FORMATIVE ASSIGNEMNT

HTU Course No: 10203210	HTU Course Name: Network Security
BTEC UNIT No: Unit 29 (M/618/7443)	BTEC UNIT Name: Network Security

Assignment Number: 1

Version   1

Formative Assignment Brief

Student Name/ID Number	
HTU Course Number and Title	**10203210: Network Security**
BTEC course number and title	**Unit 29 (M/618/7443)**
Academic Year	2022/2023 (Spring Semester)
Assignment Author	Eng. Sami Al-Mashaqbeh
Course Tutor	Dr. Eyad Taqieddin , Eng. Sami Al-Mashaqbeh. Eng. Mohammad Erdisat
Assignment Title	JAC
Assignment Ref No	Assignment 1
Issue Date	**18/04/2023**
Submission Date	**25/04/2023**

Submission Format
Each student is expected to individually submit his/her work including **Evidence** of the implemented network (**soft copy of the .pkt** file). Students should use the **<u>Cisco Packet Tracer</u>** simulator **<u>version 8.2 or greater.</u>**
Objectives
Build the Network and Configure Basic Device Settings   **Create VLANs and Assign Switch Ports**   **Maintain VLAN Port Assignments and the VLAN Database**   **Configure an 802.1Q Trunk between the Switches**   **Configure a Named Extended ACL**   **Apply and Verify the Extended ACL**
Assignment Brief and Guidance
PART1 :Build a secure networked system to meet the business requirements below.

VLAN#	Site Name (VLAN Name)	VLAN Subnet IP	Device IP
10	Human Resources (HR)	10.0.0.0/8	PC1 10.0.0.10 PC2 10.0.0.20 GW 10.0.0.1
20	Administrators (AD)	20.0.0.0/8	PC1 20.0.0.10 PC2 20.0.0.20 GW 20.0.0.1
30	Employees (EMP)	30.0.0.0/8	PC1 30.0.0.10 PC2 30.0.0.20 GW 30.0.0.1
40	Datacenter (DS)	40.0.0.0/8	Server 40.0.0.100 GW 40.0.0.1

Device	Interface	IP Address	Port
R1	G0/0/0.10	10.0.0.1/8	N/A
	G0/0/0.20	20.0.0.1/8	
	G0/0/0.30	30.0.0.1/8	
	G0/0/0.40	40.0.0.1/8	
S1	VLAN 10,20,and 30	N/A	F0/1 : VLAN10 F0/6 : VLAN20 F0/10: VLAN30 G0/1: TRUNK
S2	VLAN 10,20,30,and 40	N/A	G0/1: TRUNK G0/2: TRUNK F0/24: TRUNK
S3	VLAN 10,20,30,and 40	N/A	F0/1 : VLAN10 F0/6 : VLAN20 F0/10: VLAN30 G0/2: TRUNK G0/1: VLAN40

PART2 :configure extend named ACL to meet the business requirements below.

- *The server in VLAN 40 are accessible by other VLANs according to the following rules:*
    - HTTPs server is accessible by all VLANs except HR PC1.
    - Mail server is accessible by only VLAN 10.
    - FTP server is accessible by only the HR PC1(10.0.0.10), and Admin PC1(20.0.0.10).
    - HTTP server is accessible by VLAN 30 except EMP PC2 (30.0.0.2)
    - ICMP echo request to the server is accessible only by admin PC1

- VLAN 10 can ping VLAN 20, but cannot ping VLAN 30
- VLAN 20 can ping VLAN 30 except EMP PC1 (30.0.0.1)