

## Sample project for CCNA Topics:

### First:

1. Build the topology as shown in the figure.
2. Configure the basic settings as follows:
  - A- Set hostname for all switches and routers as:
    - Switches (S1, S2, S3...)
    - Routers (R1, R2...)
  - B- Use domain name: ITI
  - C- Set all passwords to 1234
  - D- Create user: Mostafa
  - E- Set subnet mask for all networks to /24

### Second:

1. Configure port security on SW5`.
2. Enable Spanning Tree Protocol PVST as follows:
  - On SW2: make it the root for VLAN 20
  - On SW3: make it the root for VLAN 40
3. Enable VTP protocol with:
  - Domain: ITI
  - Password: 1234
  - Configure on SW2 and SW3

### Third:

- DHCP Configuration:
- Configure the following networks to obtain TCP/IP automatically via DHCP from Router R1:
  - Network: 172.16.0.0/24, 172.16.4.0/24, 172.16.6.0/24

### Forth:

- Access Control List (ACL):
  1. Create an extended ACL to prevent VLAN 20 on SW3 from accessing web service on Server 1 but permit access to all other users.
  2. Create an extended ACL to prevent Host1 from accessing web services and from pinging.

### Fifth:

1. Configure PAT (Port Address Translation) on Router R4.
2. Enable remote management (SSH) on SW5 and prevent telnet.