- **Web 1.0:** All about experts uploading content. So pay someone to make a website. So you needed knowledge about internet architecture.
- **Web 2.0:** Allows other people to upload content and modify webpages. None expert to upload content and contribute content.

Part of cloud computing: on demand network access to shared computing resources **three types of cloud computing models:**

Virtualisation: is just a physical hardware computer turned into servers. A portion of a physical computer is a server

- **Software as a service:**
    - Rent applications instead of buying them.
    - Executed centrally: processed on a single computer resource (by provider) instead of locally (distributing software processing)
        - Advantages of centralised software processing model: Easier to manage. Once provider updates software clients automatically updated
        - Advantages of distributed software processing model: More powerful as they don't share single computer resource.
    - EG: google docs android etc. And google mail. Applications are the big ones

- **Advantages of Software as a services: (renting software)**
    - Someone else manages the software: (good for small business since they don't need to hire someone)
        - Keeps its updated
        - Everyone uses same version
    - Cheaper for infrequently used applications
        - Rapidly deployed
        - Expands and contracts required (so it can be let go)
    - Accessible:
        - Less dependence on configuration of local device
        - Universally access bale for any platform normally
- **Disadvantages of software as a service (renting service)**
    - For heavily used software it may be cheaper to buy since you don't always have to pay money to rent
    - Also since you are renting you are relying on the provider to provide uptime
    - May be limited options for customising software since you are not in control
    - Security concerns since it may be unauthorised accessed by phones.

- **Infrastructure as service:**
    - So you rent the infrastructure (and you have total control over what you do to hardware but also full control over the software that is installed in the infrastructure. Also you can upgrade hardware infrastructure cpus) Think: A physical computer cut in half
        - EGL: Amazon ec2

- **Properties of good IASS**
    - Reliability power supply
    - Environmental: Cooling + fire suppression
    - Connectivity: High speed Internet, High performance lan, Bandwidth IE NBN
    - Uptime, availability, access: 24/7 operation, data backup, remote management

- **Advantages of IASS Over buying equipment**
    - Providers purchase their hardware cheaper. Total cost of ownership. Because sharing a hardware.
    - Modest computing needs
    - Don't need to worry about infrastructure problems like fires etc. Backups are done by them just need to schedule it
    - Provides remote access for free ie software for resetting via remote
    - Scale up: buy better hardware etc but paying more

- **Disadvantages of IASS renting over buying equipment**
    - Ultimate control:
        - Security physical
        - Need knowledge where you data is and who has access
        - And need specialised hardware very narrow
        - Reliability and cost efficient (For large business 1000 servers)

- **IASS vs SASS**
    - You get control on what to install
    - Accept responsibility on operating system and software
    - Worth it –IASS
    - If it's too hard to manage –SASS

- **Collocation:** Is where you provide equipment but you get real-estate such as a rack. They don't touch your gear but they provide cooling fire etc.

- Most users doesn't care about operating system they care about services or applications. They don't care about complexity of software
- Virtual machine is similar to VPS but difference be really how data is stored

Questions: Can you get determine the hardware of the infrastructure: IAAS. Also different between vps and virtual machine & dedicated server. How can we run our own vps

Major question: Is amazon ec2 vs vps

Are we going to learn how to turn our old laptop into a virtual machine that be run remotely.