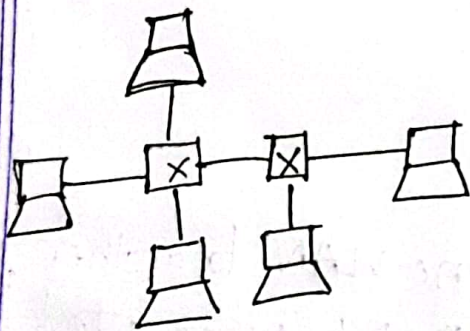Tunnelling — preprocess the data
Encryption

VLAN — Virtual LAN

is a logical grouping of devices in the same broadcast domain.

Seperate numbering
$$\underline{1-4094}$$
$\sqsubset$ VLAN address.

VLAN 0 & VLAN 4095 ← Reserved :

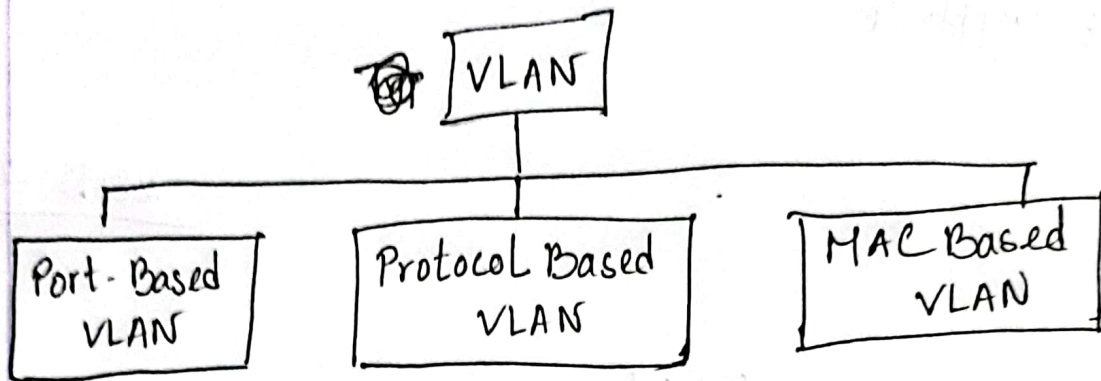VLAN 1 ← Default
      (can't be deleted). can be used in contoolling
              created

VLAN 2 — VLAN 1001 ← Normal VLAN range

VLAN 1002 — VLAN 1005 ← CISCO default VLANs

VLAN 1006 — VLAN 4094 ← Extended range

3 types of VLAN :

```
                   [ VLAN ]
                      |
   ┌──────────────────┼──────────────────┐
[ Port-Based ]   [ Protocol Based ]   [ MAC Based ]
[   VLAN    ]    [     VLAN      ]    [    VLAN   ]
```

→ Latency is less in VLAN than LAN

→ Setup, maintainence easier.

Disadvantages of VLAN:

- A packet can leak from one VLAN to another
- An injected packet may lead to cyber attack
- A single threat may spread virus through whole logical network.
- Problems in interoperability
- A VLAN can not forward network traffic to other VLAN

VLAN is used —

→ If there are more than 200 devices in LAN
→ Huge traffic

06.12.22

Slide — 13

DNS

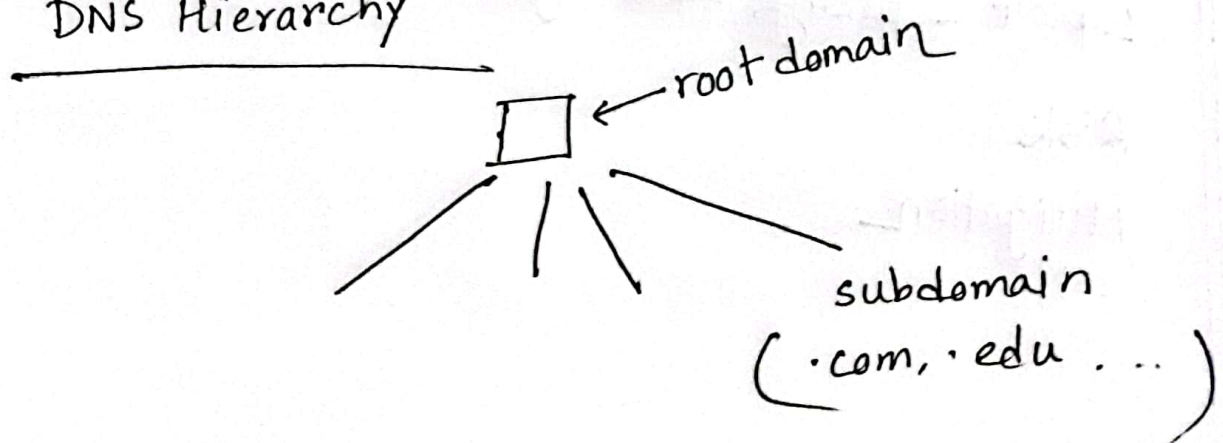website address used in place of numeric network
address.
→ ease of users.

Question
Answer → resources needed
Authority
Additional

DNS Hierarchy

root domain

subdomain
(.com, .edu ...)

Domain — range of permitted values

nslookup

Slide-13
Networking Security

Assets → people of an organization; equipment resources, data

Vulnerability → weakness in a system or design or functionality.

Threat → potential danger to company's asset

Exploit - taking advantage

Risk
Mitigation

4 types of ~~theft~~ threats:

→ Information theft
→ Data Loss of manipulation
→ Identity Theft
→ Disruption of service

Types of vulnerabilities

→ Technological
→ Configuration
→ Security policy