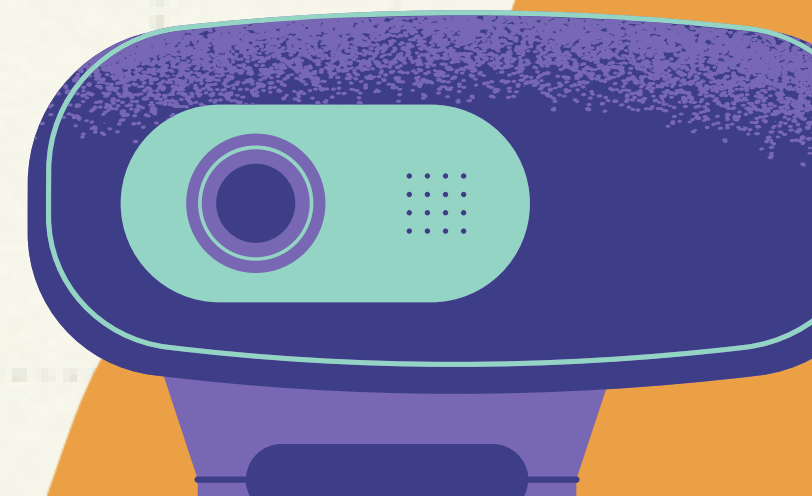
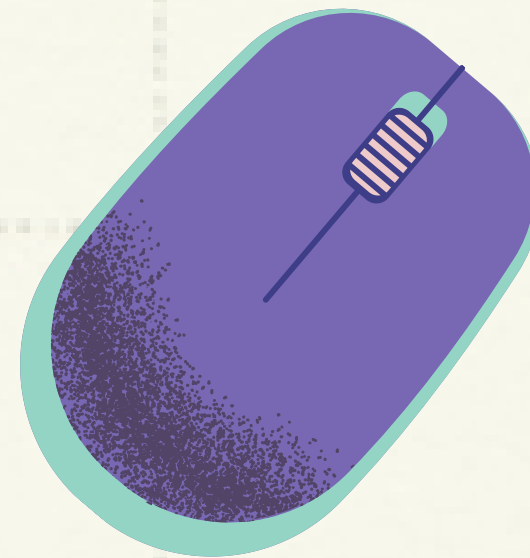
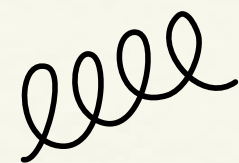
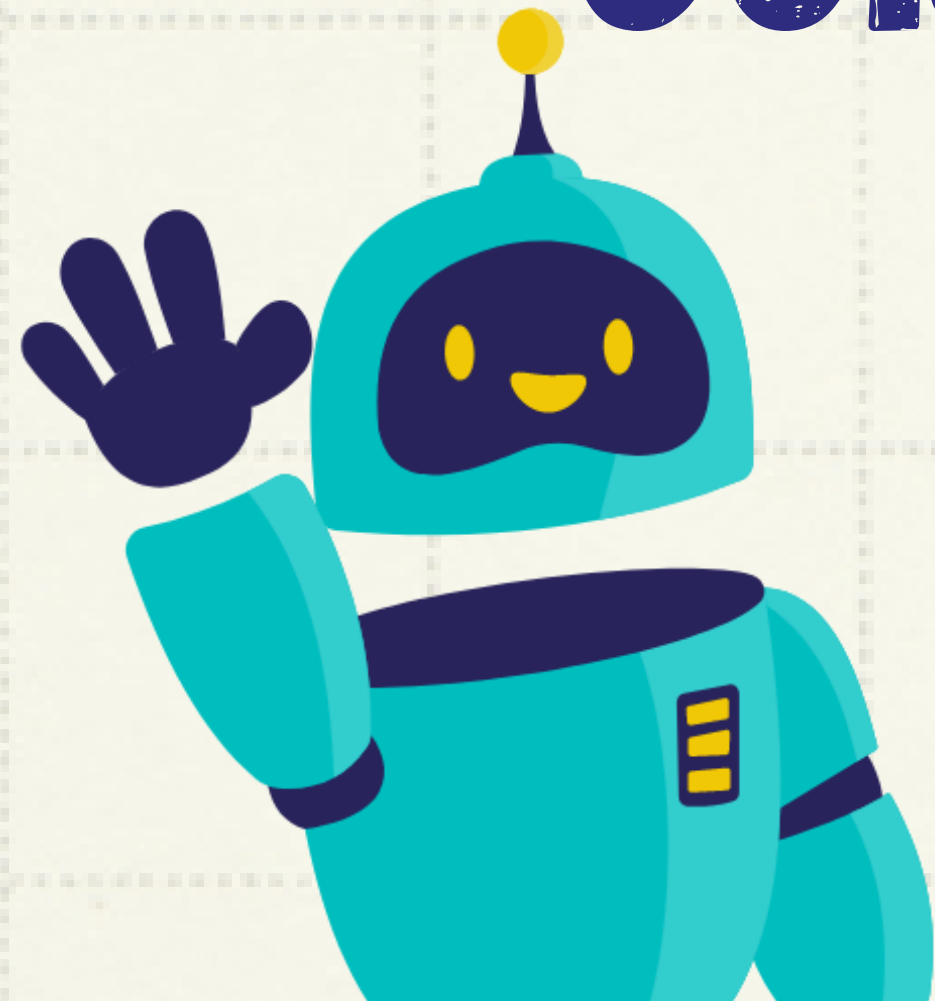
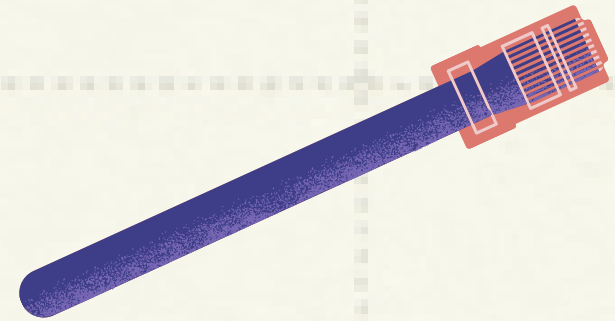
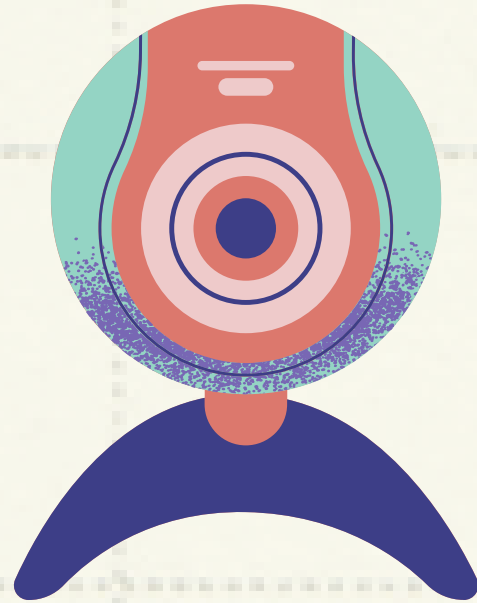
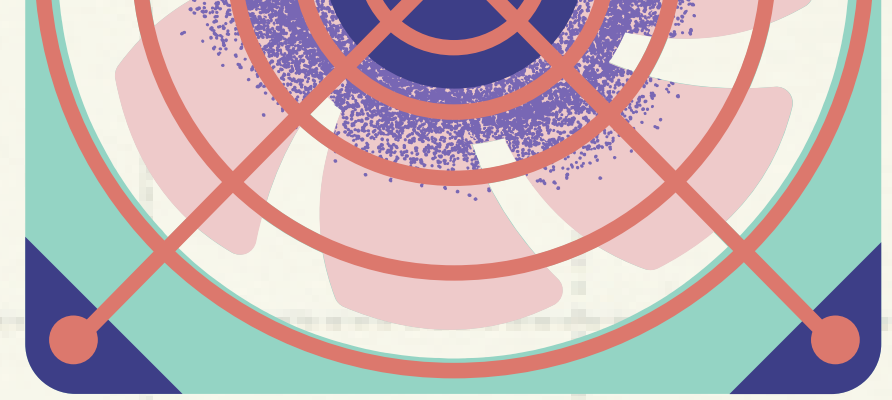


COMPUTER NETWORK



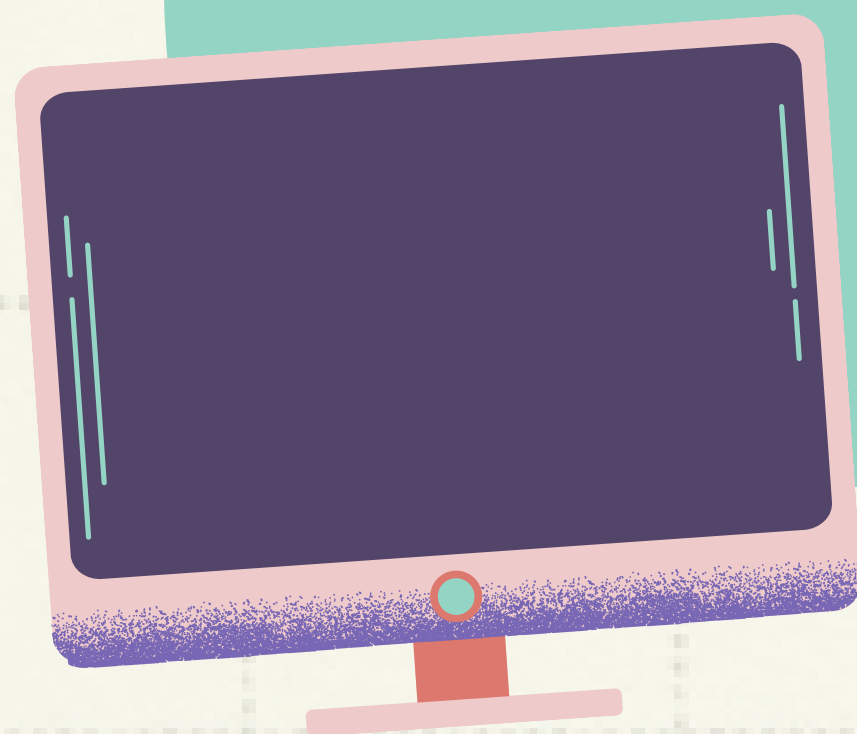


LAYER

1

&

2



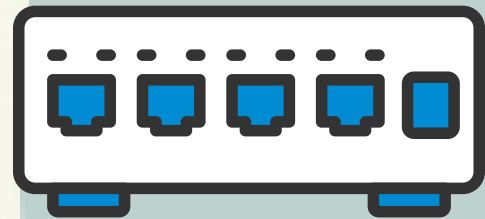
INSTRUCTIONS

lll

lll



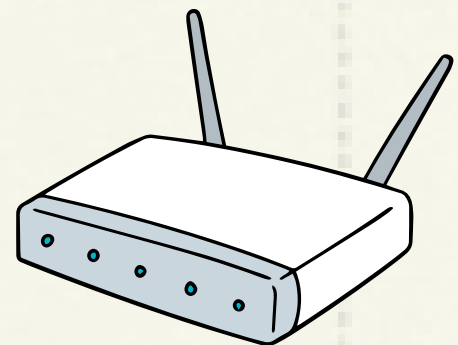
PC



SWITCH



ROUTER



ACCESS POINT



KABEL → LAN

ROUTER

Ubiquiti UDR , Unifi Dream Router

Terjual 14 • ★ 5 (5 rating) • Diskusi (2)

Rp4.620.000

[Detail](#)

[Spesifikasi](#)

[Info Penting](#)

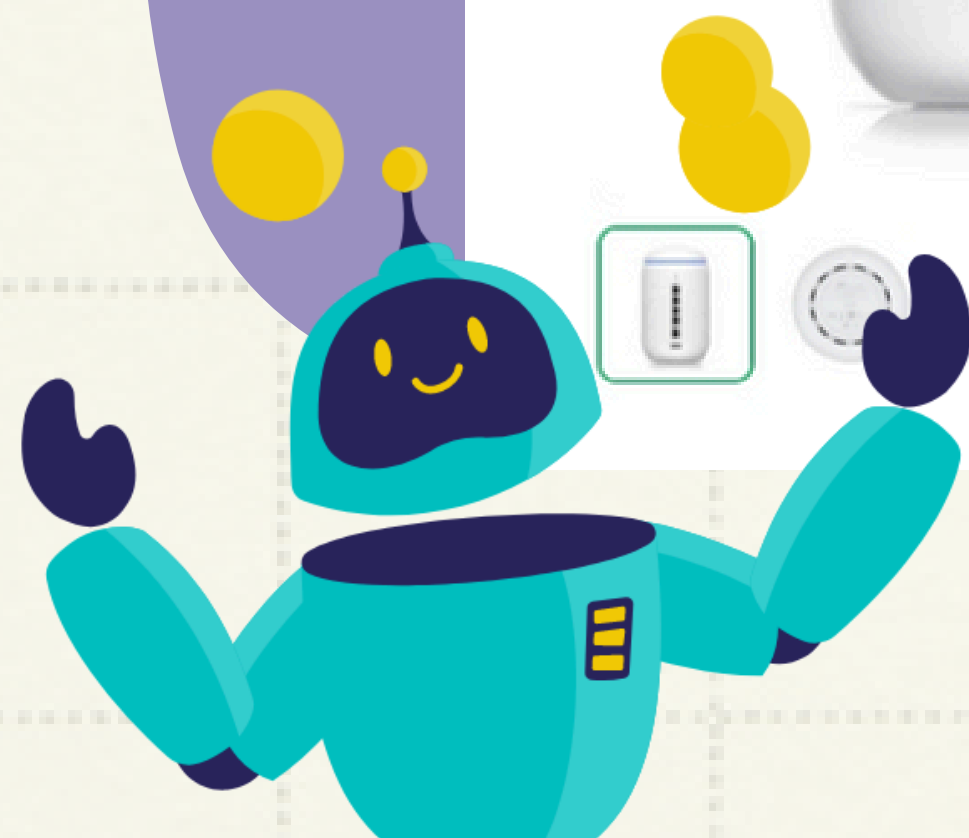
Kondisi: Baru

Min. Pemesanan: 1 Buah

Etalase: **UBIQUITI**

The Dream Router (UDR) is a next-generation WiFi 6 router that delivers unbeatable performance at an unmatched price. Featuring advanced 4x4 MU-MIMO and OFDMA technology, the UDR has an aggregate wireless throughput rate of up to 3 Gbps over its 2.4 and 5 GHz bands, ensuring quality connectivity for all of your devices. The UDR also has (5) GbE RJ45 ports, including two that supply PoE to compatible devices, and all of its connections can be conveniently monitored from the router's LCM color screen. Designed to be a...

[Lihat Selengkapnya](#)



SWITCH

SWITCH CISCO NEXUS 2232TM 32 PORT 10G Plus
8 PORT SFP 10GB

Terjual 1 • ★ 5 (1 rating)

Rp6.900.000

[Detail](#)

[Info Penting](#)

Kondisi: Bekas

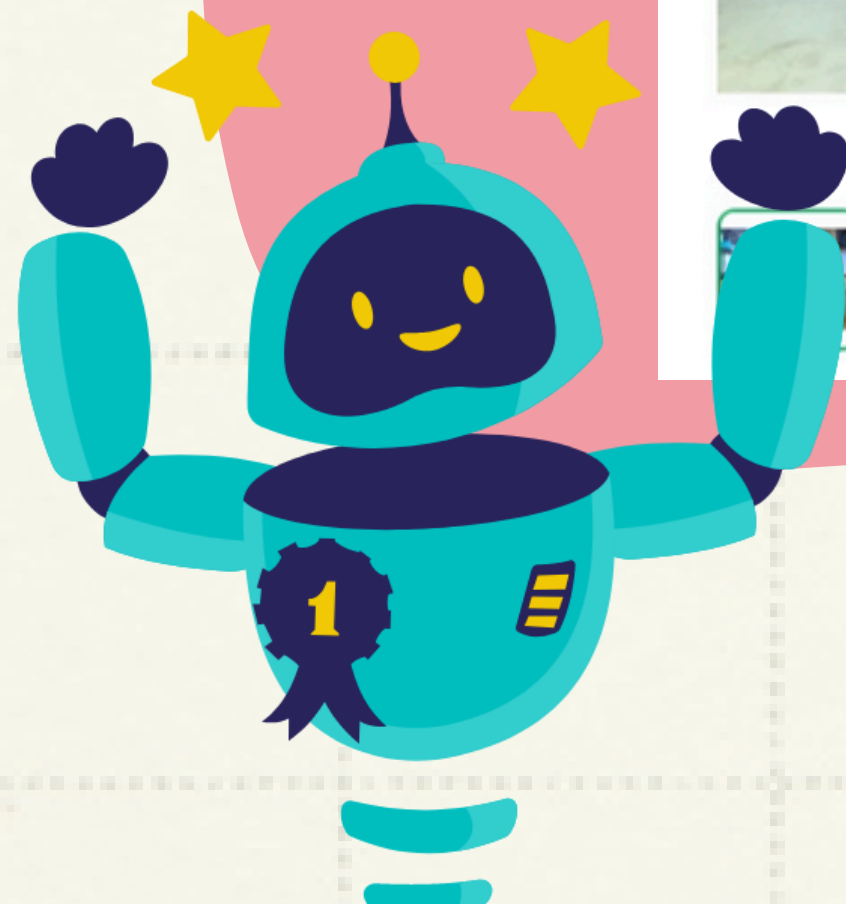
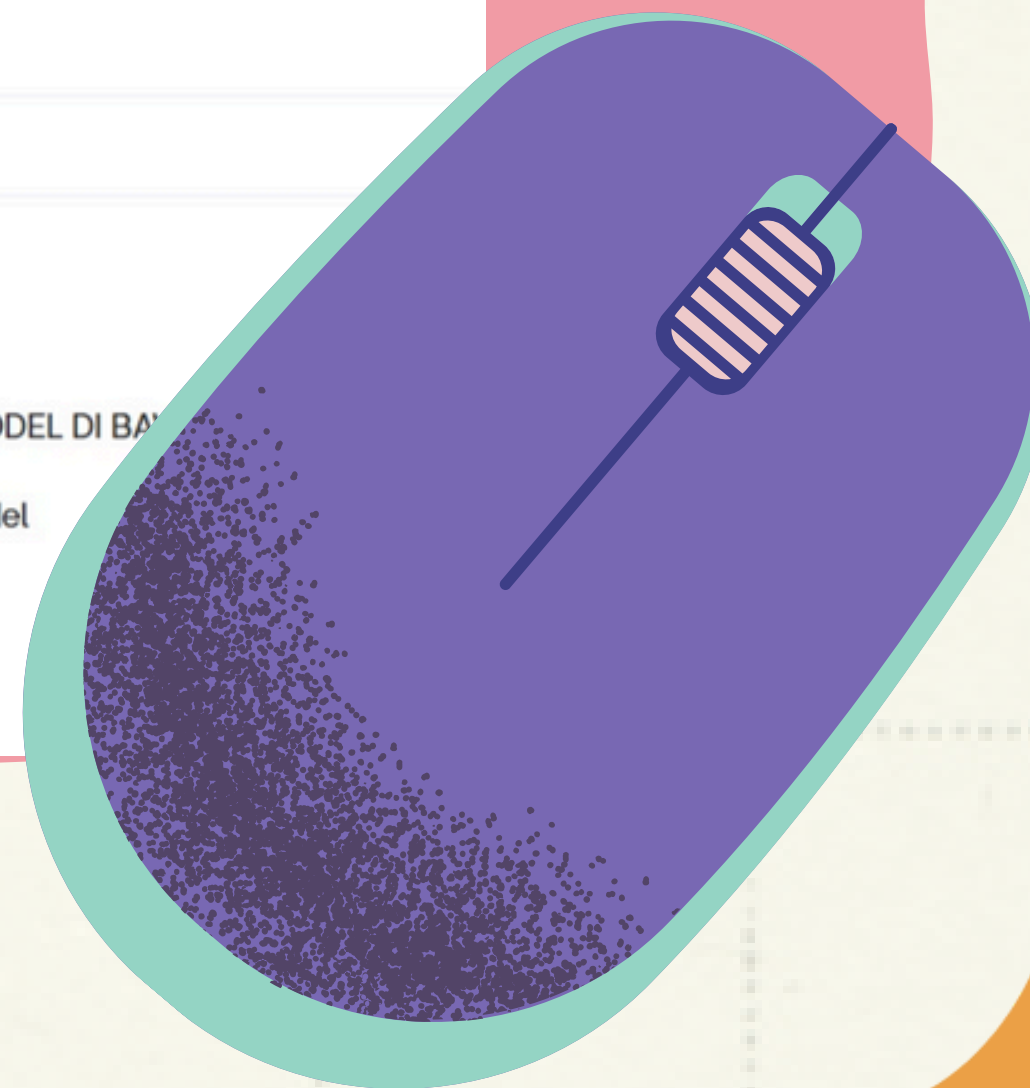
Min. Pemesanan: 1 Buah

Etalase: **HUB-CISCO**

NOTE:SWICTH INI.HARUS JOIN KE MODEL DI BAWAH

Cisco parent switch/join switch model

- Cisco Nexus 5000 Series
- Cisco Nexus 6000 Series
- Cisco Nexus 7000 Series
- Cisco Nexus 9000 Series...



ACCESS POINT

TP-LINK EAP-N10 Wireless N Ceiling Mount Access Point 300Mbps Indoor

Terjual 500+ • ★ 4.9 (115 rating) • Diskusi (1)

Rp399.000

Detail

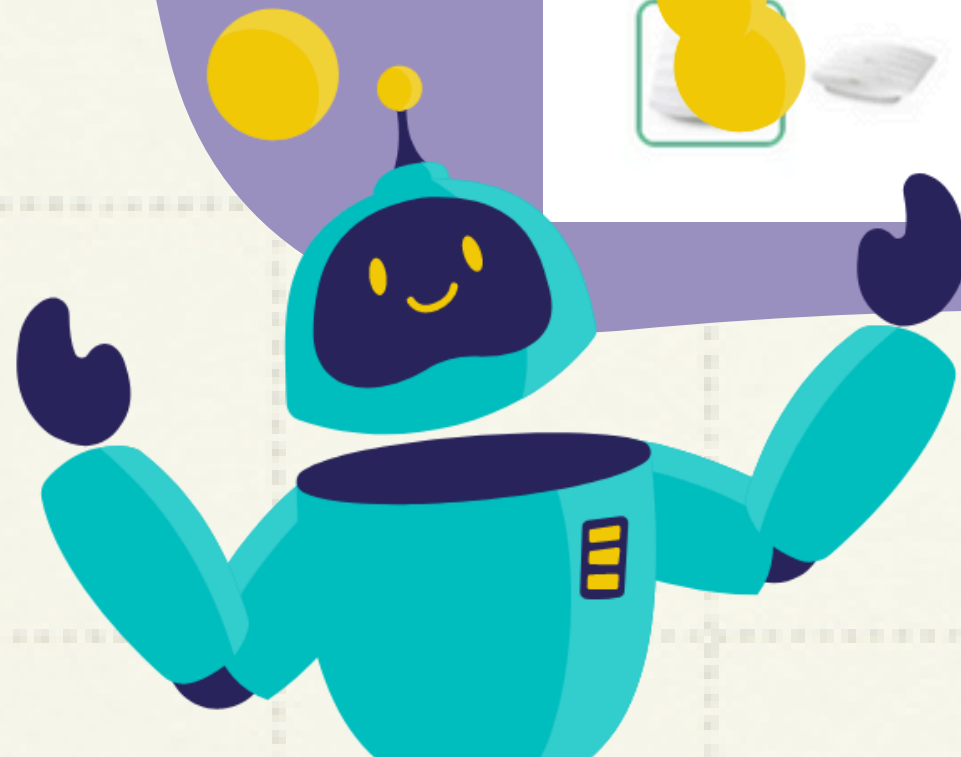
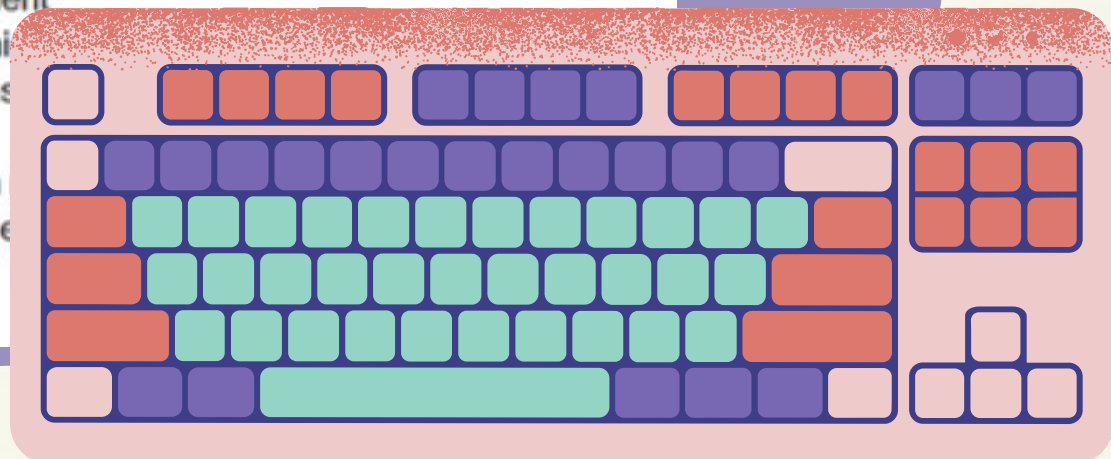
Info Penting

Kondisi: Baru

Min. Pemesanan: 1 Buah

Etalase: **TP-LINK**

Free cloud centralized management and Omada app for ultra convenience and easy management
Supports passive PoE for convenient installation
Ceiling mounting design with chameleon color, blends in with wall or ceiling
Secure guest network along with Omada Manager (SMS/Facebook Wi-Fi/ Voucher, etc.) and other technologies...



KABEL LAN



**BELDEN 7814A Kabel LAN UTP Cat. 6
Roll/Box/300M - Abu-abu / Grey**

Terjual 2 rb+ • ★ 5 (556 rating) • Diskusi (57)

Rp2.030.000

Pilih warna: Abu-Abu / Grey

100m

200m

50m

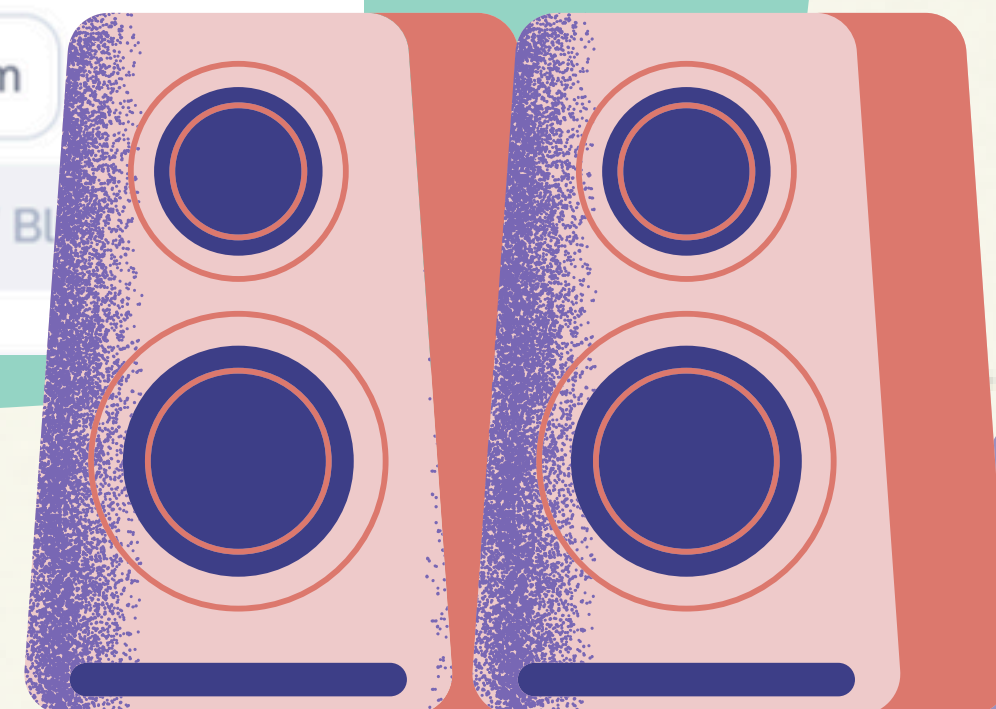
150m



Abu-abu / Grey



Biru / B



CONNECTOR KABEL LAN



Belden RJ45 Connector Cat.6 (Konektor RJ-45 Cat6 : AP700008) ORIGINAL

Terjual 10 rb+ • ★ 5 (3.561 rating) • Diskusi (90)

Rp318.000

[Detail](#)

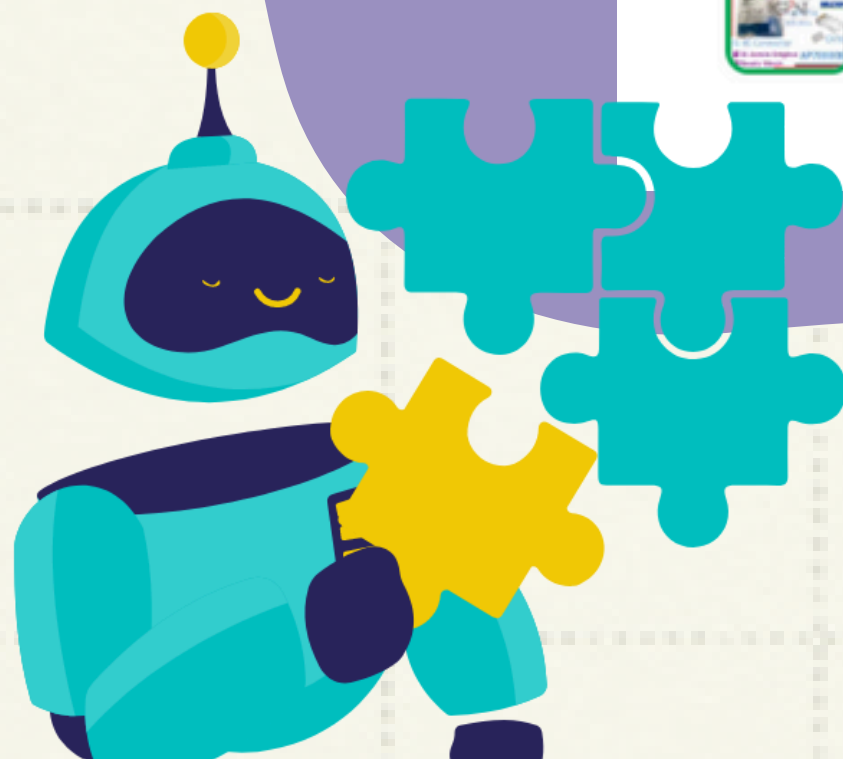
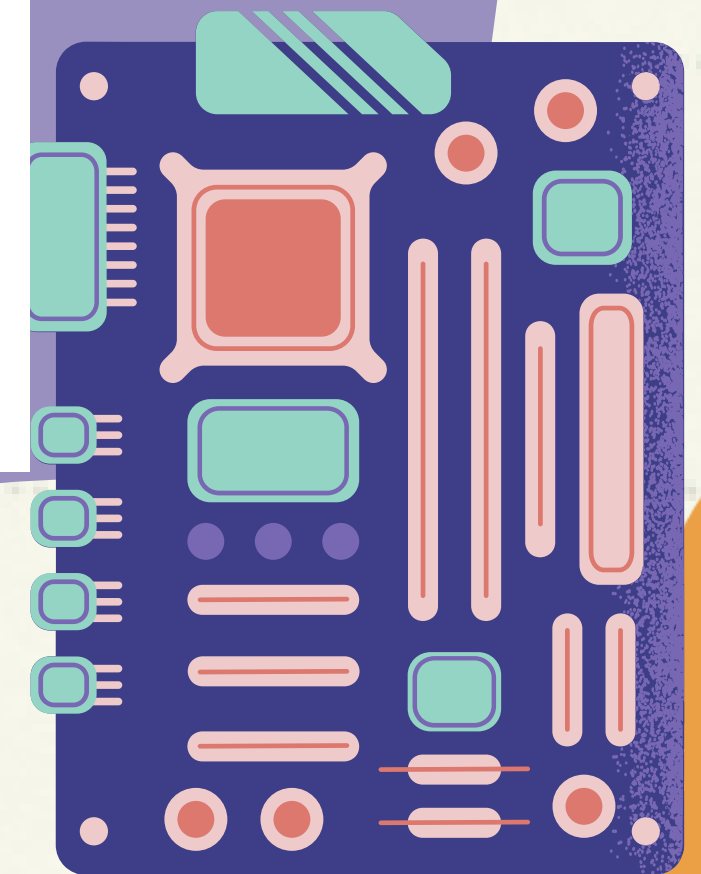
[Info Penting](#)

Kondisi: Baru

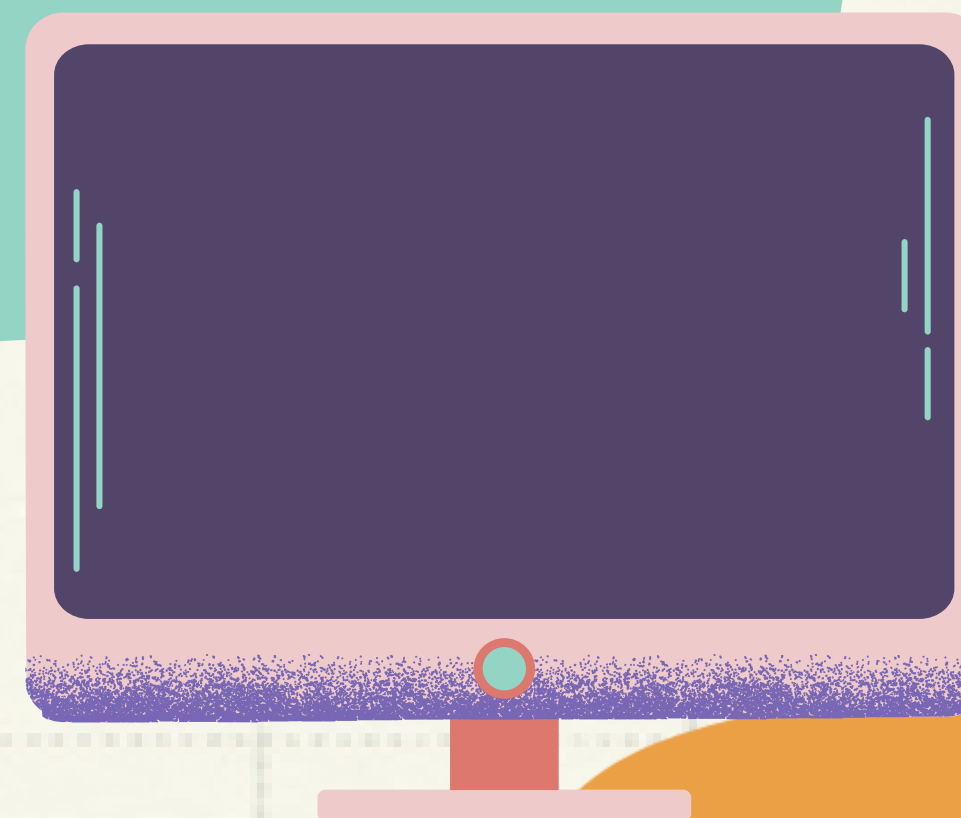
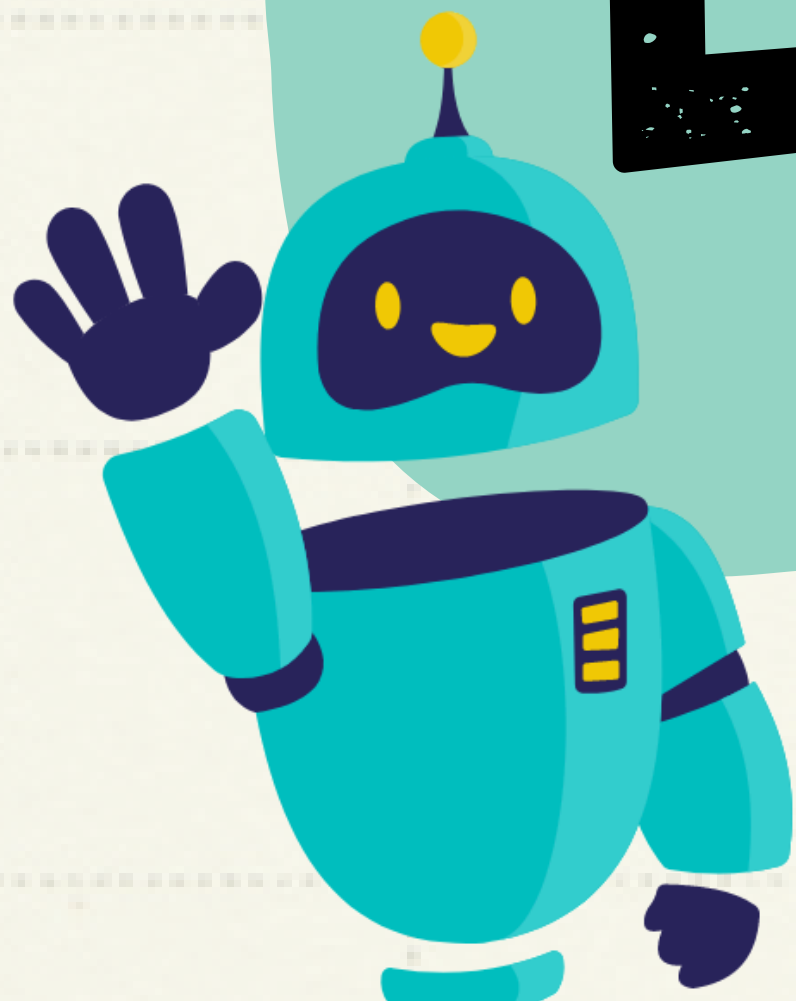
Min. Pemesanan: 1 Buah

Etalase: **BELDEN Product**

Belden RJ45 Connector Cat.6 (Konektor RJ-45 Cat6)
PN : AP700008

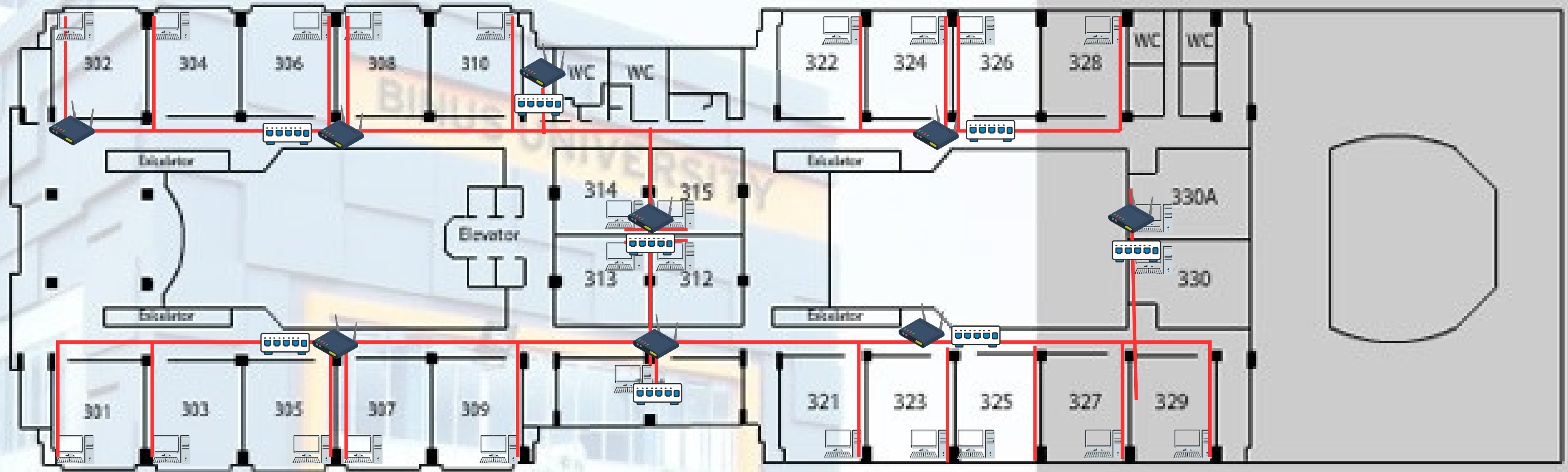


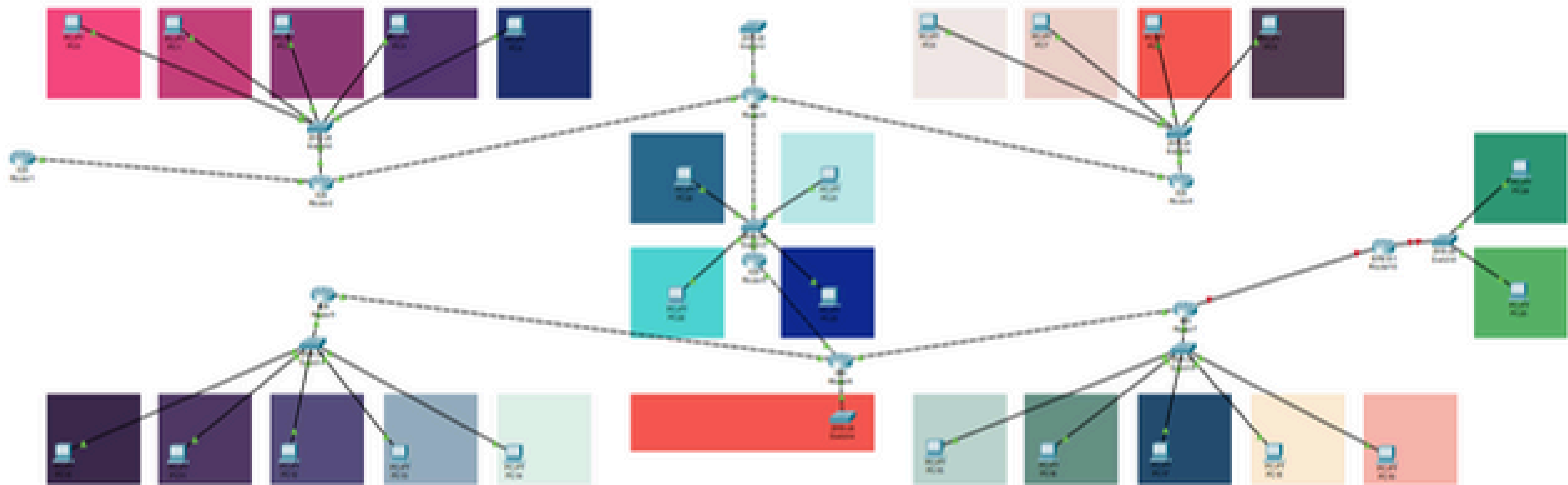
LANTAI 3



DENAH

LANTAI 3

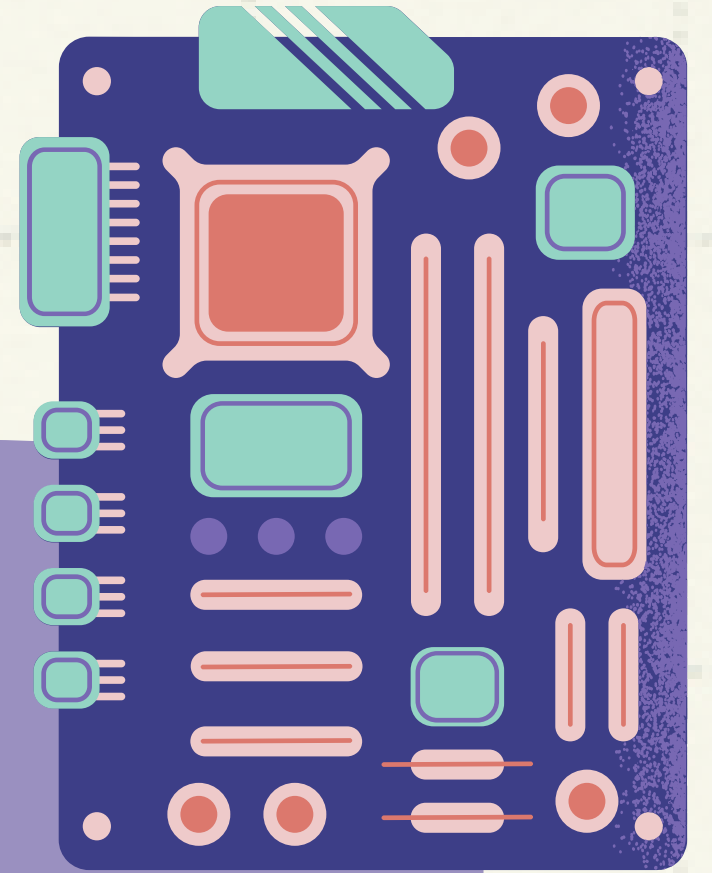






ROUTER : 4.620.000 X 9 = 41.580.000
SWITCH : 6.900.000 X 8 = 55.200.000
KABEL LAN : 2.030.000 X 2 = 4.060.000
CONNECTOR : 318.000 X 2 = 636.000

TOTAL : 101.476.000



LANTAI 5

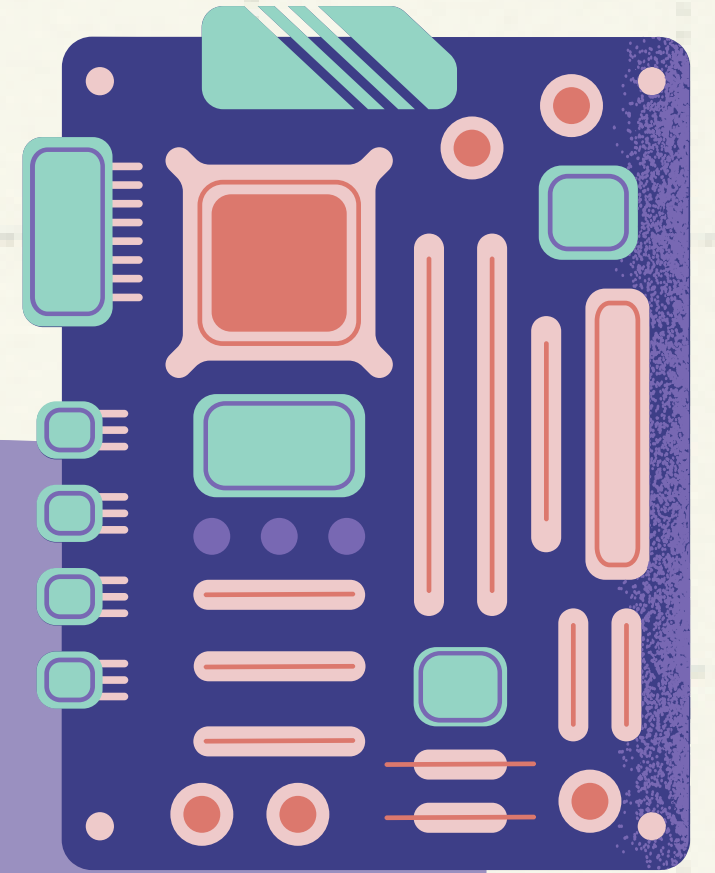


DENAH

LANTAI 5



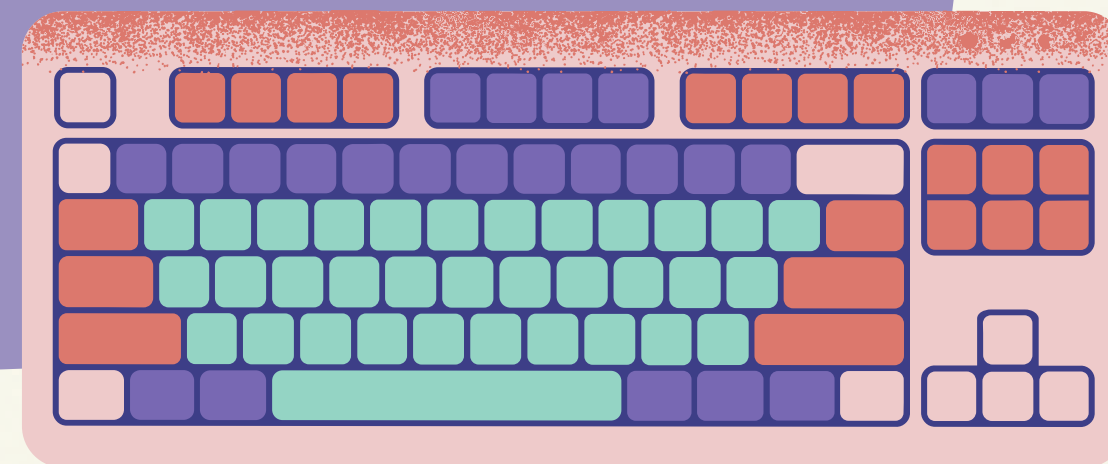
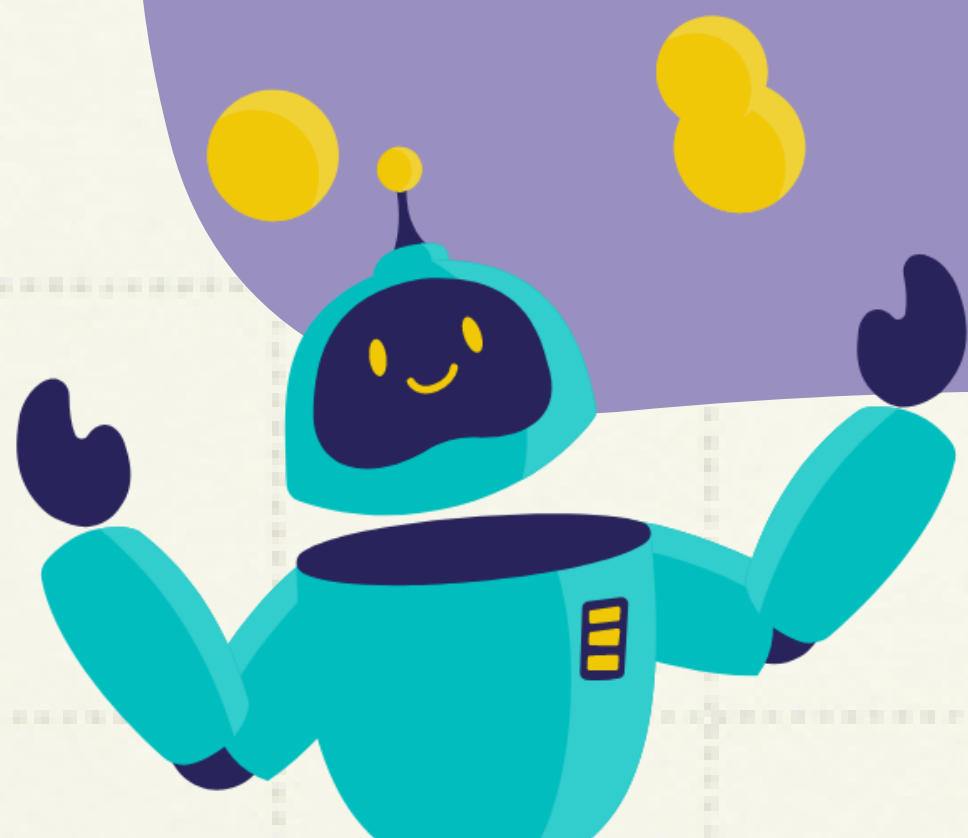
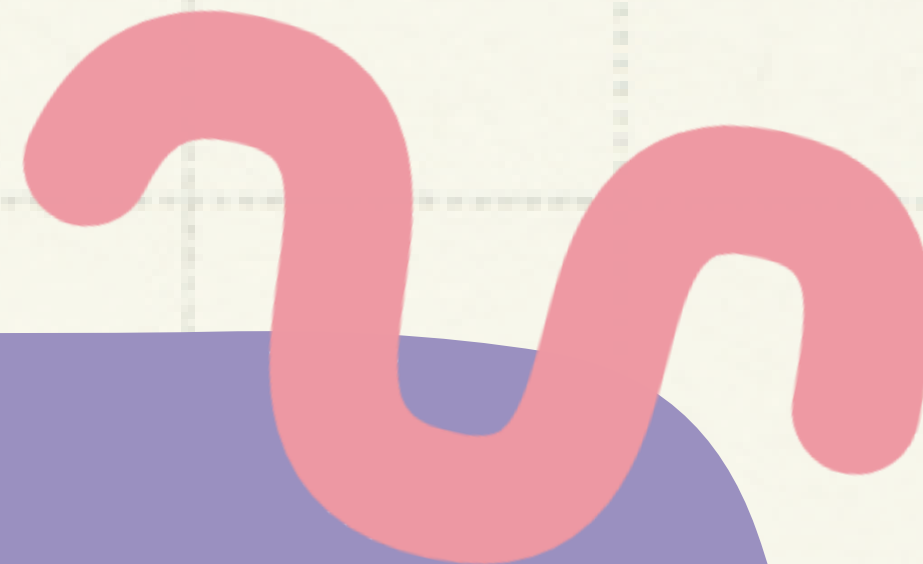
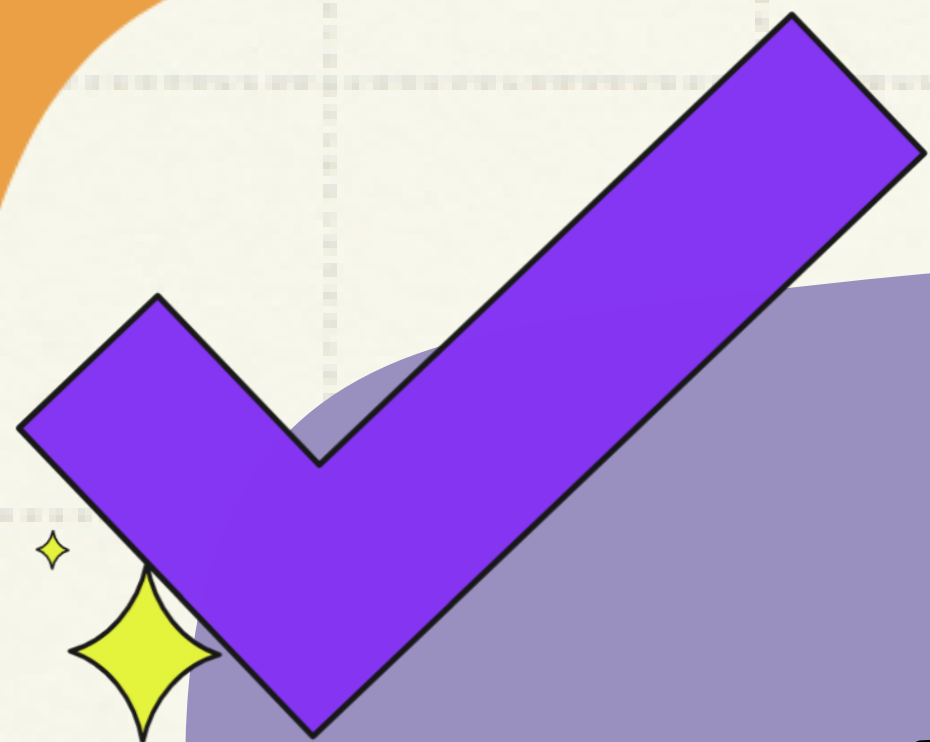




ROUTER : 4.620.000 X 8 = 36.960.000
SWITCH : 6.900.000 X 7 = 48.300.000
KABEL LAN : 2.030.000 X 2 = 4.060.000
CONNECTOR : 318.000 X 2 = 636.000

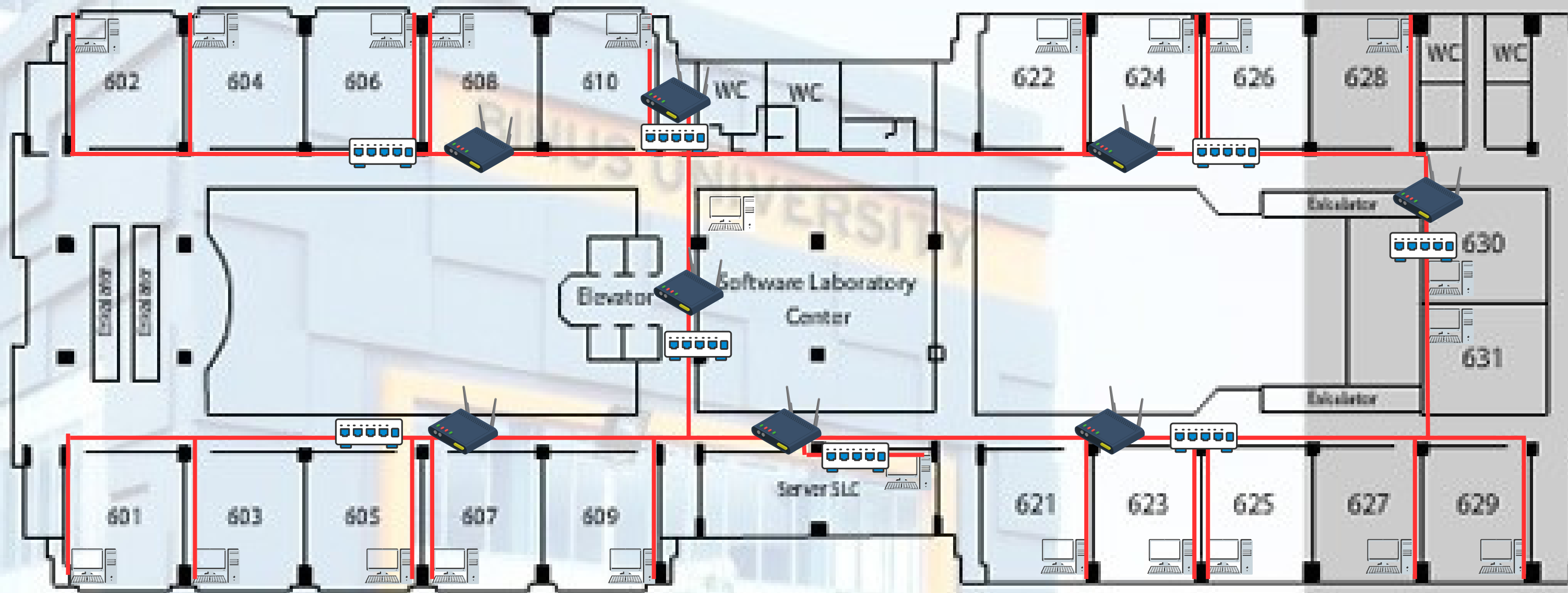
TOTAL : 89.956.000

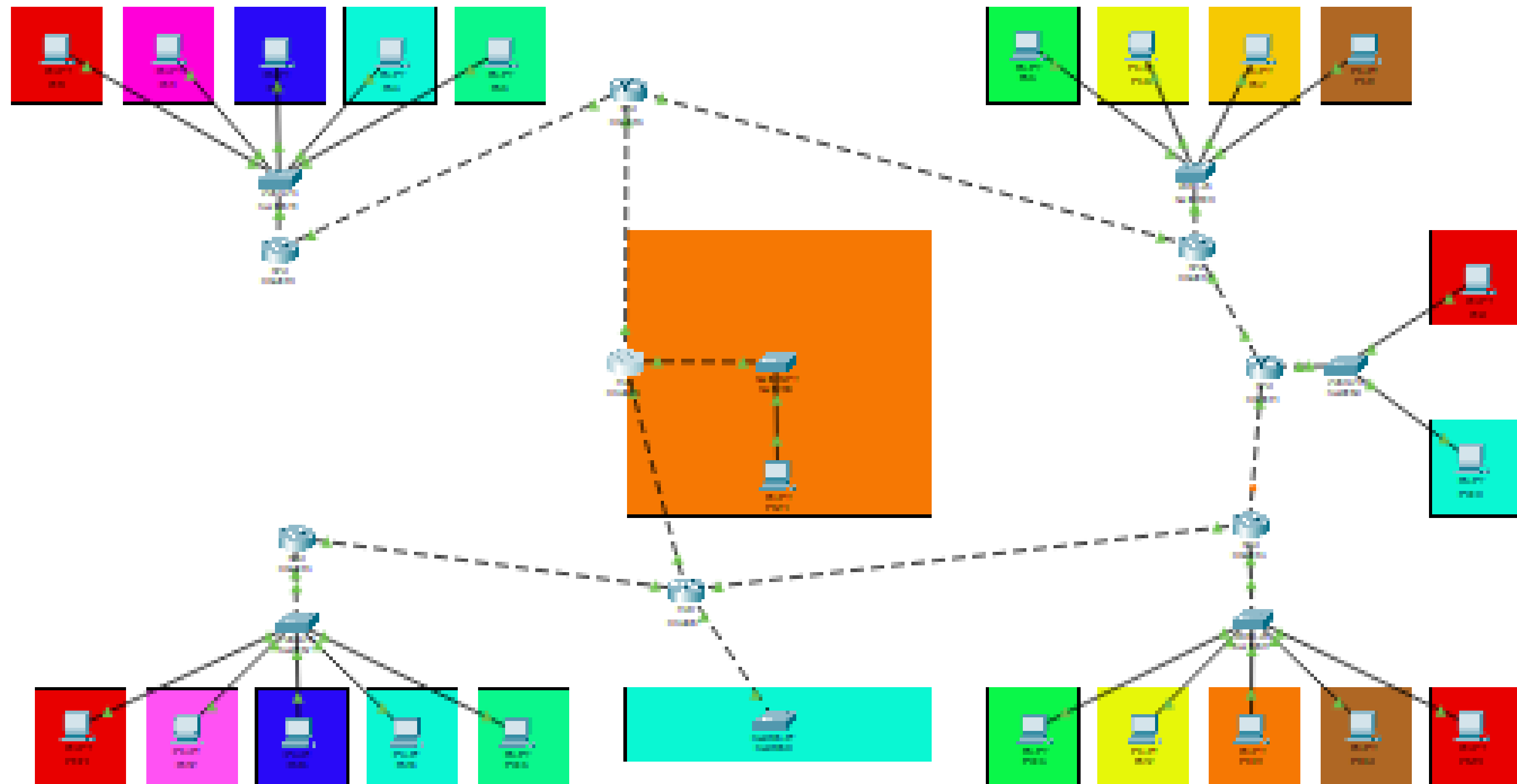
LANTAI 6



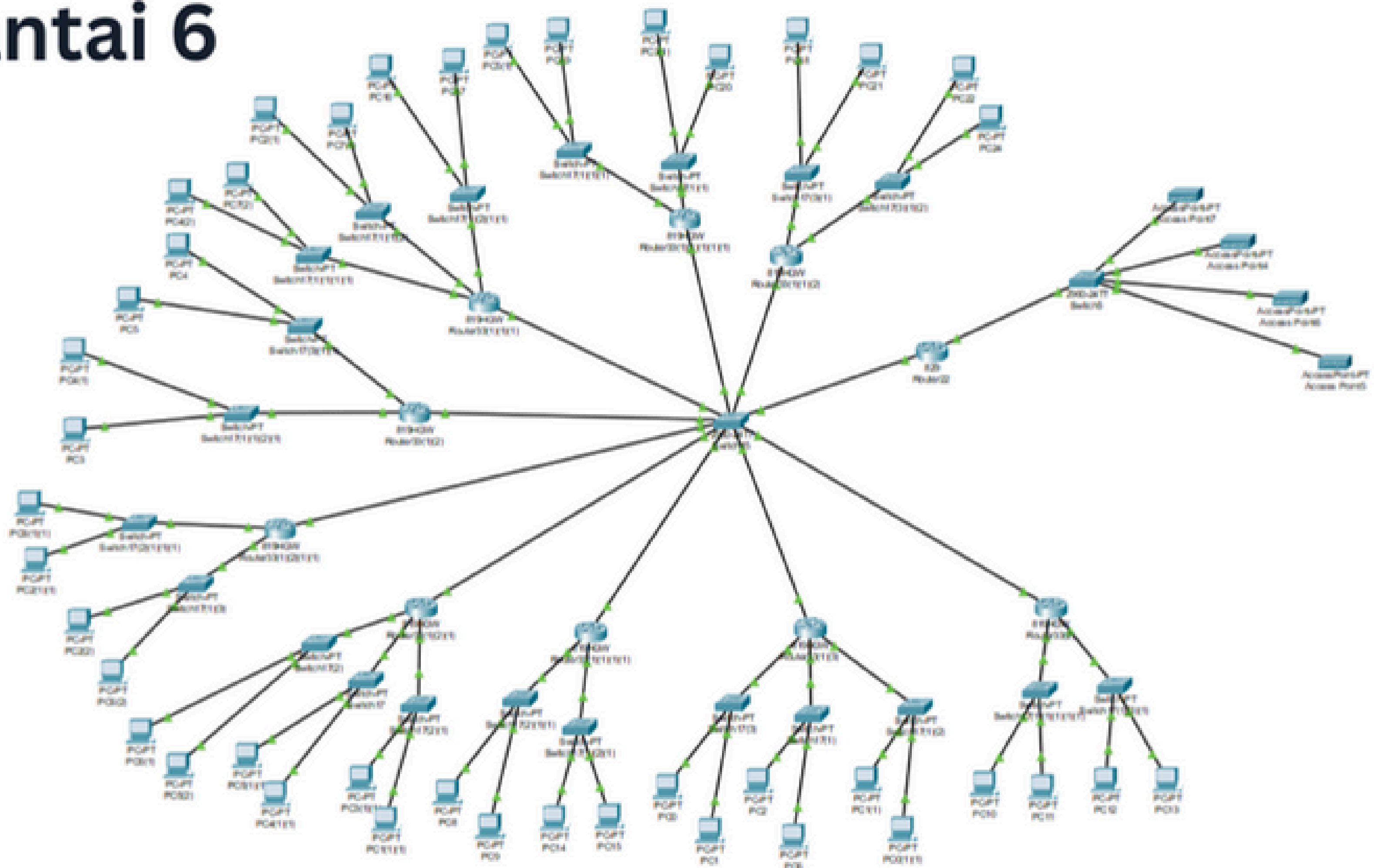
DENAH

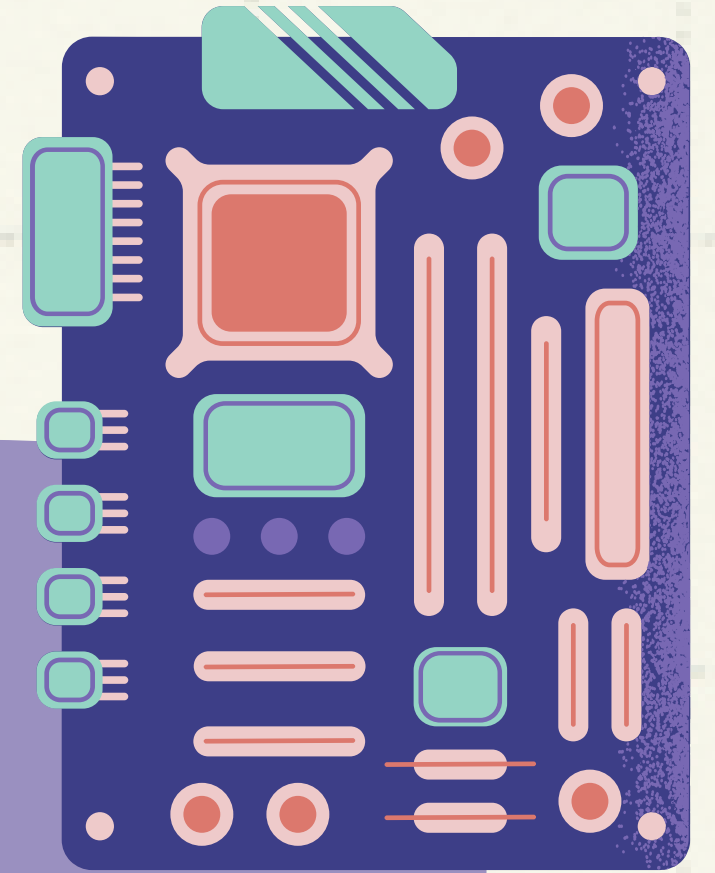
LANTAI 6





Lantai 6





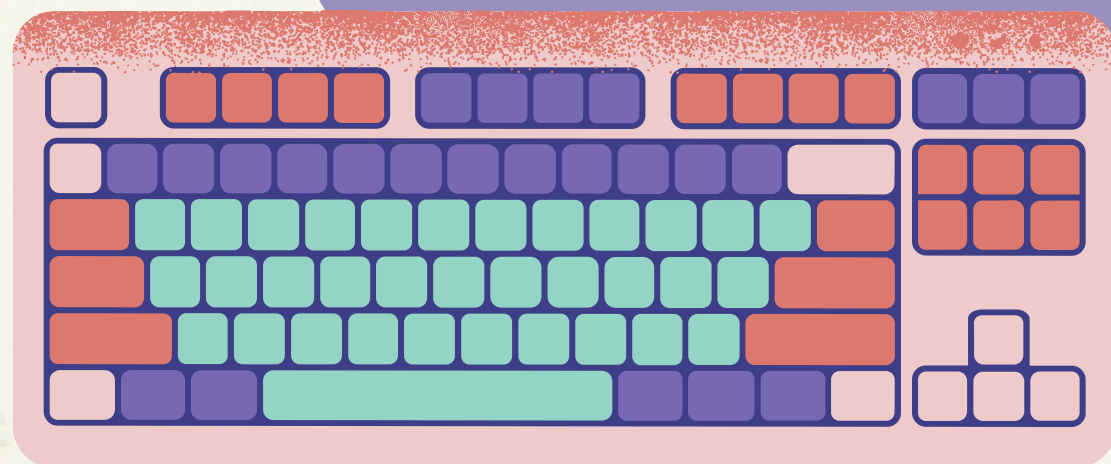
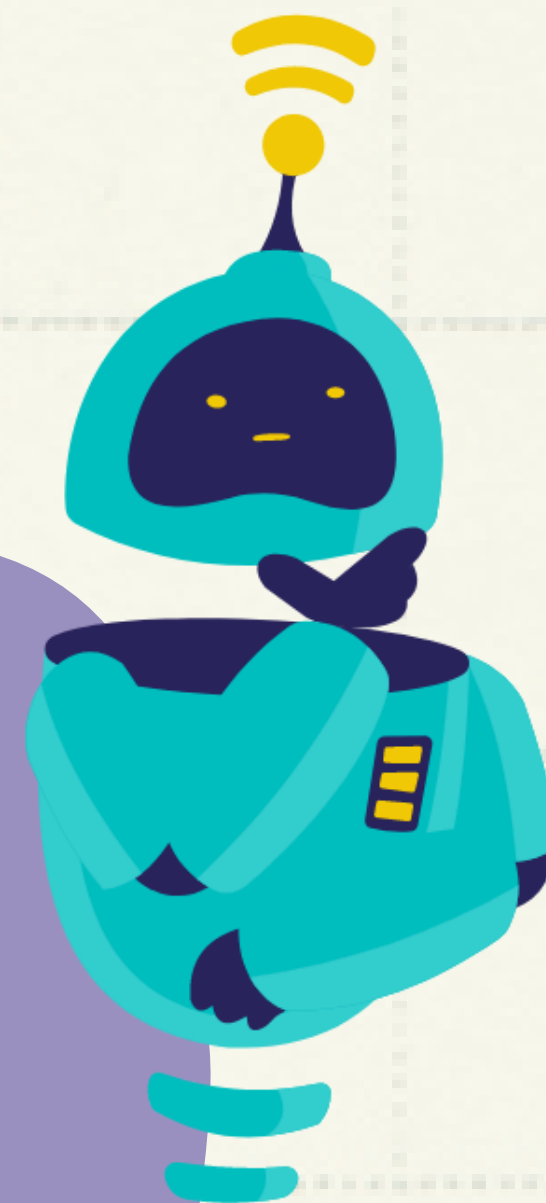
ROUTER : 4.620.000 X 8 = 36.960.000
SWITCH : 6.900.000 X 8 = 55.200.000
KABEL LAN : 2.030.000 X 2 = 4.060.000
CONNECTOR : 318.000 X 2 = 636.000

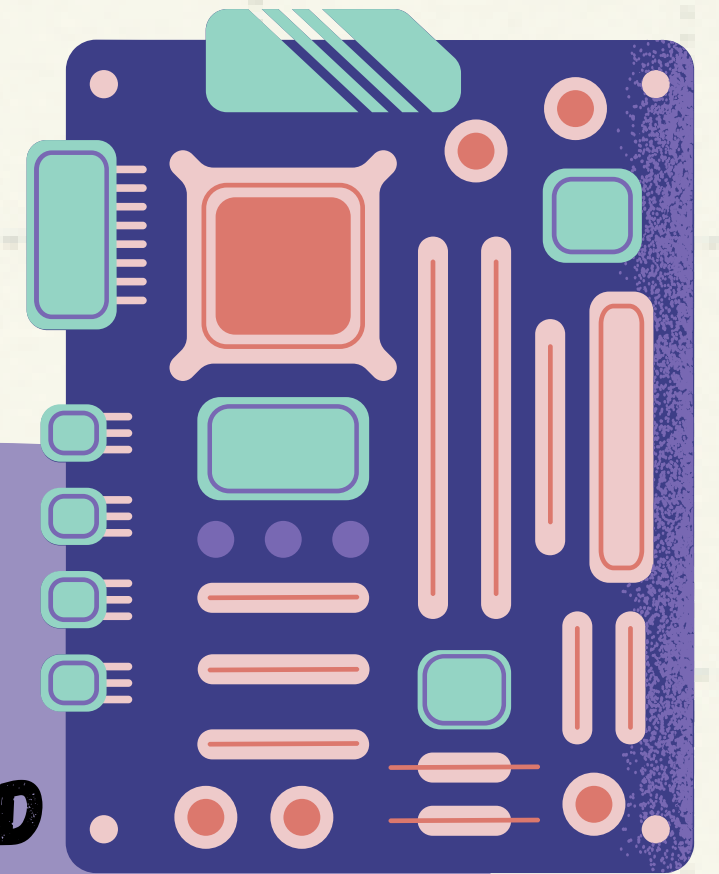
TOTAL : 93.196.000

LAYER

3

IP ADDRESS

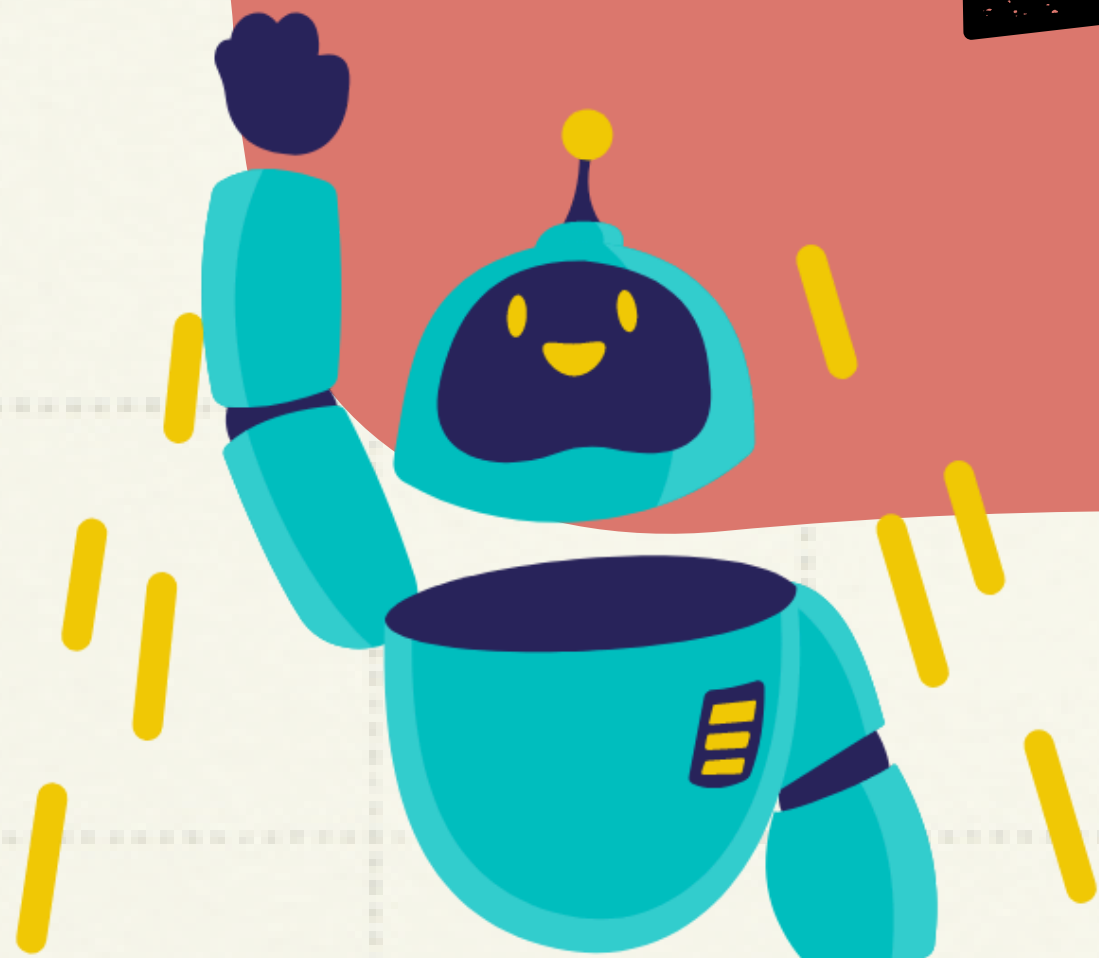
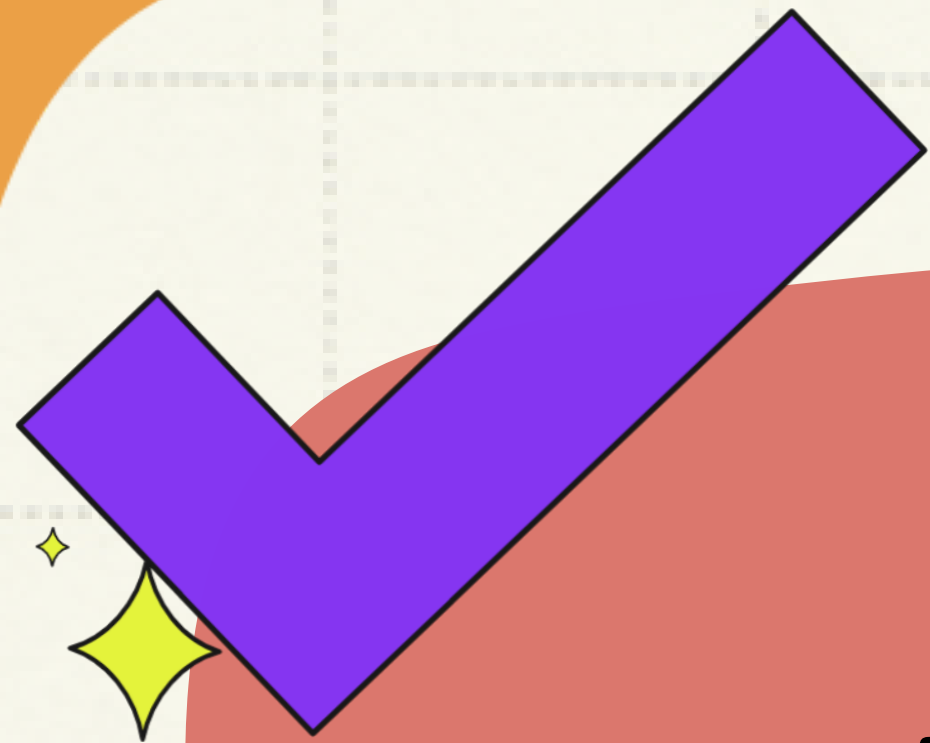




NETWORK LAYER?

- > PEMBERIAN IDENTITAS SETIAP KOMPUTER BERUPA IP ADD**
- > FUNGSI: MENGGKONEKSIKAN SEJUMLAH PERANGKAT DALAM JARINGAN**
- > PROSES: MEMECAH DATA SESUAI UKURAN MEDIA LALU DIENKAPSULASI, SETELAH ITU DIKIRIM SESUAI ALAMAT DAN JALUR**

LANTAI 3



IP LANTAI 3

301

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.10.0$$

$$\text{BA} = 192.168.10.63$$

$$\text{Range} = 192.168.10.1 - 192.186.10.62$$

303

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.10.64$$

$$\text{BA} = 192.168.10.127$$

$$\text{Range} = 192.168.10.65 - 192.168.10.126$$

305

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.10.128$$

$$\text{BA} = 192.168.10.191$$

$$\text{Range} = 192.168.10.129 - 192.168.10.190$$

307

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.10.192$$

$$\text{BA} = 192.168.10.255$$

$$\text{Range} = 192.168.10.193 - 192.168.10.254$$

309

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.11.0$$

$$\text{BA} = 192.168.11.63$$

$$\text{Range} = 192.168.11.1 - 192.186.11.62$$

IP LANTAI 3

321

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.11.64$$

$$\text{BA} = 192.168.11.127$$

$$\text{Range} = 192.168.11.65 - 192.186.11.126$$

323

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.11.128$$

$$\text{BA} = 192.168.11.191$$

$$\text{Range} = 192.168.11.129 - 192.168.11.190$$

325

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.11.192$$

$$\text{BA} = 192.168.11.255$$

$$\text{Range} = 192.168.11.193 - 192.168.11.254$$

327

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.12.0$$

$$\text{BA} = 192.168.12.63$$

$$\text{Range} = 192.168.12.1 - 192.186.32.62$$

329

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.12.64$$

$$\text{BA} = 192.168.12.127$$

$$\text{Range} = 192.168.12.65 - 192.186.12.126$$

IP LANTAI 3

311

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.16.192$$

$$\text{BA} = 192.168.16.255$$

$$\text{Range} = 192.168.16.193 - 192.168.16.254$$

312

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.12.128$$

$$\text{BA} = 192.168.12.191$$

$$\text{Range} = 192.168.12.129 - 192.168.12.190$$

313

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.12.192$$

$$\text{BA} = 192.168.12.255$$

$$\text{Range} = 192.168.12.193 - 192.168.12.254$$

314

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.12.64$$

$$\text{BA} = 192.168.13.127$$

$$\text{Range} = 192.168.13.65 - 192.186.13.126$$

315

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.13.0$$

$$\text{BA} = 192.168.13.63$$

$$\text{Range} = 192.168.13.1 - 192.186.13.62$$

IP LANTAI 3

302

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.13.128$$

$$\text{BA} = 192.168.13.191$$

$$\text{Range} = 192.168.13.129 - 192.168.13.190$$

304

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.13.192$$

$$\text{BA} = 192.168.13.255$$

$$\text{Range} = 192.168.13.193 - 192.168.13.254$$

306

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.14.0$$

$$\text{BA} = 192.168.14.63$$

$$\text{Range} = 192.168.14.1 - 192.186.14.62$$

308

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.14.64$$

$$\text{BA} = 192.168.14.127$$

$$\text{Range} = 192.168.14.65 - 192.186.39.126$$

310

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.14.128$$

$$\text{BA} = 192.168.14.191$$

$$\text{Range} = 192.168.14.129 - 192.186.14.190$$

IP LANTAI 3

320

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.14.192$$

$$\text{BA} = 192.168.14.255$$

$$\text{Range} = 192.168.14.193 - 192.168.14.254$$

322

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.15.0$$

$$\text{BA} = 192.168.15.63$$

$$\text{Range} = 192.168.15.1 - 192.186.14.62$$

324

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.15.64$$

$$\text{BA} = 192.168.15.127$$

$$\text{Range} = 192.168.15.65 - 192.186.15.126$$

326

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.15.64$$

$$\text{BA} = 192.168.15.127$$

$$\text{Range} = 192.168.15.65 - 192.186.15.126$$

328

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.16.192$$

$$\text{BA} = 192.168.16.255$$

$$\text{Range} = 192.168.16.193 - 192.168.16.254$$

330

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.16.0$$

$$\text{BA} = 192.168.16.63$$

$$\text{Range} = 192.168.16.1 - 192.186.16.62$$

IP LANTAI 3

330 a

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

$$11111111.11111111.11111111.11000000$$

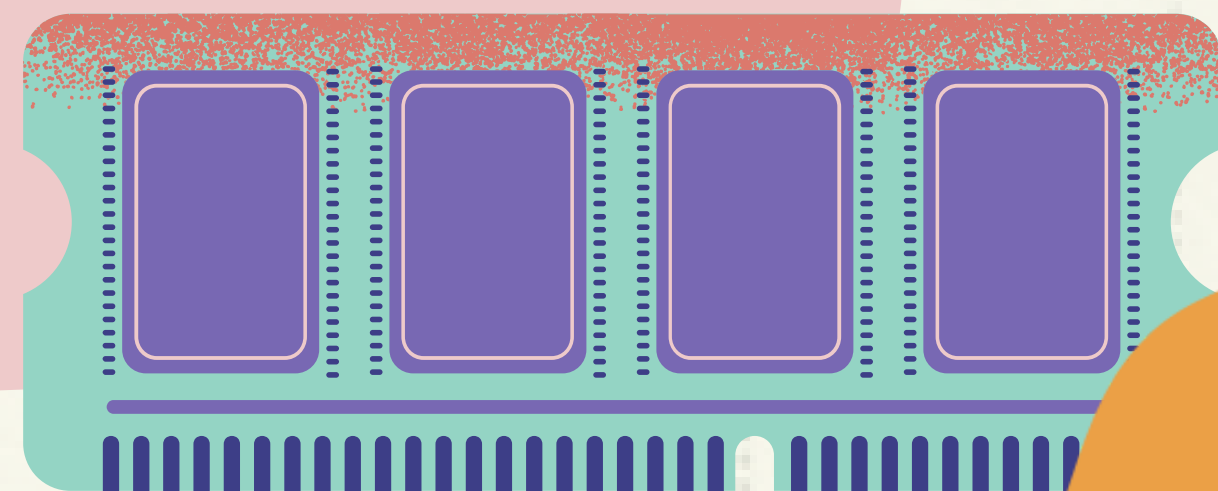
$$= 255.255.255.192$$

$$\text{NA} = 192.168.16.64$$

$$\text{BA} = 192.168.16.127$$

$$\text{Range} = 192.168.16.65 - 192.186.16.126$$

LANTAI 5



IP LANTAI 5

501

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.35.0$$

$$\text{BA} = 192.168.35.63$$

$$\text{Range} = 192.168.35.1 - 192.186.35.62$$

503

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.35.64$$

$$\text{BA} = 192.168.35.127$$

$$\text{Range} = 192.168.35.65 - 192.168.35.126$$

505

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.35.128$$

$$\text{BA} = 192.168.35.191$$

$$\text{Range} = 192.168.35.129 - 192.168.35.190$$

507

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.35.192$$

$$\text{BA} = 192.168.35.255$$

$$\text{Range} = 192.168.35.193 - 192.168.35.254$$

509

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.36.0$$

$$\text{BA} = 192.168.36.63$$

$$\text{Range} = 192.168.36.1 - 192.186.36.62$$

IP LANTAI 5

521

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.36.64$$

$$\text{BA} = 192.168.36.127$$

$$\text{Range} = 192.168.36.65 - 192.186.36.126$$

523

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.36.128$$

$$\text{BA} = 192.168.36.191$$

$$\text{Range} = 192.168.36.129 - 192.168.36.190$$

525

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.36.192$$

$$\text{BA} = 192.168.36.255$$

$$\text{Range} = 192.168.36.193 - 192.168.36.254$$

527

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.37.0$$

$$\text{BA} = 192.168.37.63$$

$$\text{Range} = 192.168.37.1 - 192.186.37.62$$

529

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.37.64$$

$$\text{BA} = 192.168.37.127$$

$$\text{Range} = 192.168.37.65 - 192.186.37.126$$

IP LANTAI 5

511

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.40.192$$

$$\text{BA} = 192.168.40.255$$

$$\text{Range} = 192.168.40.193 - 192.168.40.254$$

512

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.37.128$$

$$\text{BA} = 192.168.37.191$$

$$\text{Range} = 192.168.37.129 - 192.168.37.190$$

513

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.37.192$$

$$\text{BA} = 192.168.37.255$$

$$\text{Range} = 192.168.37.193 - 192.168.37.254$$

514

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.38.64$$

$$\text{BA} = 192.168.38.127$$

$$\text{Range} = 192.168.38.65 - 192.186.38.126$$

515

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.38.0$$

$$\text{BA} = 192.168.38.63$$

$$\text{Range} = 192.168.38.1 - 192.186.38.62$$

IP LANTAI 5

502

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.38.128$$

$$\text{BA} = 192.168.38.191$$

$$\text{Range} = 192.168.38.129 - 192.168.38.190$$

504

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.38.192$$

$$\text{BA} = 192.168.38.255$$

$$\text{Range} = 192.168.38.193 - 192.168.38.254$$

506

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.39.0$$

$$\text{BA} = 192.168.39.63$$

$$\text{Range} = 192.168.39.1 - 192.186.39.62$$

508

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.39.64$$

$$\text{BA} = 192.168.39.127$$

$$\text{Range} = 192.168.39.65 - 192.186.39.126$$

510

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.39.128$$

$$\text{BA} = 192.168.39.191$$

$$\text{Range} = 192.168.39.129 - 192.186.39.190$$

IP LANTAI 5

520

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.39.192$$

$$\text{BA} = 192.168.39.255$$

$$\text{Range} = 192.168.39.193 - 192.168.39.254$$

522

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.40.0$$

$$\text{BA} = 192.168.40.63$$

$$\text{Range} = 192.168.40.1 - 192.186.40.62$$

524

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.40.64$$

$$\text{BA} = 192.168.40.127$$

$$\text{Range} = 192.168.40.65 - 192.186.40.126$$

526

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

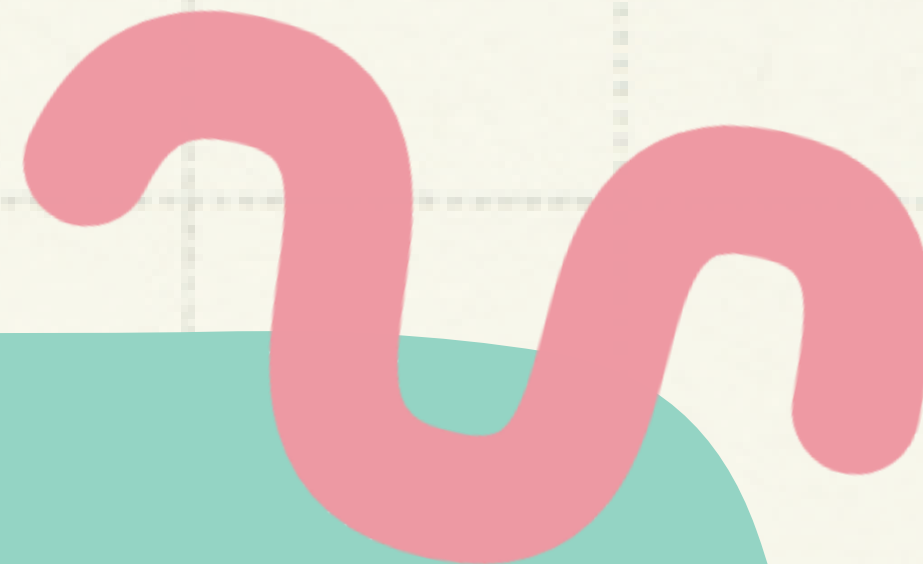
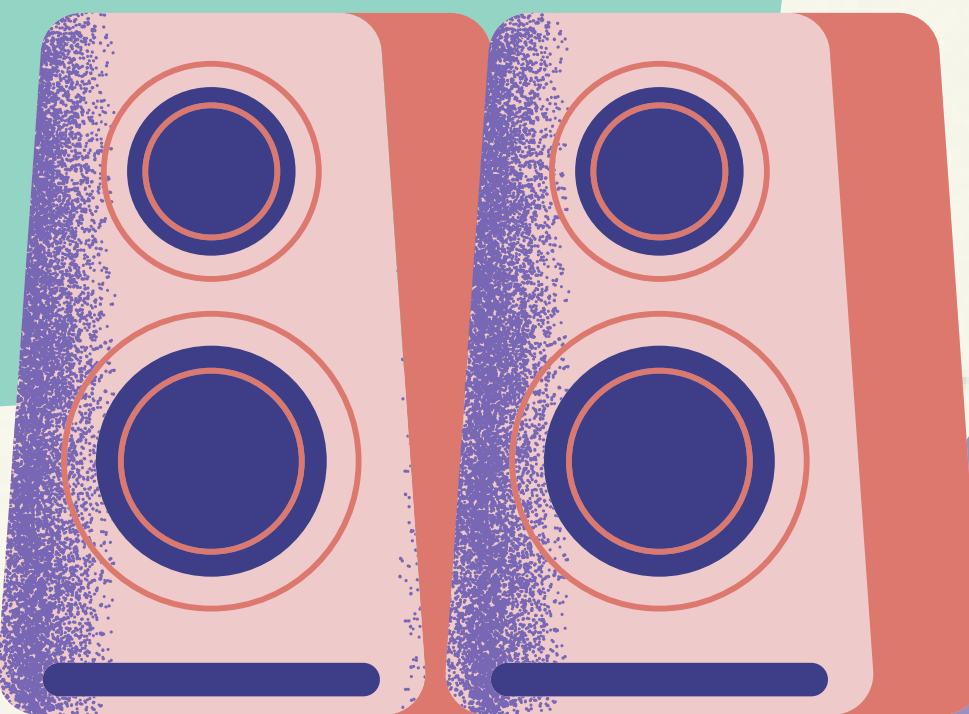
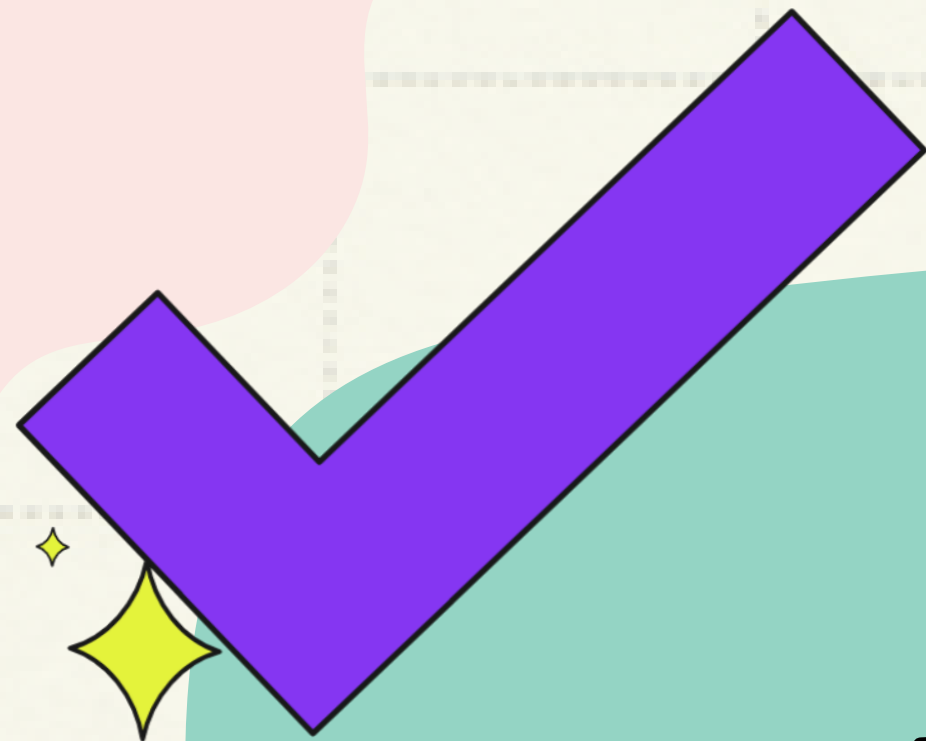
$$= 255.255.255.192$$

$$\text{NA} = 192.168.40.64$$

$$\text{BA} = 192.168.40.127$$

$$\text{Range} = 192.168.40.65 - 192.186.40.126$$

LANTAI 6



IP LANTAI 6

601

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.60.0$$

$$\text{BA} = 192.168.60.63$$

$$\text{Range} = 192.168.60.1 - 192.186.60.62$$

602

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.60.64$$

$$\text{BA} = 192.168.60.127$$

$$\text{Range} = 192.168.60.65 - 192.168.60.126$$

603

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.60.128$$

$$\text{BA} = 192.168.60.191$$

$$\text{Range} = 192.168.60.129 - 192.168.60.190$$

604

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.60.192$$

$$\text{BA} = 192.168.60.255$$

$$\text{Range} = 192.168.60.193 - 192.168.60.254$$

605

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.61.0$$

$$\text{BA} = 192.168.61.63$$

$$\text{Range} = 192.168.61.1 - 192.186.61.62$$

606

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.61.64$$

$$\text{BA} = 192.168.61.127$$

$$\text{Range} = 192.168.61.65 - 192.186.61.126$$

IP LANTAI 6

607

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.61.128$$

$$\text{BA} = 192.168.61.191$$

$$\text{Range} = 192.168.61.129 - 192.168.61.190$$

608

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.61.192$$

$$\text{BA} = 192.168.61.255$$

$$\text{Range} = 192.168.61.193 - 192.168.61.254$$

609

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.62.0$$

$$\text{BA} = 192.168.62.63$$

$$\text{Range} = 192.168.62.1 - 192.186.62.62$$

610

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.62.64$$

$$\text{BA} = 192.168.62.127$$

$$\text{Range} = 192.168.62.65 - 192.186.62.126$$

611

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11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.62.128$$

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$$\text{Range} = 192.168.62.129 - 192.168.62.190$$

612

$$h = 2^6 = 64$$

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11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.62.192$$

$$\text{BA} = 192.168.62.255$$

$$\text{Range} = 192.168.61.193 - 192.168.61.254$$

IP LANTAI 6

613

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.63.0$$

$$\text{BA} = 192.168.63.63$$

$$\text{Range} = 192.168.63.1 - 192.186.63.62$$

614

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.63.64$$

$$\text{BA} = 192.168.63.127$$

$$\text{Range} = 192.168.63.65 - 192.186.63.126$$

615

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.63.128$$

$$\text{BA} = 192.168.63.191$$

$$\text{Range} = 192.168.63.129 - 192.168.63.190$$

616

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.63.192$$

$$\text{BA} = 192.168.63.255$$

$$\text{Range} = 192.168.63.193 - 192.168.63.254$$

617

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.64.0$$

$$\text{BA} = 192.168.64.63$$

$$\text{Range} = 192.168.64.1 - 192.186.64.62$$

618

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.64.64$$

$$\text{BA} = 192.168.64.127$$

$$\text{Range} = 192.168.64.65 - 192.186.64.126$$

IP LANTAI 6

620

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.64.128$$

$$\text{BA} = 192.168.64.191$$

$$\text{Range} = 192.168.64.129 - 192.168.64.190$$

621

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.64.128$$

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$$\text{Range} = 192.168.64.129 - 192.168.64.190$$

622

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.65.0$$

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$$\text{Range} = 192.168.65.1 - 192.186.65.62$$

623

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.65.64$$

$$\text{BA} = 192.168.65.127$$

$$\text{Range} = 192.168.65.65 - 192.186.65.126$$

624

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.65.128$$

$$\text{BA} = 192.168.65.191$$

$$\text{Range} = 192.168.65.129 - 192.168.65.190$$

625

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.65.192$$

$$\text{BA} = 192.168.65.255$$

$$\text{Range} = 192.168.65.193 - 192.168.61.254$$

IP LANTAI 6

626

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.66.0$$

$$\text{BA} = 192.168.66.63$$

$$\text{Range} = 192.168.66.1 - 192.186.66.62$$

627

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.66.64$$

$$\text{BA} = 192.168.66.127$$

$$\text{Range} = 192.168.66.65 - 192.186.66.126$$

628

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.66.128$$

$$\text{BA} = 192.168.66.191$$

$$\text{Range} = 192.168.66.129 - 192.168.63.190$$

629

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.66.192$$

$$\text{BA} = 192.168.66.255$$

$$\text{Range} = 192.168.66.193 - 192.168.66.254$$

630

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

$$= 255.255.255.192$$

$$\text{NA} = 192.168.67.0$$

$$\text{BA} = 192.168.67.63$$

$$\text{Range} = 192.168.67.1 - 192.186.67.62$$

631

$$h = 2^6 = 64$$

$$\text{Subnet Mask} = 32 - 6 = 26$$

11111111.11111111.11111111.11000000

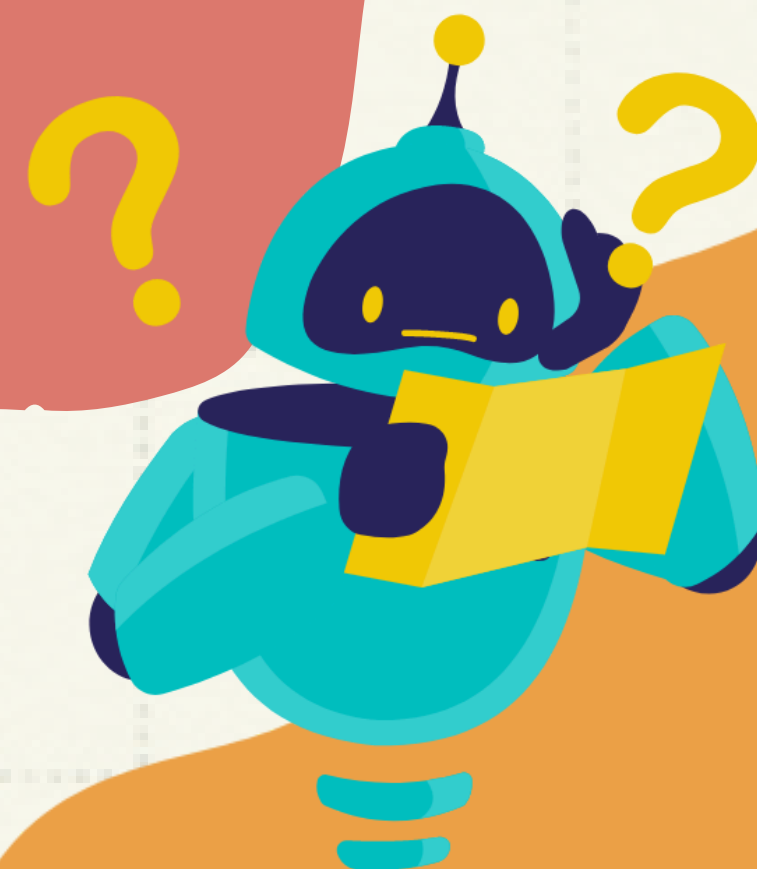
$$= 255.255.255.192$$

$$\text{NA} = 192.168.67.64$$

$$\text{BA} = 192.168.67.127$$

$$\text{Range} = 192.168.67.65 - 192.186.67.126$$

LAYER 4



FUNCTIONS

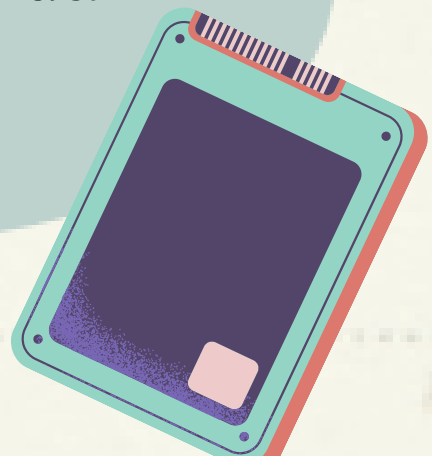
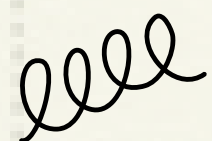
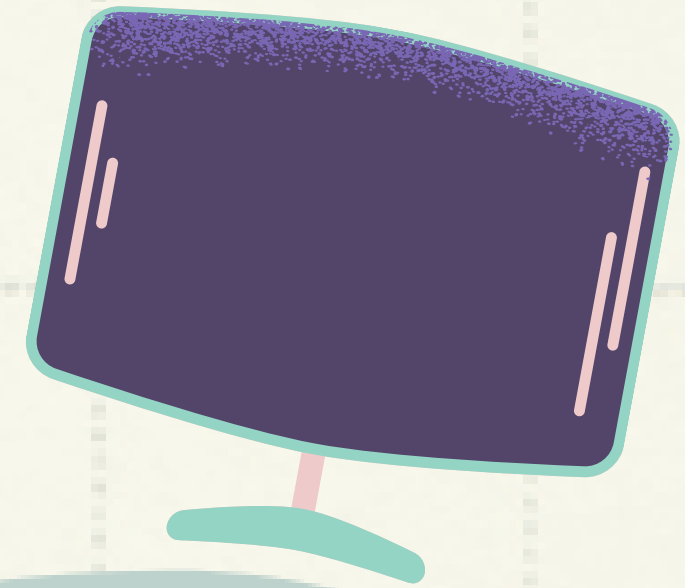
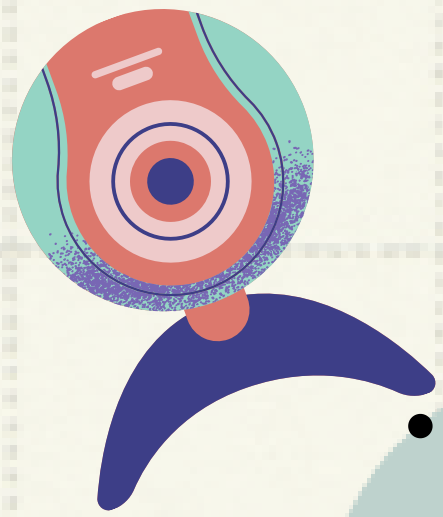
- Segmentation and Reassembly (Segmentasi dan Penyusunan Kembali):

- Segmentation: Layer 4 memecah data yang besar menjadi segmen-segmen kecil agar lebih mudah dikelola dan dikirim melalui jaringan.
- Reassembly: Pada sisi penerima, Layer 4 menyusun kembali segmen-segmen tersebut menjadi data asli.

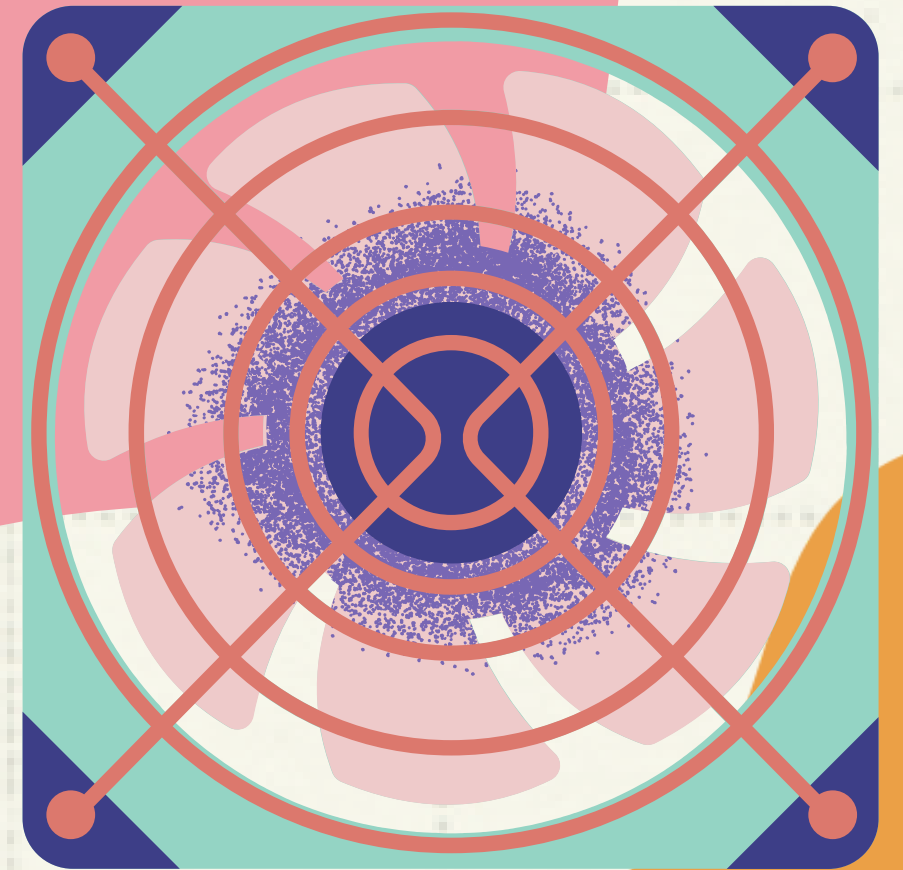
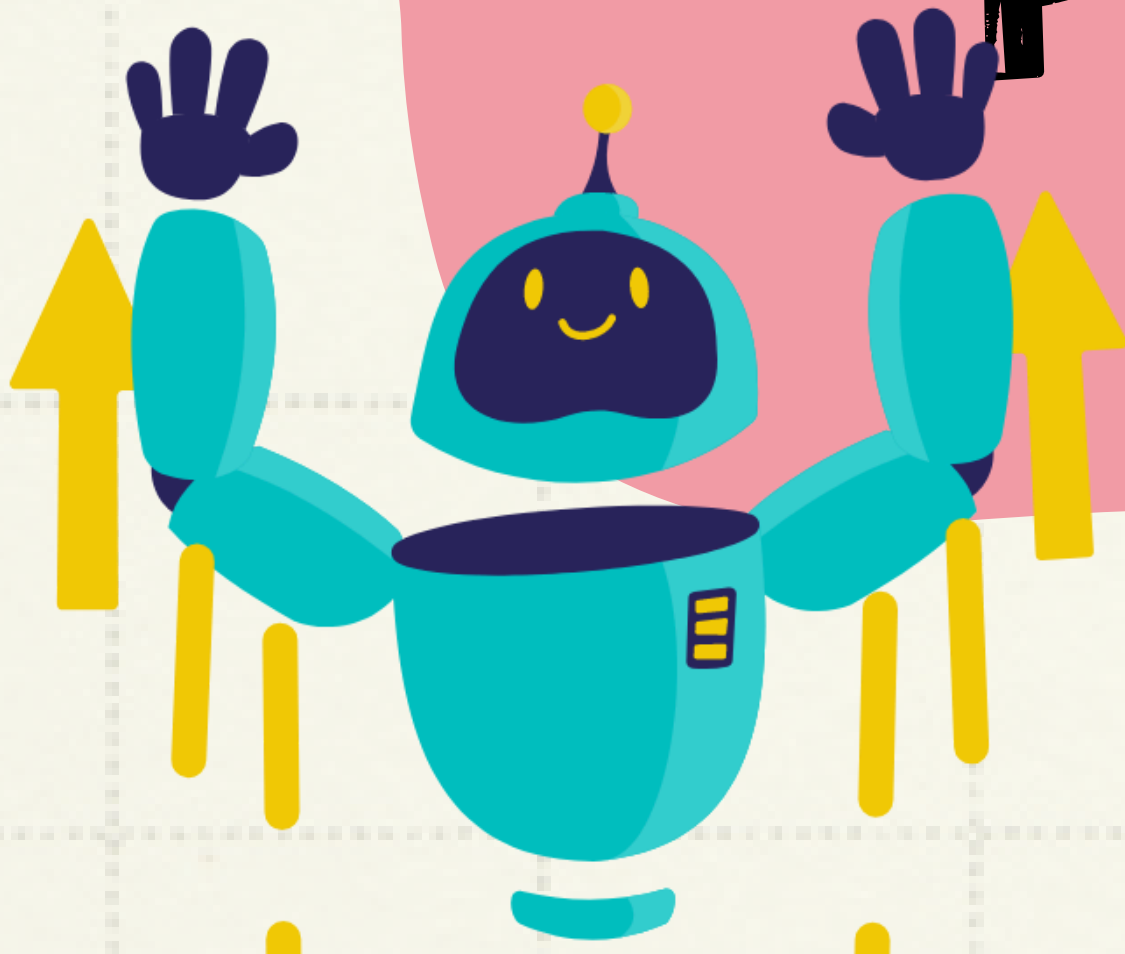
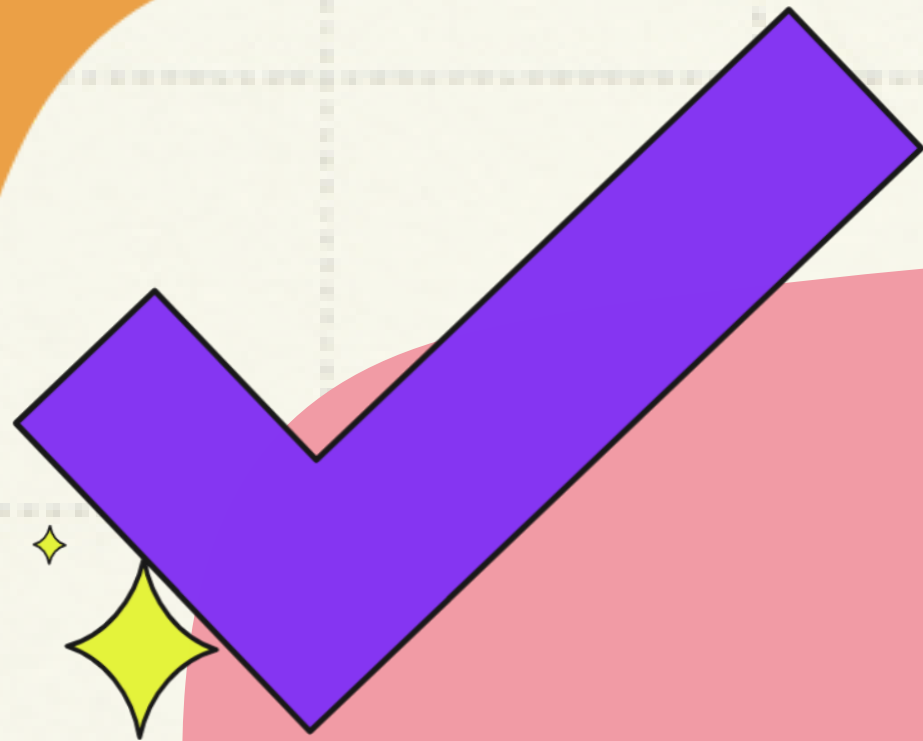
- Flow Control (Kontrol Aliran):

- Mengatur laju pengiriman data antara pengirim dan penerima untuk mencegah kelebihan beban pada penerima.

- Error Control (Kontrol Kesalahan):
 - Memastikan data dikirimkan tanpa kesalahan dengan menggunakan teknik seperti checksums dan acknowledgment (pengakuan) untuk mendeteksi dan memperbaiki kesalahan.
- Connection Management (Manajemen Koneksi):
 - Mengelola pengaturan dan pengakhiran koneksi antara dua perangkat. Ini melibatkan proses seperti three-way handshake pada TCP untuk memulai koneksi dan graceful termination untuk mengakhiri koneksi.

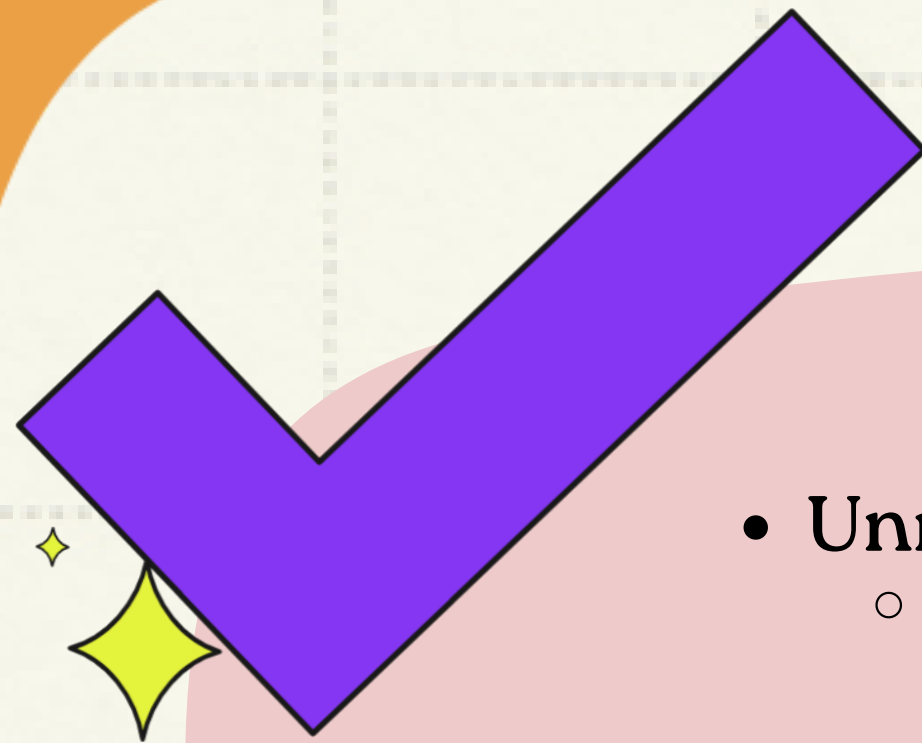


PROTOCOLS



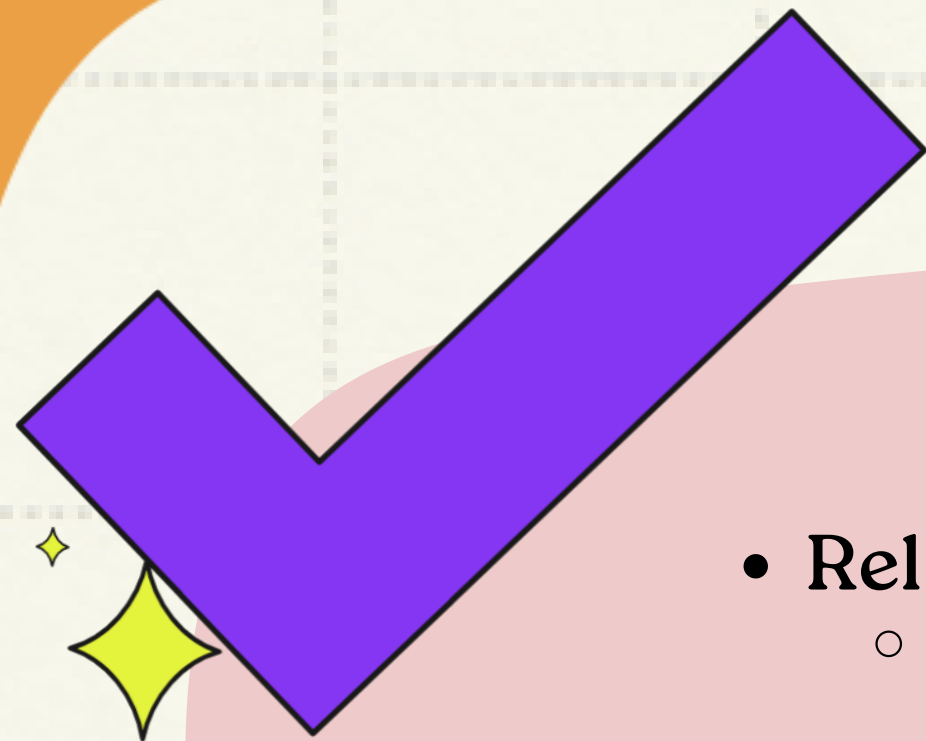
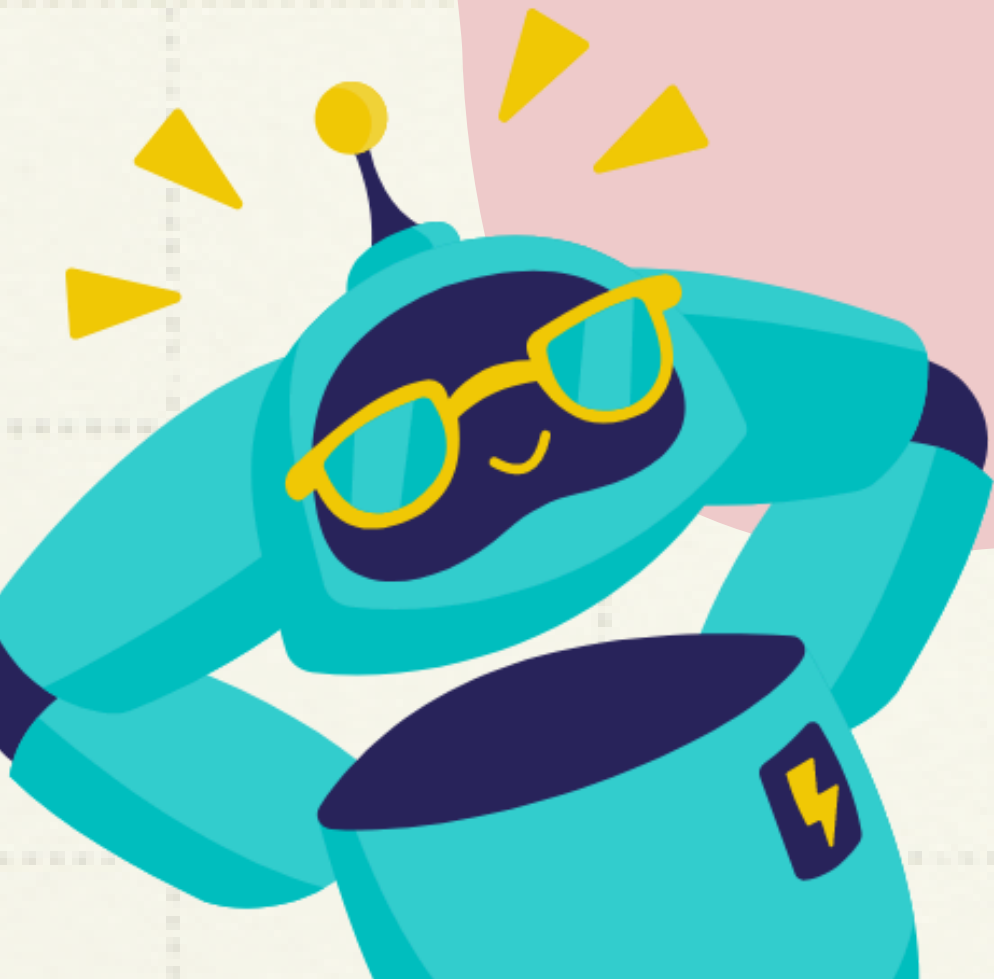
UDP

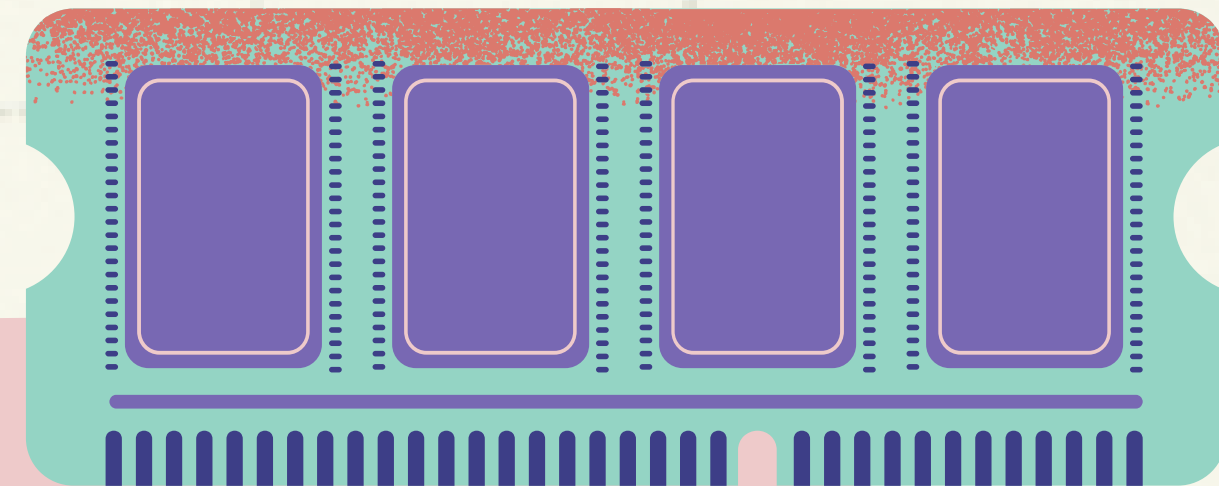
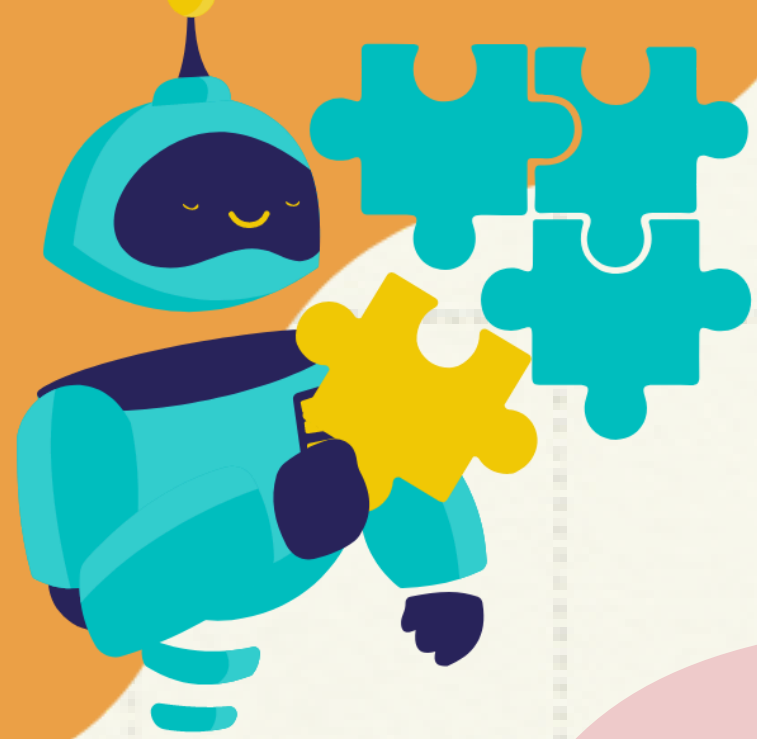
- Unreliable Transmission
 - UDP tidak menjamin pengiriman data yang andal. Segmen data dapat hilang atau tiba dalam urutan yang salah.
- Connectionless
 - UDP tidak memerlukan koneksi yang stabil antara pengirim dan penerima.
- Low Overhead
 - Karena tidak ada overhead untuk memastikan keandalan, UDP lebih cepat dan lebih efisien untuk aplikasi yang tidak memerlukan keandalan tinggi, seperti streaming video atau suara.



TCP

- Reliable Transmission
 - TCP menyediakan pengiriman data yang andal dengan memastikan semua segmen data sampai ke tujuan dan disusun kembali dengan benar.
- Connection-oriented
 - TCP memerlukan koneksi yang stabil antara pengirim dan penerima sebelum data dikirimkan.
- Flow Control dan Congestion Control
 - TCP mengatur aliran data dan mengelola kemacetan jaringan untuk memastikan pengiriman data yang efisien.





LAYER 5

FUNCTIONS

- Establishing Sessions
 - Membuat koneksi antara perangkat untuk memungkinkan komunikasi.
- Maintaining Sessions
 - Memastikan koneksi tetap aktif selama transfer data.
- Synchronizing Sessions
 - Menjaga sinkronisasi antara dua perangkat yang berkomunikasi.
- Terminating Sessions
 - Menutup koneksi setelah transfer data selesai.

