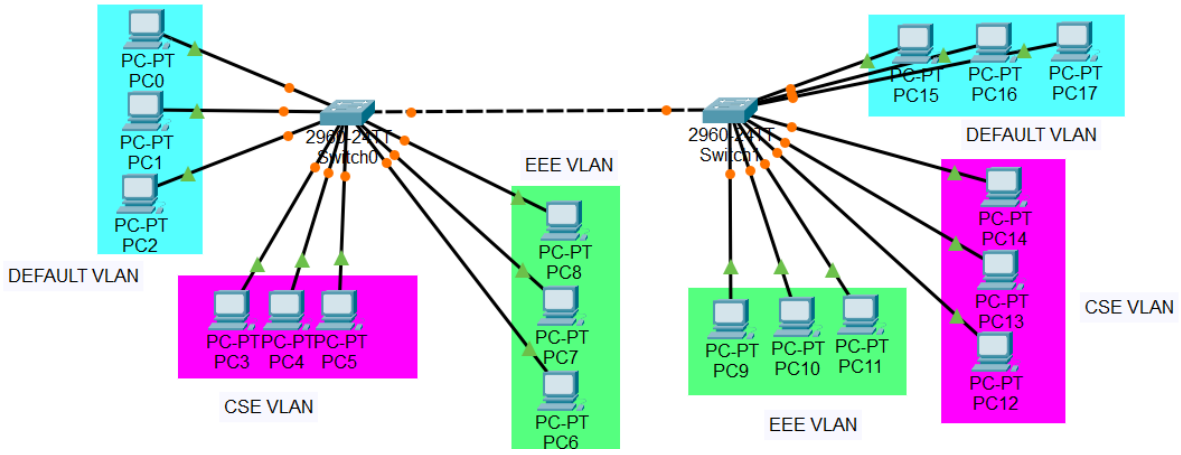

Figure 4.1: VLAN Configuration.

5. Programs or Procedure

5.1: Launch Cisco Packet Tracer.

Launch **Cisco Packet Tracer** and create a new project by selecting the **New** option from the File menu.

5.2: Set up the network topology:

- **Add a switch** (2960-24TT).
- **Add 9 PCs** and connect them to the switch using straight-through cables.

5.3: Configure VLANs on the switch:

Access the switch's CLI and enter the configuration mode:

```
Switch#en
Switch#sh vlan
```

5.4: Create VLANs:

```
Switch#config t
Switch(config)#vlan 2
Switch(config-vlan)#name cse
Switch(config-vlan)#vlan 3
Switch(config-vlan)#name eee
Switch(config-vlan)#exit
Switch(config)#exit
Switch#
```

1. Objectives

The objective of this lab is to understand and implement VLAN (Virtual Local Area Network) configurations using Cisco Packet Tracer. The goal is to demonstrate network segmentation by creating separate VLANs and connecting computers to a switch to illustrate communication within VLANs.

2. Necessary Tools

2.1 Software:

Cisco Packet Tracer: A network simulation tool used to design and simulate networking environments.

2.2 Hardware:

- **Switch**: A central network device that connects multiple devices on the network and facilitates data transmission. In this lab, a 2960-24TT switch is used to connect all PCs.
- **Client Devices**: PCs (Personal Computers) that serve as nodes in each VLAN. Each PC in this simulation is used to demonstrate connectivity and isolation within the network.
- **Cables**: Straight-through cables are used to connect PCs to the switch.

3. Theory/Background

A **VLAN** is a logical grouping of devices within a larger network. VLANs enhance network security and manageability by dividing a physical network into multiple isolated sub-networks. Devices in the same VLAN can communicate freely, but communication between VLANs requires a Layer 3 device like a router.

4. Figures

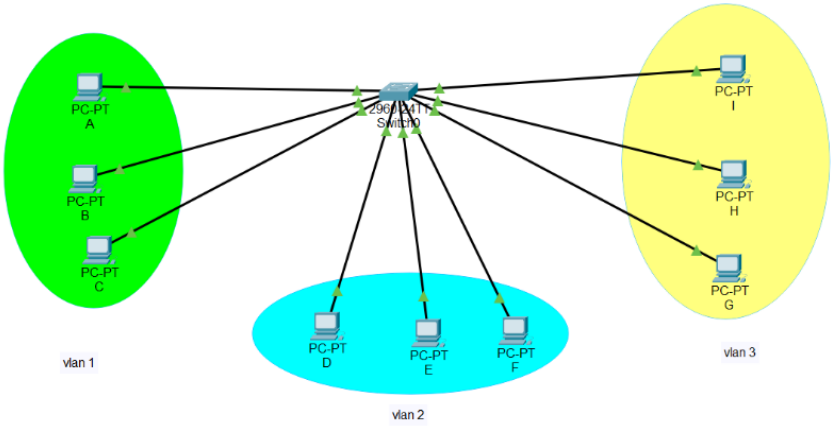

Figure 4.1: VLAN Configuration.