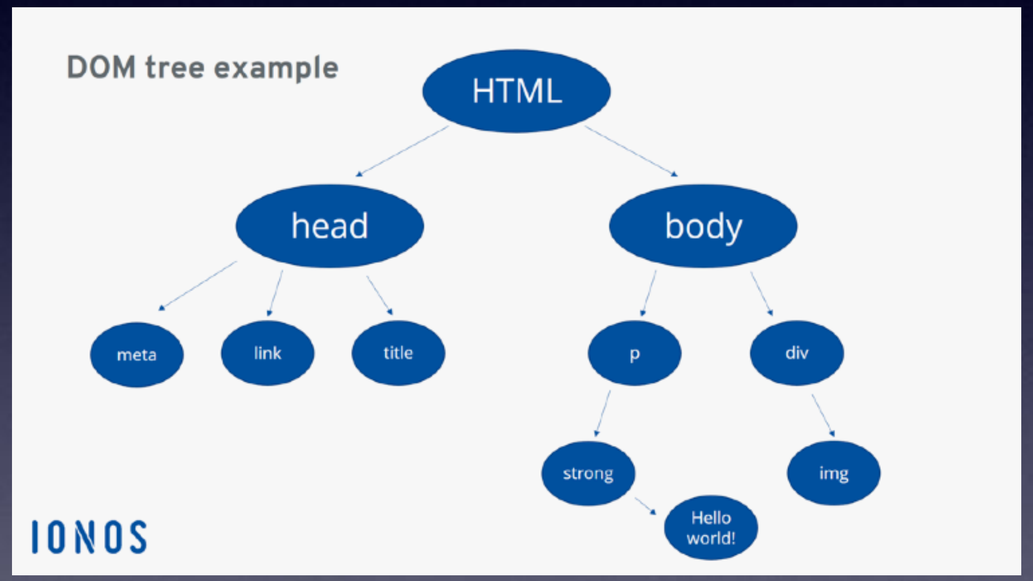
Browser Graphics

- everything displayed in a window is in Document Object Model (DOM)
- conventional web programming comes down to manipulating the DOM, using a weakly-typed language w/ automatic memory management
- almost the polar opposite of environment for high-performance graphics



APIs for WebXR

- Canvas is HTML Element (in the DOM) you can draw into (bitmapped)
  - covers rectangular part or all of window
  - *doesn't* contain DOM, nor retain your draw calls
- Current: **WebGL 2**: *context* of HTML Canvas
  - based closely on OpenGL ES 3.0,
  - focus is on the shader program, written in GLSL (you serve GLSL files just like JavaScript): flat, PBR, toon, points, etc
  - not accessible to the blind :-(
- Future: **WebGPU** in progress
  - new kind of Context of HTML Canvas element
  - no baggage from 1990s & supports modern GPU architectures
  - abstraction on top of Vulkan, Metal & DirectX 12
  - focuses on resource re-use via "pipelines" & "RenderBundles"