Repack and recap

# Section one TCP vs UDP

The TCP protocol is viewed as a reliable protocol for data transmission. This is because it keeps track of the number of packets that have arrived and requests any missing packets again.

The UDP protocol is viewed as unreliable because it does not request that any missing packets be resent.

**Question:** Give **two** examples of when the **TCP** protocol could be used

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**Question:** Give **two** examples of when the **UDP** protocol could be used

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# Section two Protocols

Protocols that deal directly with applications operate in the application layer. These protocols are:

* HTTP / HTTPS
* IMAP
* SMTP
* POP
* FTP

Other protocols used in networking are IP, ethernet, TCP, UDP, and WiFi.

**Question:** Which protocol(s) operate in the **transport layer**?

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**Question:** Which protocol(s) operate in the **internet layer**?

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**Question:** Which protocol(s) operate in the **link layer**?

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# Section three Layers

The **application layer** deals with preparing data for sending. It also decodes data received so that it can be viewed by the end user. The application layer is used by applications, such as the web browser.

**Question:** Describe the role and purpose of the **transport layer**

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**Question:** Describe the role and purpose of the **internet layer**

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**Question:** Describe the role and purpose of the **link layer**

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# Explorer task Routing tables

Routing tables were used to help with the transmission of packets around the network. Based on your experience with Packet tracer and the unplugged activity from this lesson, describe the role and function of routing tables.

You can use your own knowledge or complete some research to further explain your answer. The [A-Level packet switching section](https://isaaccomputerscience.org/concepts/net_internet_structure?examBoard=all&stage=all) (ncce.io/net-packet-switching) of the Isaac Computer Science page is a good place to start.

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