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| Reg.No : 220701518    Practical 4: Setting Up and Configuring a LAN Using a Switch    AIM: To set up and configure a Local Area Network (LAN) using a switch and Ethernet cables.  What is a LAN?  A Local Area Network (LAN) connects devices in a limited area (like a lab, office, or home) to share resources such as data, printers, and internet access. It enables fast, secure data transfer between connected devices, like computers, printers, and servers, through a central device called a switch.  Steps to Set Up a LAN  1. Plan the Network  - Design the layout based on equipment location and network requirements.  2. Gather Equipment  - 4 computers, an 8-, 16-, or 24-port switch, and 4 Ethernet cables.  3. Connect Devices  - Connect each computer to the switch using Ethernet cables.  4. Assign IP Addresses to Computers   * Log in as an Administrator, go to Network Settings:   -Right-click Local Area Connection → Properties → Internet Protocol (TCP/IPv4) .   * Choose Use the following IP address and assign IPs: * PC1: IP 10.1.1.1, Subnet Mask 255.0.0.0 * PC2: IP 10.1.1.2, Subnet Mask 255.0.0.0 * PC3: IP 10.1.1.3, Subnet Mask 255.0.0.0 - PC4: IP 10.1.1.4, Subnet Mask 255.0.0.0   5. Configure the Switch   * Connect your computer to the switch and log into the switch's web interface using its IP address. * Set the switch’s IP address to \*\*10.1.1.5\*\* with Subnet Mask \*\*255.0.0.0\*\*.     6. Test Connectivity |

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| - Use the ping command in Command Prompt to check if each device can communicate with the switch and other computers.  7. Share Files  - Right-click on a folder, select Properties → Sharing tab → Share it with everyone on the LAN.  8. Access Shared Files  - On other computers, navigate to the shared folder to ensure file sharing is successful. |