Leya

Module A.4a: The Web Part 1

1. Tim Berners-Lee created the world wide web and created the first web page in 1990.
2. He worked at a software engineering company called CERN.
3. His inspiration was the [internet](http://www.internetsociety.org/internet/what-internet) and Berners-Lee realised they could share information by exploiting an emerging technology called hypertext. The problem Sir Tim was trying to solve was that people were having difficulty sharing information.
4. **HTML:** HyperText Markup Language. The markup (formatting) language for the web.

**URI:** Uniform Resource Identifier. A kind of “address” that is unique and used to identify to each resource on the web. It is also commonly called a URL.

**HTTP:** Hypertext Transfer Protocol. Allows for the retrieval of linked resources from across the web.

1. Tim and others advocated to ensure that CERN would agree to make the underlying code available on a royalty-free basis, forever.
2. **Decentralisation:** No permission is needed from a central authority to post anything on the web, there is no central controlling node, and so no single point of failure … and no “kill switch”! This also implies freedom from indiscriminate censorship and surveillance.

**Non-discrimination:** If I pay to connect to the internet with a certain quality of service, and you pay to connect with that or a greater quality of service, then we can both communicate at the same level. This principle of equity is also known as Net Neutrality.

**Bottom-up design:** Instead of code being written and controlled by a small group of experts, it was developed in full view of everyone, encouraging maximum participation and experimentation.

**Universality:** For anyone to be able to publish anything on the web, all the computers involved have to speak the same languages to each other, no matter what different hardware people are using; where they live; or what cultural and political beliefs they have. In this way, the web breaks down silos while still allowing diversity to flourish.

**Consensus:** For universal standards to work, everyone had to agree to use them. Tim and others achieved this consensus by giving everyone a say in creating the standards, through a transparent, participatory process at W3C.

1. These ideas are giving rise to exciting new approaches in fields as diverse as information (Open Data), politics (Open Government), scientific research (Open Access), education, and culture (Free Culture).
2. When you click on a link, your browser and operating system figure out where you've clicked by changing the URL to an IP address. Then each computer, when it gets a packet, looks at it and sees what computer number it is being sent to. It then just passes it on to the next computer in the net, in the general direction toward its destination.
3. No, Tim did not invent the internet, when he came up with the world wide web some of the factors were already done. For example, Vint Cerf and people he worked with had figured out the Internet Protocol, and also the Transmission Control Protocol.
4. Vectors, Calculus, and eigenvector concept.

1. The Web can be used for all the wrong things. For downloading pictures of horrible, gruesome, violent or obscene things, or ways of making bombs which terrorists could use. But, Other people say how their lives have been saved because they found out about the disease they had on the Web, and figured out how to cure it. The Web could be used for good and bad things, it just depends on what people decide to use it for.