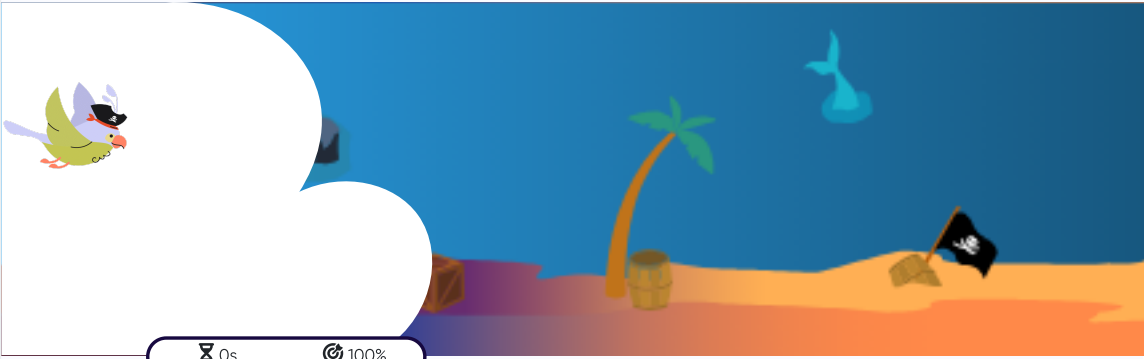
Full Screen

Audio

Instructions

Restart

Pause



0s100%

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

Answer Keys & Solutions

Checkpoint Solutions

HTML Structure

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4   </head>
5
6   <body>
7
8     <h1>Welcome to my website!</h1>
9
10    <h1>We are glad you could join us! </h1>
11
12  </body>
13 </html>
```

Questions

1. What are the three main tags in an HTML file?

MULTIPLE CHOICE

Correct Answer:

- A. <head><body><foot> ✗ Incorrect
- B. <html><title><body> ✗ Incorrect
- C. <html><body><foot> ✗ Incorrect
- D. <html><head><body> ✓ Correct

Explanation:

HTML doesn't have a <foot> tag.

2. How do you indent a piece of code?

MULTIPLE CHOICE

Correct Answer:

- A. Press the enter key. ✗ Incorrect

B. Press the tab key.

✓ Correct

C. Press the delete key.

✗ Incorrect

D. Press the shift + return key.

✗ Incorrect

Explanation:

Indentation is similar to what you do to create a new paragraph.

3. Which tag contains code that links your HTML file to other files like CSS or JavaScript?

MULTIPLE CHOICE

Correct Answer:

A. <head>

✓ Correct

B. <body>

✗ Incorrect

C. <foot>

✗ Incorrect

D. <doctype>

✗ Incorrect

Explanation:

This tag looks like this <link> and it does not go inside the <body> tag.

4. What makes a piece of code a child of a parent element?

MULTIPLE CHOICE

Correct Answer:

A. A child element is between the opening and closing tags of its parent.

✓ Correct

B. A child element has the same tagName as the parent element.

✗ Incorrect

C. A child element is on the same line as the parent element.

✗ Incorrect

D. A child element is coded below the parent element.

✗ Incorrect

Explanation:

The child tag is inside the parent tag.

5. What is the purpose of the <head> tags in an HTML page?

Correct Answer:

- A. They display content on the page. ✗ Incorrect
- B. They hold most of the code for the website. ✗ Incorrect
- C. They contain links to CSS and JavaScript files. ✓ Correct
- D. They define child elements. ✗ Incorrect

Explanation:

The head tag holds links to other resources.

6. Why is it important to indent HTML code?

Correct Answer:

- A. It helps the computer understand the code. ✗ Incorrect
- B. It makes the code more beautiful. ✗ Incorrect
- C. It helps programmers and others read and understand the code. ✓ Correct
- D. Reducing file size. ✗ Incorrect

Explanation:

Indentation helps make the code easier for the programmer to read.

7. What do child elements and parent elements refer to in HTML?

Correct Answer:

- A. The order in which elements appear in the code. ✗ Incorrect
- B. Elements that are nested inside other elements. ✓ Correct
- C. Elements with a higher precedence in styling. ✗ Incorrect
- D. Elements that have special attributes. ✗ Incorrect

Explanation:

Child elements are nested inside parent elements.

8. Debug the following code:

DEBUG CODE

Incorrect Code:

```
1 <!DOCTYPE html>
2 <html>
3   <body>
4
5   </body>
6
7   <head>
8     <h1>Hello World!</h1>
9   </head>
10 </html>
```

Correct Solution:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8     <h1>Hello World!</h1>
9   </body>
10 </html>
```

Explanation:

The head tag comes before the body tag.

9. Debug the following code:

DEBUG CODE

Incorrect Code:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <h1>Hello World!</h1>
5   </head>
6
7   <body>
8
9   </body>
10 </html>
```

Correct Solution:

```
1 <!DOCTYPE html>
```

```
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8     <h1>Hello World!</h1>
9   </body>
10 </html>
```

Explanation:

Header tags go inside the body tag

10. Debug the following code:

DEBUG CODE

Incorrect Code:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8     <h1>Hello World!</h1>
9   </body>
```

Correct Solution:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8     <h1>Hello World!</h1>
9   </body>
10 </html>
```

Explanation:

This needs a closing html tag.

Challenges

1. Website Paleontology

Solution:

```
1 <!DOCTYPE html>
```

```

2 <html>
3   <head>
4
5   </head>
6
7   <body>
8     <h1 style="font-family: fantasy; color: green">Dinosaurs are the kings of
reptiles!</h1>
9     <h2 style="font-family: american typewriter; color: orange">They lived millions of
years ago.</h2>
10   </body>
11 </html>

```

2. Pirate Website Structure

Solution:

```

1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8     <h3 style="font-family: fantasy; color: maroon">Pirates of the Dark Sea</h3>
9     <h4 style="font-family: cursive; color: olive"> They patrol the shores to guard
their precious treasure. </h4>
10    <h4 style="font-family: impact; color: red;">Sailors be warned!</h4>
11   </body>
12 </html>

```

3. Atlantis Website Structure

Solution:

```

1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8 <h3 style="font-family: fantasy; color: turquoise">Atlantis the Legend</h3>
9   <h4 style="font-family: snell roundhand; color: blue"> Atlantis was a society
that was supposedly buried in the ocean.</h4>
10
11 <h4 style="font-family: trattatello; color: navy">Do you believe it is real? </h4>
12
13   </body>
14 </html>

```

4. Star Wars Website

Solution:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8
9     <h1> The force will be strong with you. </h1>
10    <h2>Luke, I am your father!</h2>
11    <h3>I have a bad feeling about this.</h3>
12
13
14  </body>
15 </html>
```

5. Sports Formation

Solution:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4
5   </head>
6
7   <body>
8
9     <h1 style="color:green"> Soccer has 3 positions: offense, midfield, defense! </h1>
10    <h2 style="color:blue">Offense is responsible for scoring goals</h2>
11    <h2 style="color:black">Midfield is responsible for helping both offense and
12    defense in their jobs, with lots of running and passing!</h2>
13    <h2 style="color:grey">Defense is responsible for preventing the other team from
14    scoring and need to communicate a lot</h2>
15
16  </body>
17 </html>
```

6. Human Skeleton

Solution:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4   </head>
5
6   <body>
7     <h1> Skull </h1>
8     <h2>Sternum</h2>
9     <h3>Femur</h3>
10    <h4>Tibia</h4>
11    <h5>Talus</h5>
12  </body>
13 </html>
```

7. Avengers Website Structure

Solution:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4   </head>
5
6   <body>
7
8     <h1 style="color: red"> Iron Man </h1>
9     <h1 style="color: blue"> Captain America </h1>
10    <h1 style="color: green"> Hulk </h1>
11    <h1 style="color: maroon"> Black Widow </h1>
12    <h1 style="color: black"> Black Panther </h1>
13
14
15  </body>
16 </html>
```

Games

1. HTML Structure Order

Correct Order:

1. <!DOCTYPE html>
2. <html>
3. <head>
4. </head>
5. <body>
6. </body>
7. </html>

Students must arrange items in the correct sequence.

2. HTML Structure Memory

Memory Game Pairs:

1. ↔
2. ↔
3. ↔
4. ↔

Students must find all matching pairs by flipping cards and remembering their positions.

3. HTML Structure Matching

Matching Game Solutions:

1. →
2. →
3. →
4. →
5. →

Students must drag items from the left to match with corresponding items on the right.

4. HTML Structure Typing

Typing game - no answer key needed. Students practice typing the provided content.