Networking

Learned:

- I identified that an IP Address has 4 octets and is linked to devices on a network.
- Devices communicate using their MAC address in order to send data across the network without reaching the wrong device.
- By typing the `Ping` command in Powershell I learned that a request is sent to devices on a network, which sends packets of data. The target then replies with data showing the trip time in Milliseconds and if any packets were lost.
- For example a ping to Google received 32 Bytes of Data with 4 packets sent over 14ms on average in the Powershell command.

IP Address is a way of identifying a host on a network for a period of time and is divided into four octets.

MAC addresses is a twelve character number split by a colon. This is found on the microchip board on the devices motherboard. Each device is assigned a unique address at the factory it was built at called (Media Access Control) address.

The first six characters of a MAC Address is by the company that made the interface and the last six is a unique address.

Ping uses (Internet Control Message Protocol) Packets to determine the performance of a connection between devices.
The time taken for ICMP packets to travel between devices is measured by the ping.

Pings can be performed on devices like the home network or websites. This also comes installed on Operating Systems such as Linux and Windows.

The Syntax to do a ping is Ping IP address or Website URL.