KIDS & TEENS FREELANCING TRAINING INSTITUTE

Cisco Certified Network Associate (CCNA) Course Outline

Module 1: What is CCNA and Why Networking Matters

- Introduction to CCNA and its role in networking careers
- Real-life example: How your devices connect to the internet
- Basics of networking: devices, IP addresses, data transfer
- Activity: Draw your home or office network

Module 2: Network Components and Devices

- Routers, switches, hubs, cables, and access points
- Difference between LAN, WAN, MAN, and PAN
- Real-life example: School or office network setup
- Activity: Identify network components in your surroundings

Module 3: IP Addressing and Subnetting

- Understanding IPv4 and IPv6
- How subnetting helps manage networks
- Real-life example: Assigning IPs in a school lab
- Activity: Practice IP subnetting with simple exercises

Module 4: Routing and Switching Basics

- Introduction to static and dynamic routing
- Routing protocols: RIP, EIGRP, OSPF
- Switching concepts: MAC address tables, VLANs

- Activity: Simulate routing between two networks

Module 5: Wireless, Security & Access Control

- Basics of wireless networks (Wi-Fi standards, SSID, encryption)
- Network security: firewalls, ACLs, VPNs
- Real-life example: Protecting a home Wi-Fi network
- Activity: Create a network security checklist

Module 6: Network Troubleshooting Techniques

- Using commands like ping, traceroute, ipconfig
- Common issues: DNS failures, IP conflicts, hardware errors
- Real-life example: Diagnosing a slow or disconnected network
- Activity: Troubleshoot a sample network scenario

Module 7: Hands-On Labs and Cisco Packet Tracer

- Introduction to Cisco Packet Tracer simulation tool
- Building and configuring simple networks
- Real-life example: Creating a working model of a small business network
- Activity: Use Packet Tracer to connect PCs, routers, and switches

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Module 8: Certification & Career Pathways

- CCNA exam format, topics, and preparation tips
- Career opportunities: network technician, administrator, engineer
- Real-life example: Journey of a certified network professional
- Activity: Plan your study schedule for CCNA exam

Bonus Materials

- Command-line cheat sheet
- Subnetting practice workbook
- Cisco Packet Tracer download and tutorials
- List of CCNA interview questions

- Certificate of Completion for CCNA Fundamentals