Table of Contents

INTRODUCTION:

To connect all the devices, we need a router and switch on each floor. As we know with one switch, we can connect 24 devices. So, we need multiple switch to connect all the devices together for one floor. We need copper straight wire to connect all the devices with the switches. As all the floor are connected all the switches of different floors we need to connect with the router via cross-over wire. To work properly we need to configure individual IP address for each device.

After the process we can excess the whole network with just a particular computer/laptop.

A. Discuss the need for network architecture and strategy planning:

Why network design is important:

When mapping the network for your company, it can be tempting to take shortcuts or skip the planning process to get it up as quickly as possible. However, we should bear in mind that all good networks with a reasonable level of protection come from good network architecture plans, not from the top of your head. Here is some detail on the importance of the network design plan when it comes to developing IP-based networks.

There are only about two types of IP internet works in workplaces around America—those that are well built and thought out, and those that have been separated into parts over time. Networks that emerge from network design strategies are usually stronger in several different areas.

How are you planning to build a network?

A company named Cordial IT Service LTD is a multistage building. As we want to merge the network of first, second & third floor together, we need a router. To connect the router, we need copper straight wire the switches which are connected with the devices in individual floors. After configure the router by the help of the IP address we now can merge all the devices of the three floors together.

B. Build a network and explain the design decisions taken, show how the design can serve its function and meet the requirements of the line:

1. To build the network design at first, we need to build the topology by adding computers/laptops, servers, switches & a router. To connect the computers/laptop & servers we need copper straight wire to connect with a switch in each floor. After connect the switches with all the devices we need to connect a router with copper cross over wires. After the connections with the router & the switches we need to configure each of the devices by adding IP address & default gateway. All this process we can create a network.

C. Explain individual responsibility and efficient self-management for the planning and implementation of the network:

1. Offer a brief description of the overall design and planning process.

In these steps, I will explain how we can connect desktops or laptops together via a switch and merge all floors together via a router using a virtual program called (CISCO Packet Tracer) so that we can easily share files and document.
We use virtual network software so when we first do the virtual network, we'll know how many switches, cables and routers we need to purchase.
We need to follow some steps for our planning to built a network. They are:

- Select the end system icon as shown on the Picher and extract 4 desktops.
- To link between desktops, add a switch unit. v We can extract the switch device from the icon from the lower left of cisco packet tracer app.
- Connecting the desktop via switch using copper straight cable.
- Click on copper straight cable, then click on desktop (PC0), after that click on the switch. Do this step with all desktops.
- Give an IP address for each desktop/laptop.
- Double Click First PC. Click on the Desktop Tab and Click IP Configuration Insert IP of PC but make sure it is of the same class as its switch has. Insert Gateway and a different IP the for each PC.
  Have to follow the same procedure for each floor.
- To configure the router, we need to Insert the IP and check Port status.
- Click on the RIP and Enter RIP addresses of networks connected with this router
- After configure the router Open command prompt of any PC and ping other PC. Another Pinging to confirm all the pcs are connected.
- To configure the http server, we just need to set the IP address and default gateway. Need to turn on the http service.
- To check go to web browser from any pc from the network and put the ip address on the search engine to confirm weather, its working or not.
- Configure the www.rianplaza.com server as a DNS server to provide domain name to IPv4 address resolution. While still in the Services tab, select DNS from the SERVICES listed in the left pane. Configure the DNS service using the following settings as shown in the figure. Click On to turn the DNS service on
  A. Name: www.rianplaza.com
  B. Type: A Record
  C. Address:192.168.2.66 Click
- Add to add the DNS service settings.