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| animatedLOGO | **Assignment No. 01 (Graded) Spring 2024 CS610P- Computer Networks(Practical)** | | **Total Marks: 10**  **Due Date: April 30, 2024** |
| ***Instructions:***  **Please read the following instructions carefully before solving & submitting the assignment solution:**  **It should be clear that your assignment will not get any credit (zero marks) if:**   * **The assignment is submitted after the due date.** * **The submitted assignment solution does NOT open or the file is corrupt.** * **The assignment is copied (from other students or copied from handouts or the internet).** * **Please ensure that your assignment submission is in the proper file format (i.e. Packet Tracer file). Solution submitted in any irrelevant file format such as scanned images, Doc/docx, PDFs, .zip, .rar, .bmp, etc., will not be accepted.**   ***Objectives:***  The objectives of this assignment are:   * To Design and structure the Star Topology network. * To make the device’s configuration using Cisco Packet Tracer.   **For any query about the assignment, contact at** [**cs610p@vu.edu.pk**](mailto:cs610p@vu.edu.pk)  **GOOD LUCK** | | | |
|  | | **Marks: 10** | |

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| **Question No. 1: (Marks 10)**  Consider a smart home setup, where a star topology network is employed. At the center of this network, there exists a powerful smart home hub, controlling all connected devices. Five different nodes (computers) represent various smart devices distributed throughout the home network. Mentioned below are the labeling of the topology design.   * **Central Hub**: Smart home controller in the living room (*should be labelled with your vuid*) * **Node 1**: Smart thermostat in the hallway * **Node 2**: Smart security camera system around the exterior * **Node 3**: Smart refrigerator in the kitchen * **Node 4**: Smart lighting system in the bedroom * **Node 5**: Smart speaker system in the home office   This star topology network enables seamless communication between all devices and the central hub, facilitating efficient automation and control of the smart home environment. Each node is connected to the central hub; hence it can interact independently, enhancing convenience, comfort, and security for the residents.  In this scenario, you must ***design and structure*** the Star Topology with the proper *device configuration* using the Cisco Packet Tracer. You can configure each node in your smart home-based network with the following static IP addresses:   * **Central Hub**: Smart home controller in the living room (*should be labeled with your VUID*) * **Node 1**: 192.168.1.3 * **Node 2**: 192.168.1.4 * **Node 3**: 192.168.1.6 * **Node 4**: 192.168.1.9 * **Node 5**: 192.168.1.11   **Note:** You must submit your solution as a *Packet Tracer* file. |
| **Lectures Covered:** This assignment covers Lab # 1 to 3.  **Deadline:** Your assignment must be uploaded/submitted on or before the due date. |