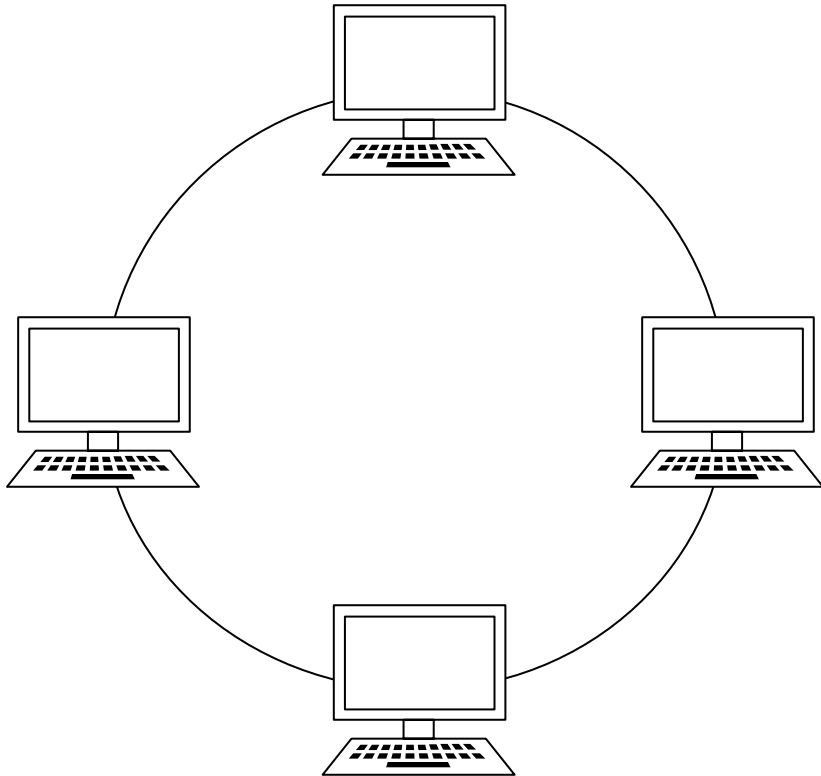
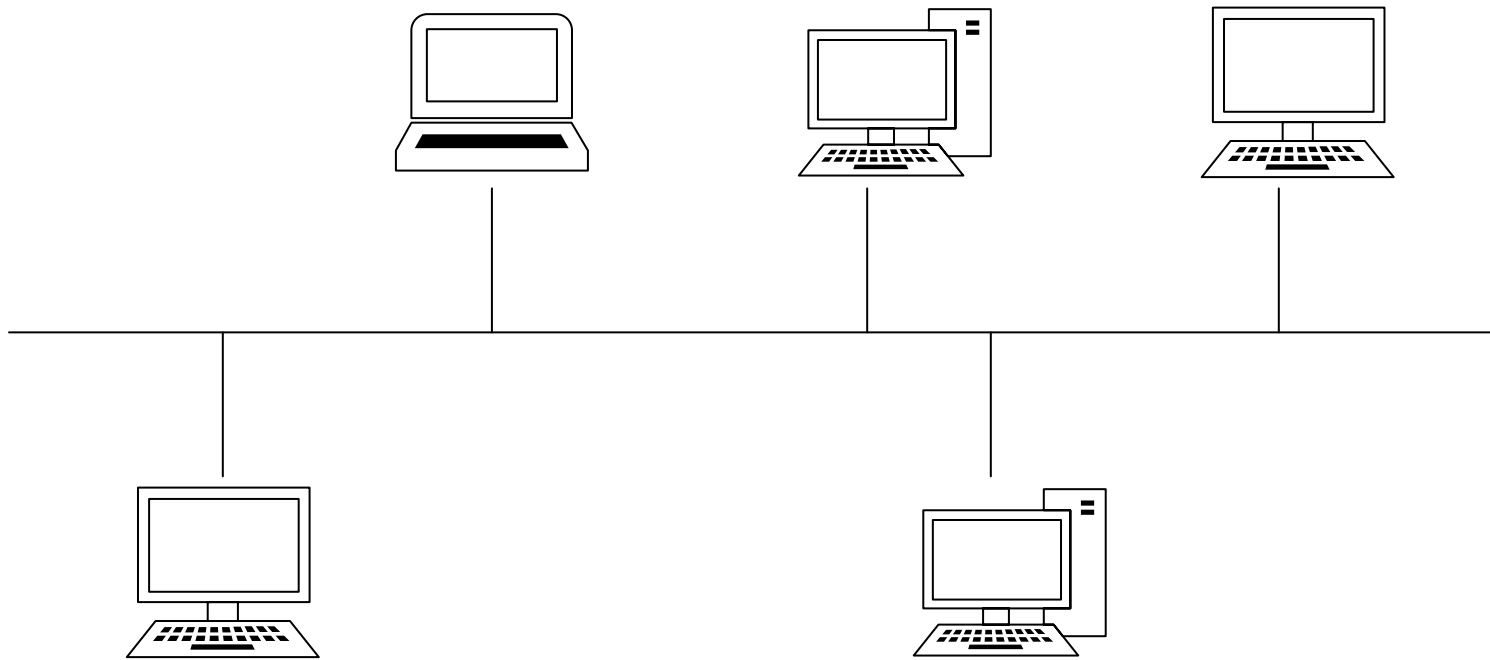


Ring Topology



Ring topologies have some issues. While it is useful when you want to move information between a couple of computers, the problems arise when one of those computers breaks (or one of the connectors). Unlike some of the other network topologies, ring topologies have no fault tolerance; which means that if anything breaks on this ring, the whole topology becomes useless.

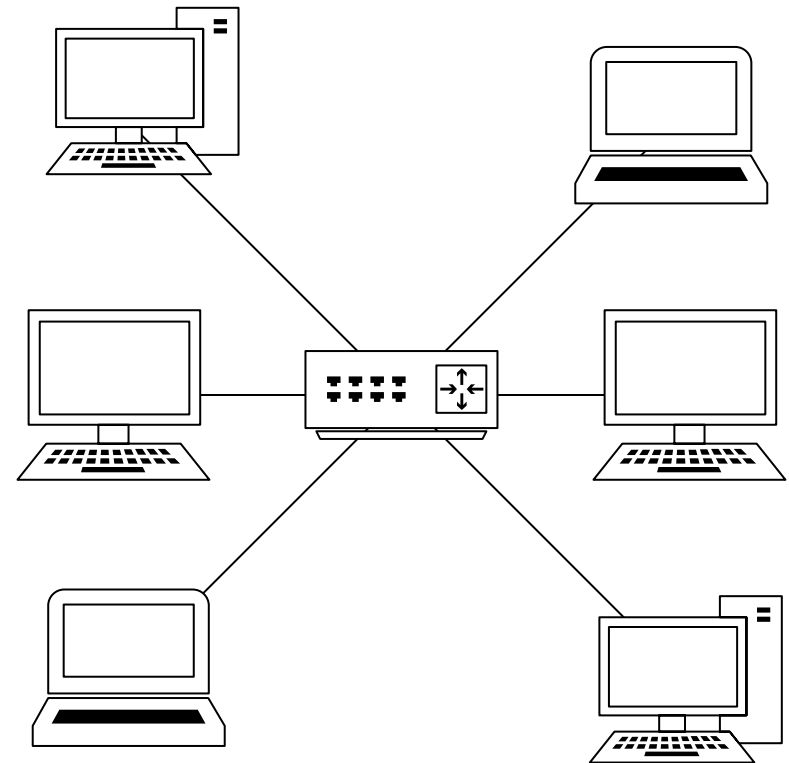
Bus Topology



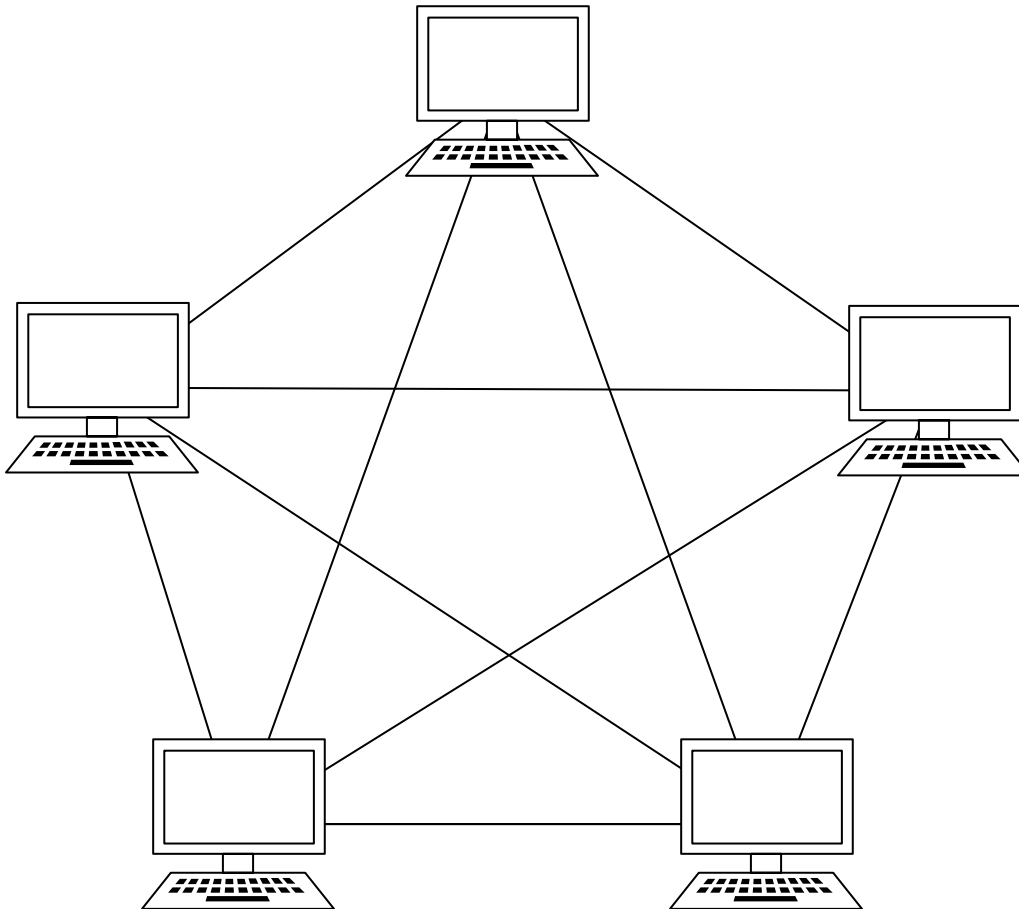
Bus topologies are great when you have a low budget and only a few computers you want to connect. Bus topologies require the least setup and they cost the least. However, similar to ring topologies, they are not fault tolerant. If any part of the main wire breaks or is otherwise irreparably damaged, the rest of the network after that point goes down.

Star Topology

Star topologies have a few good things going for them. Firstly, they are easy to troubleshoot. Secondly, and most importantly, if any one connected device is removed, the network will continue working as normal. The biggest issue with star topologies, however, is the exception to that last statement. There is one device that, should it fail or be removed, the entire network would fail right along with it – that device is the hub or switch in the very middle. This is called a “central point of failure.”



Mesh Topology



Of all the topologies that are covered in this assignment, the mesh topology is, by far, the best. Mesh topologies have multiple pathways to each computer, – thereby removing the problems of the ring and bus topologies – there is no central point of failure, – which fixes the issue with star topologies – if a computer or other connected node is removed, the whole network won't suffer, mesh topologies (because of their multiple paths) are able to withstand more traffic on the network, and finally, they are extraordinarily fault tolerant! The only problem with mesh topologies is that they are more expensive to set up.

Tree Topology

The tree topology allows multiple PANs to “talk” to each other over a common LAN. It is almost like a bus topology, but instead of singular nodes coming off of the main line, there are groups of nodes that re connected through a common switch.

