Week-4

Virtual Private Cloud :-

VPN ——> (Virtual) (Private Network)

① ②

Peshawar   Dedicated   Lahore

[ ] ⌣ Network ⌢ [ ]

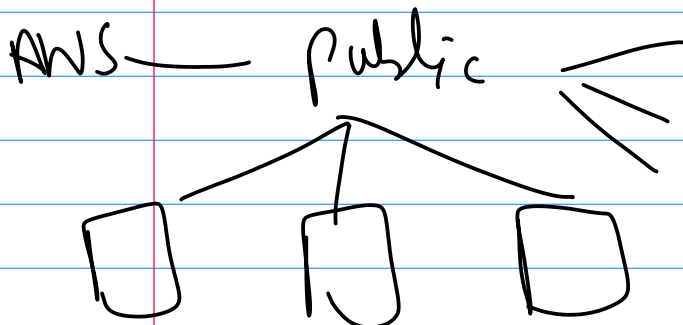WiFi / Cable

Cost ——>
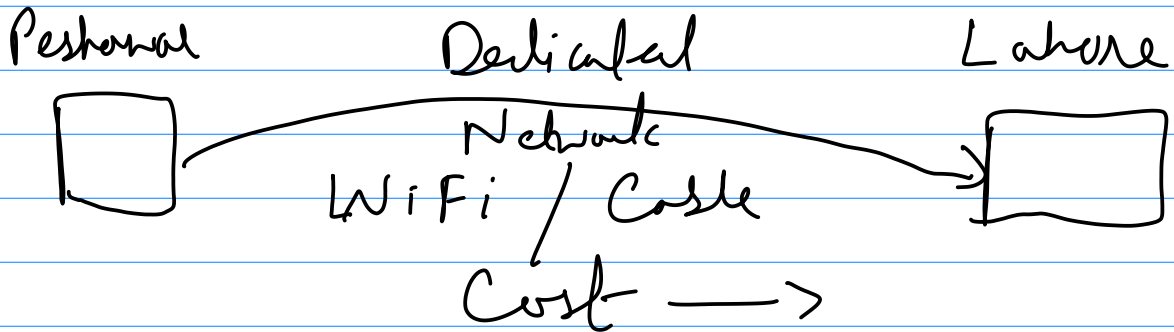
Public Network (Internet)

VPN

Creation of Private Network

Using Public network

VPN

Virtual Private Cloud

AWS —— Public ⟵ We can not

[ ] [ ] [ ]   trust third party

for this service

Default — VPC Dflt

Cloud Provider

VPC ———————> Custom VPC ②

① Defult

Security —— concern ——> We can enforce
constraint as per
need

Subnetting :- ??

Network with in a network.

CS Dennt
40 PCs
N |————————————| H
192-168-10-0

SE
20
PCs
N |————————————| H
192-168-11-0

Switch
Managl.
Sam 30
PCs

Router

Swit
S E E
15 PC

Switch   255   Router (Intermify)

Subnets

Front-End

Private IP's   Public IP's

Back End

[diagram] Frwl2 — public

[box diagram] → Private

$$40 \longrightarrow 2^n - 2 \geq 40$$

$$2^6 - 2 \geq 40$$

$$62 \geq 40$$

$192-168-1-\textcircled{5} \longrightarrow Bin$

burrow

$\circ\circ \boxed{\circ\circ\circ\circ\circ\circ}$

192-168-1-0/26

Host-

128 64 32 18 8 & 2 ·

$\boxed{\textcircled{1}\circ\circ\circ\circ\circ\circ}$

255·255·255·192   192   N   H

A 1 —— 126
B 128 —— 191
C 192 —— 223

T — ぅ — ぅ — ぅ
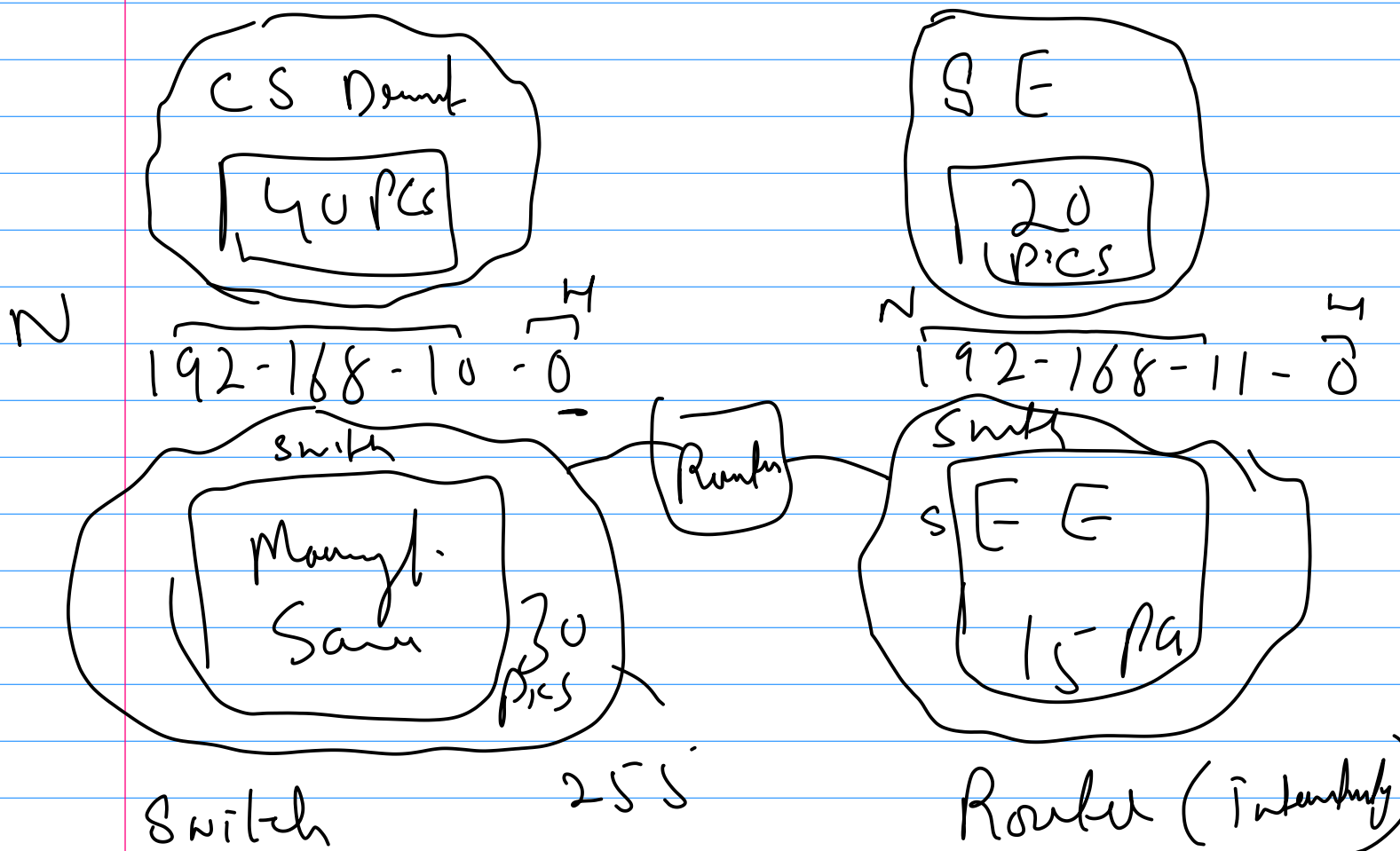
Subnet --1

192 - 168 - 1 - 0 /26

Subnet - 2

192 - 168 - 1 - 64/26

192 - 168 - 1 - 128 / 26

192 - 168 - 1 - 192/26

VPC

Public ————————— Constant

Private ————————— Constant

Region ————————— North Verginia
                                       US

Zones   China

1 Region ———— 5 VPC

1 VPC ————— 200

VPC Components

1. SubNet ⟵ public / private
2. Internet Gateway
3. Security Group
4. NaCl ⟶ Network Access Control list
5. NAT Gateway
6. Router

VPC ———————— Router

AWS
VPC — Region
Zone A — FRONT [EC2] Public — Route Table
Route — IG
Zone B — RDS. Database Private — Route Table
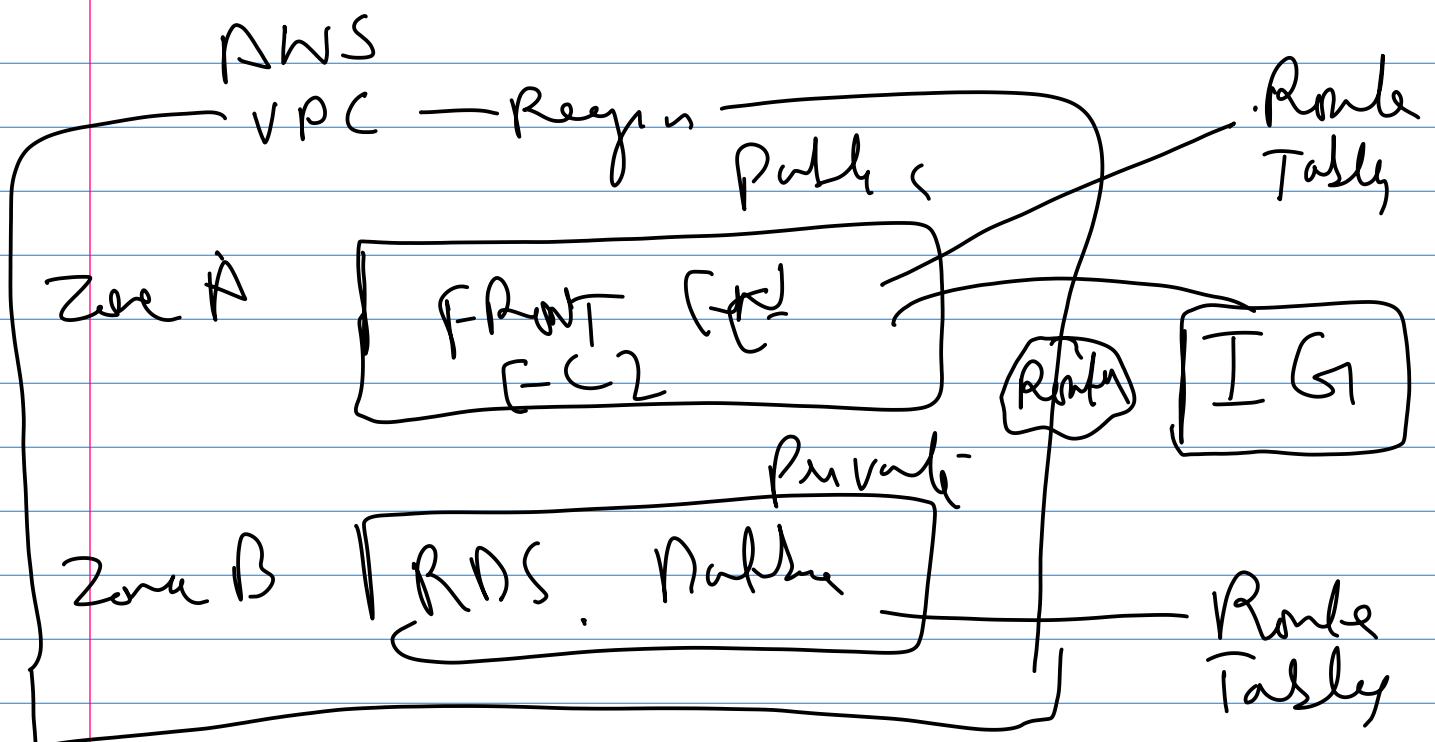
NAT Gateway —— Network Addeley
                      Trunbh

NateGumy ——————> Public
        ⌐——————————— Private

NACL   Security Grup
Network Level   —> Oprnte Instnce
  1 subnat-   Level

  ▯ ▯ ▯ ▯   Allow   Only

Allon / Deny

VPC Peering

  VPC   Punke   VPC
  ▭——————————▭
            IP