**Overview**: As an IT Support Specialist, it’s important that you fully grasp how networks work. You may need to troubleshoot different aspects of a network, so it’s important that you know how everything fits together. This assignment will help you demonstrate this knowledge by describing how networks function.

**What You’ll Do**: In your own words, describe what happens at every step of our network model, when a node on one network establishes a TCP connection with a node on another network. You can assume that the two networks are both connected to the same router.

Your submission must include a detailed explanation of the following:

* Physical layer
* Data link layer
* Network layer
* Transport layer
* MAC address
* IP address
* TCP port
* Checksum check
* Routing table
* TTL

physical layer: represents the physical devices that connects the computer. Data link layer : responsible for defining a common way of interpreting these signals so network devices can communicate. network layer:Allows different network to communicate. transport layer: sorts out which client and server programs are supposed to get that data. MAC address: a globally unique identifier attached to an individual network interface. IP address: 32 bit long nos. made up of 4-octets TCP port: A 16-bit port no. that's used to direct traffic to specific network apps. Checksum check: operates a checksum of the contents of the entire IP datagram header.