**Internet –**

* **User is asking for a website – HTTP:**
* **When you hit enter, you ask for the contents of the page.**
* **So if you go to youtube, it has to send the packet back over fibre optic cables to the internet hub, the server at the internet hub reads the request and sends the webpage back.**
* **Images and text are too large to send over a single packet.**
* **Hundreds of packets are sent back to rebuild the webpage.**

**Steps that happen**

**Front End**

1. **User submits query to your ISP.**
2. **Within your ISP, the DNS takes the Domain name and turns it into an IP address.**
3. **A request is sent to the desired IP address via HTTP**
4. **Your request finds the fastest possible path to the server with the specified IP.**
5. **This is not a direct journey. It requires hoping from server to server until we arrive.**

**Back End**

1. **The requested server figures out exactly what we’re asking for (/courses)**
2. **The server build us the right content, often pulling information from database**
3. **The server responds with any combination of HTML, CSS, and JavaScript**

**Requests and responses –**

* Asking for data, the server giving you that data, and the browser displays it.

**Web Pages are too large to send as a single packet of data.**

**Front End (Client Side)** –

* HTML, CSS, and JS

**Back End (Server Side)** –

* PHP, Python, MYSQL, MONGODB, APACHE, ETC

**HTML**

* HyperText Markup Language
* Defines the structure of a webpage
  + “put an image here”
  + “put a form here”
* The “nouns” of a webpage

**CSS**

* Cascading Style Sheets
* Defines the style of HTML
  + “makes all text purple”
  + “give the first image a yellow border”
* The “adjectives” of a webpage

**JavaScript**

* Adds logic and interactivity to a page
  + “Do some math”
  + “Change color when the user clicks”
  + “Load new data from twitter”
* The actions of “verbs” of a webpage