Dynamic Web

Servers, Clients, Protocols

The Whole Point of this Course...

Being able to answer these questions will make your entire experience in this class easier.

We will discuss:

What a server is,

What a browser is, and

What a protocol is.

What is a server?

Software on a computer.

That software is usually running on another computer, far away from you.

That software has rules and expectations.

That software will exchange information (data) if you give it information (data).

What is a browser?

Software on a computer.

Software that runs software while running inside of software running inside of software.

Webpage -> Browser -> Operating System -> CPU/GPU/Bios

What is a protocol?

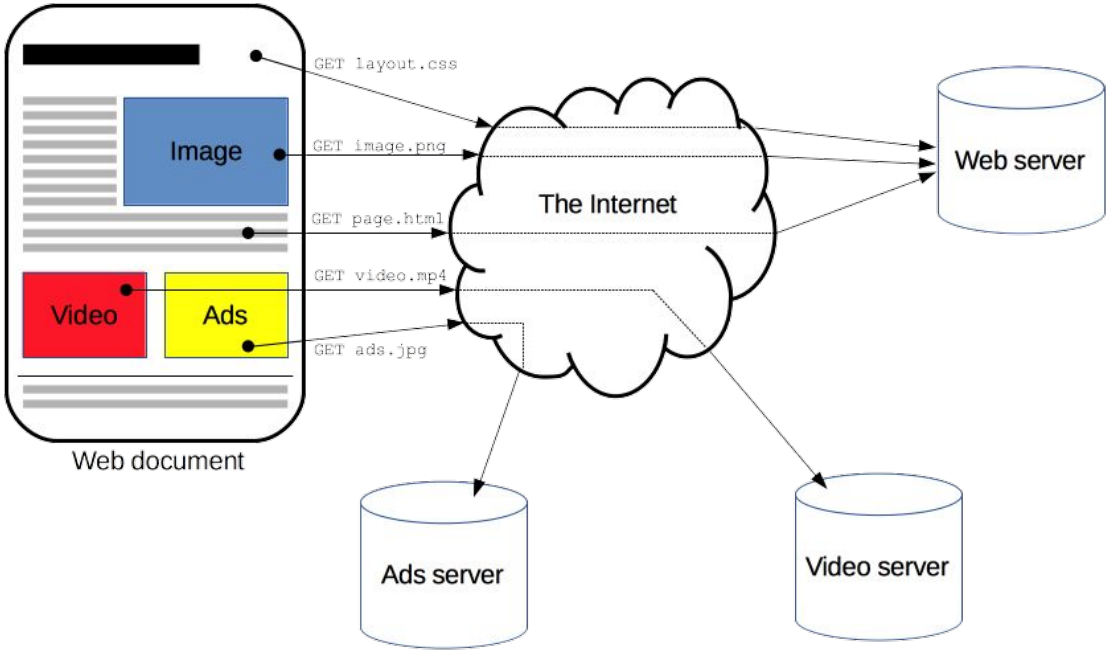
The **rules** that allow two computers to “talk” to one another - using software.

The **rules** portion is key.

A protocol is simply a set of rules - knowing the rules and having the correct values to satisfy the rules allows you to use the protocol to let software communicate.

Have I used a protocol before?

Yes. Today even. You used this one, I am sure.



How does a protocol work?

1. **Client** (Browser) sends **data** to a **server.**
2. This **data** includes information about what it wants from the **server.**
3. The **server** receives the **data** and then sends **data** to the **client**.
4. The **client** now has the **data** it wanted and can do something with it.

Who cares?

I don’t have an answer to this question....

But **servers** can do a lot of interesting things:

1. Send a website and its content.
2. Compute complex problems and return the results.
3. Save information for later.
4. Anything you want it to do - so long as you possess the means to write the instructions (code).

What about browsers?

Tbh. Browsers are awful. However....

1. Browsers can do a lot of things, like... more than we could cover in 100 classes.
2. Everyone has a browser.
3. Everyone knows how to use a browser.
4. But, browsers also have rules, lots of them.

How do browsers work?

1. What languages do browsers accept?
2. What protocol does a browser rely heavily on?
3. Name one good website. Why?
4. What purpose does HTML serve in a browser?
5. What purpose does CSS serve in a browser?
6. What purpose does JavaScript serve in a browser?
7. How many different browsers are there? Why so many?

Okay, again, why should I care?

1. Connectivity to billions of devices and people (good? bad?).
2. Ability to modify the world and reality remotely (good? bad?).
3. Ability to express ideas - creative or otherwise.
4. Create communities, create connections, and create memories (good? bad?).
5. Literally do things people cannot do.

In this class we will...

1. Learn how to set up and give commands to servers.
2. Learn how to get a server to talk to a client (browser).
3. Display server processed data to a client.
4. Do this in new ways, think about how this simple structure can be applied to a multitude of situations.
5. Ideally pick up some skills - and you can do what you will with those skills.
6. Create some art.