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HTML & CSS
-> lecture 01

¡n! Gist

- HTML & CSS basics
- The HTML Structure
- Chrome DevTools & CSS box
- Layouts
- CSS Grid & Flexbox
- Media queries

¡n! HTML / HTML5 Basics

HTML elements and its terminology

```html
<p>
    This tag allows you to create paragraphs
    My name is Aroo. I'm from Almaty!
</p>
<h1> Heading 1 is the largest heading</h1>
<h2> Heading 2 is the second largest heading</h2>
<h3> Heading 3 is another  heading</h3>
<h4> Heading 4 is another  heading</h4>
<h5> Heading 5 is second smallest  heading</h5>
<h6> Heading 6 is the smallest heading</h6>
```

Check out for more tags - https://www.w3schools.com/tags/ref_byfunc.asp

¡n! **Syntax**

= rules for writing the code, that computer can read

= grammar for computer

CSS Basics

- ‣ CSS Syntax
- ‣ Selectors: inline styles, ids, classes, elements
- ‣ Hierarchy
- ‣ Hover, transitions shadows

¡n! Chrome DevTools

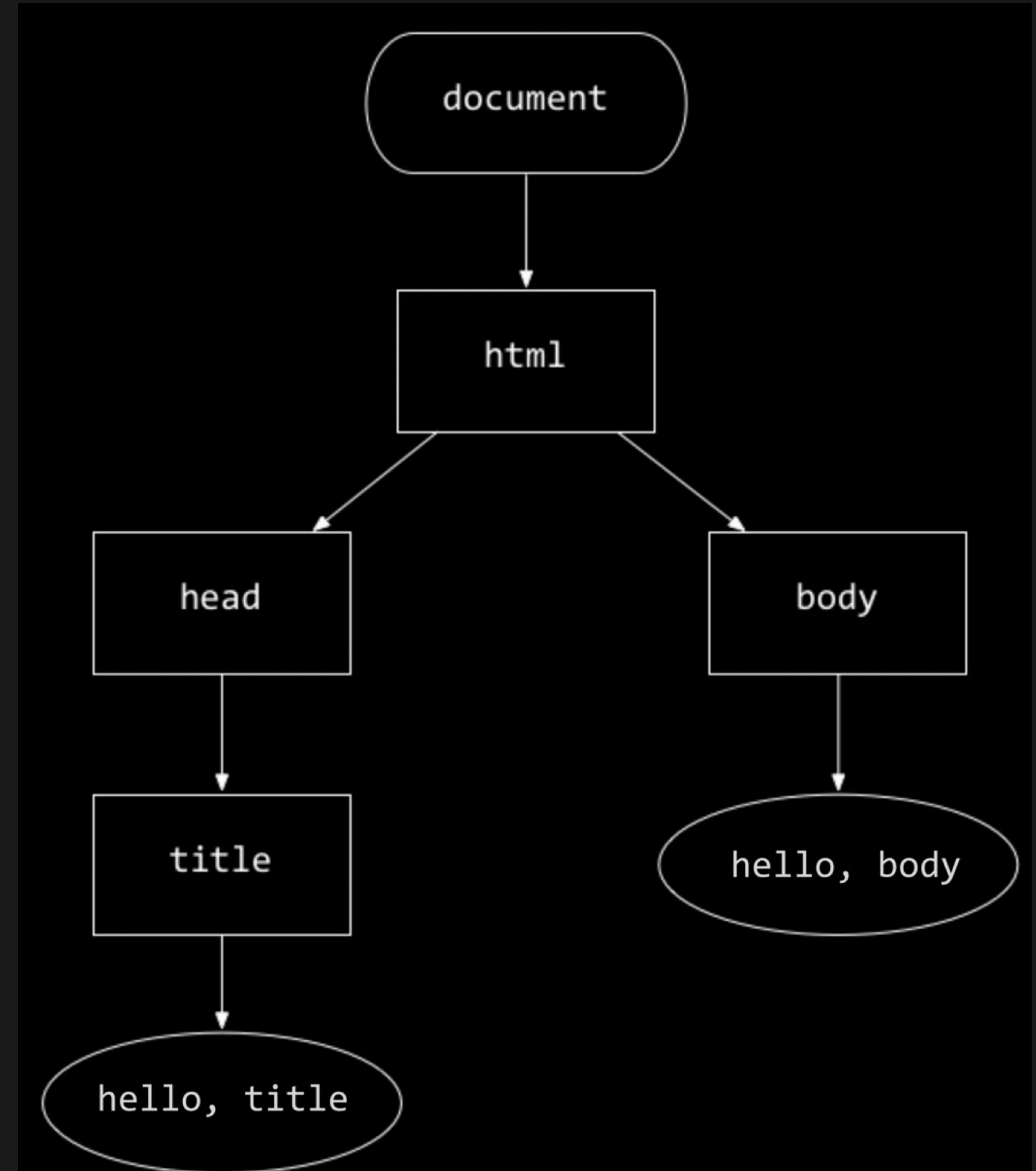- is a set of web developer tools built directly into the Google Chrome browse

To open DevTools on your web browser click right button on your mouse and select "Inspect"
Or by keys combination cmd+opt+I / alt+I

HTML Structure

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>

</body>
</html>
```

Layouts

- Flow layout (default)

- Positioned layout

- Flexible layout

- Grid layout

- Table layout and etc.

¡n! Flow layout (default)

 - is the way that Block and Inline elements are displayed on a page before any changes are made to their layout

```css
span.a {
    display: inline; /* the default for span */
    width: 100px;
    height: 100px;
    background-color: yellow;
}

span.b {
    display: inline-block;
    width: 100px;
    height: 100px;
    background-color: red;
}

span.c {
    display: block;
    width: 100px;
    height: 100px;
    background-color: black;
}
```

¡n! **Positioned layout**

- is a module of CSS that defines how to position elements on the page.

¡n! CSS Grid

 - offers a grid-based layout system, with rows and columns, making it easier to design web pages without having to use floats and positioning.

```css
.item1 { grid-area: header; }
.item2 { grid-area: menu; }
.item3 { grid-area: main; }
.item4 { grid-area: right; }
.item5 { grid-area: footer; }

.grid-container {
  display: grid;
  grid-template-areas:
    'header header header header header header'
    'menu main main main right right'
    'menu footer footer footer footer footer';
  gap: 10px;
  background-color: #2196F3;
  padding: 10px;
}


.grid-container > div {
  background-color: rgba(255, 255, 255, 0.8);
  text-align: center;
  padding: 20px 0;
  font-size: 30px;
}
```

¡n! CSS Flexbox

 - makes it easier to design flexible responsive layout structure without using float or positioning.

```css
.flex-container {
    display: flex;
    flex-direction: column;
    justify-content: center;
}
```

Media queries

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or how to make our website responsive and available for different devices.

```css
/* Extra small devices (phones, 600px and down) */
@media only screen and (max-width: 600px) {

}


/* Small devices (portrait tablets and large phones, 600px and up) */
@media only screen and (min-width: 600px) {

}


/* Medium devices (landscape tablets, 768px and up) */
@media only screen and (min-width: 768px) {

}


/* Large devices (laptops/desktops, 992px and up) */
@media only screen and (min-width: 992px) {

}


/* Extra large devices (large laptops and desktops, 1200px and up) */
@media only screen and (min-width: 1200px) {

}
```

¡n! Useful links:

1. All HTML tags - https://www.w3schools.com/html/default.asp

2. CSS dictionary - https://www.w3schools.com/css/default.asp

3. Media queries cheat list - https://kapeli.com/cheat_sheets/
   CSS_Device_Media_Queries.docset/Contents/Resources/Documents/index

4. Game - Flexbox Froggy - https://flexboxfroggy.com/

5. Game 2 - Flexbox Adventure - https://codingfantasy.com/games/
   flexboxadventure/play

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Rakhmet everyone👋