

Jim Lister - T1A1 - Workbook

Written Responses to short and long answers.

1. Identify and explain common and important components and concept of web development

Web development mark up language defines the method of annotating text in order to give a specific visual output through a web browser. HTML (hyper text markup language) is the most widely used version of this and along with CSS and Javascript can be used to make functional, dynamic, responsive web sites. HTML specifically utilises the use of tags to define the objects structure. For example a tag with the semantic annotation of `<Main></Main>` might contain a websites main elements which would be specified within this parent element. These tags can then be given various different attributes to make them function in a specific way and are identifiable for others who might also be working on the code.

2. Define the features of the following technologies that are essential in terms of the development of the internet:

- *packets*
- *IP addresses (IPv4 and IPv6)*
- *routers and routing*
- *domains and DNS*
 - **Explain** how each technology has contributed to the development of the internet.

What are packets? A packet is formatted piece of data sent from one system to another over a network. The data is fragmented into smaller pieces and then sent one after the other finally being combined to make up the larger overall message.

What are IP addresses? an IP address is a number used to identify a computer or a whole network of computers. IP4 is the older version (Internet Protocol Version 4) which has a smaller 32-bit address whereas IP 6 (Internet Protocol Version 6) is a 128-bit hexadecimal address making it better in terms of complexity and efficiency.

What are routers and routing? A Router is a device that receives information from the internet and translates it to visual elements that you'll see on your monitor. Routing is the process of sending and receiving data between the personal computer and the world wide web. This process basically consists of sending and receiving the packet data that is broken into smaller pieces and assembling it back into whole pieces of information.

What are domains and DNS servers? A domain is like an address that must be registered in order for a user to visit a website. Like a physical address, this is where the website lives on the internet. A DNS server is a naming database where these addresses are stored, a bit like street directory. DNS stands for domain name system.

*explain how each technology has contributed to the development of the internet

3. Define the features of the following technologies that are essential in terms of the development of the internet:

- TCP
- HTTP and HTTPS
- web browsers (requests, rendering and developer tools)

Explain how each technology has contributed to the development of client and server communication over the internet (50 - 150 words for each technology)

experimenting with markdown

Next Line

More experimenting with Markdown <div><div>

Github view is broken