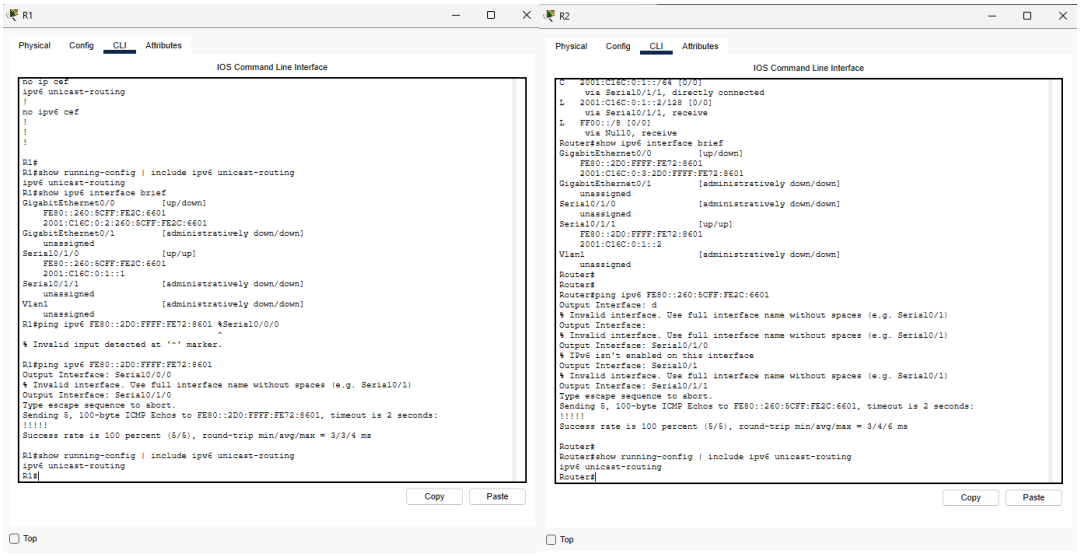
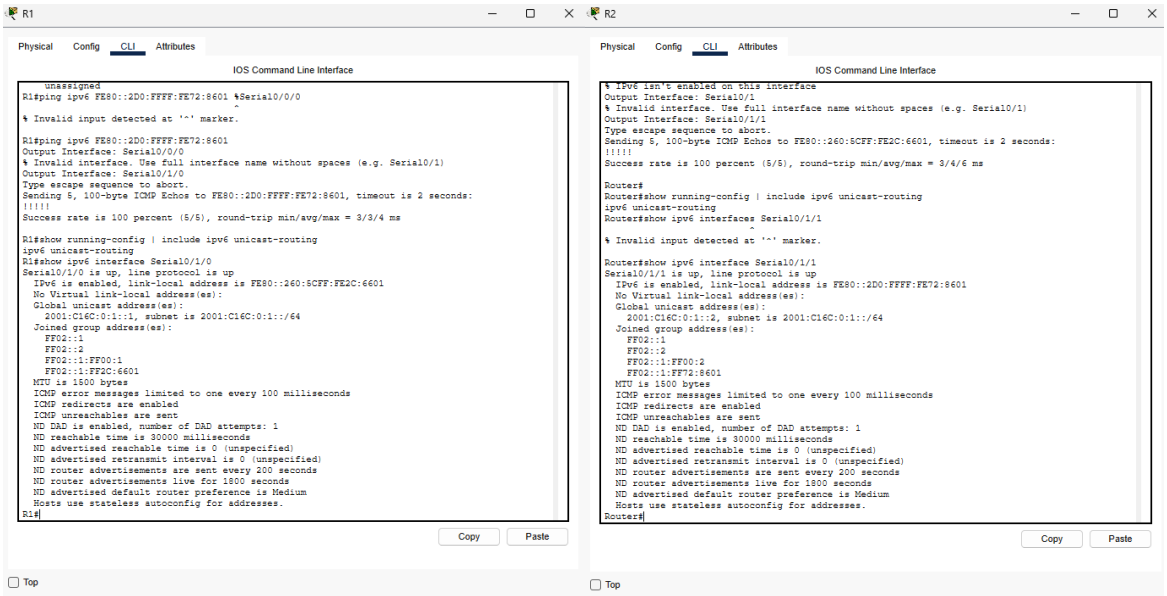
Lab 8

Lab Completed Remotely

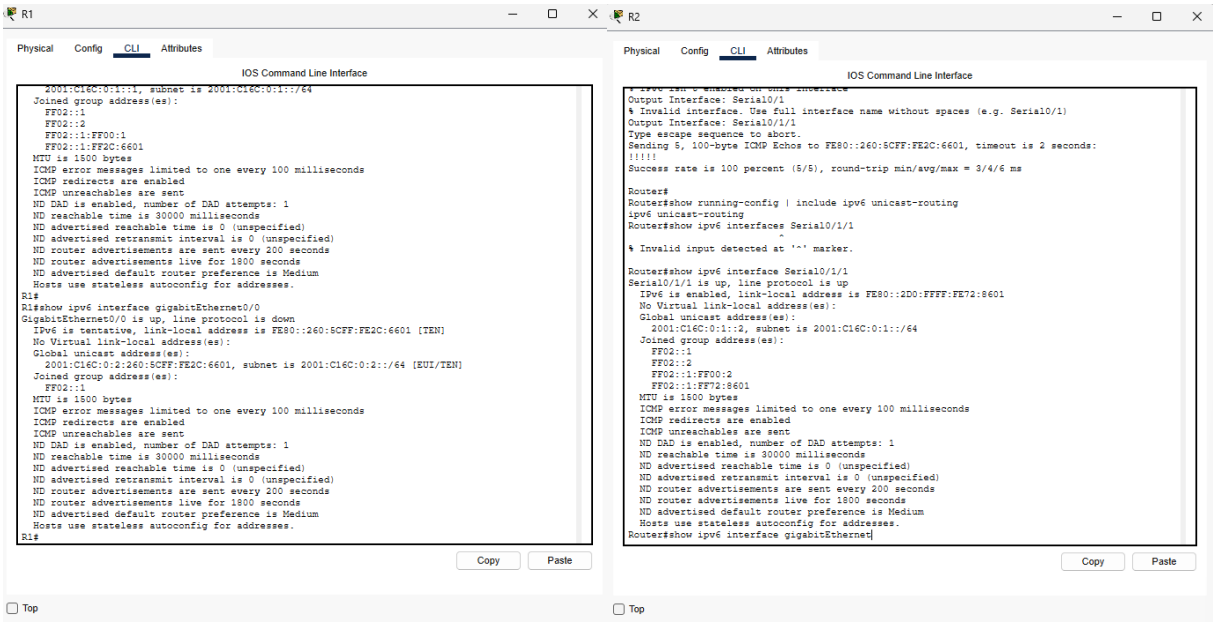
Unicast Routing



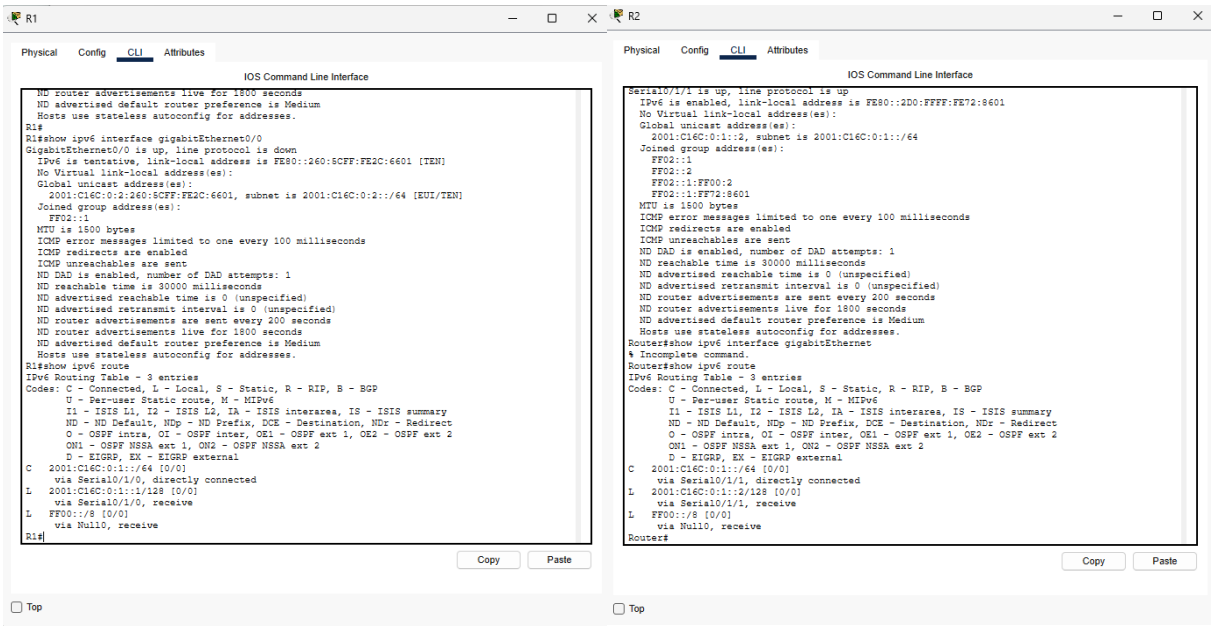
Interfaces Config



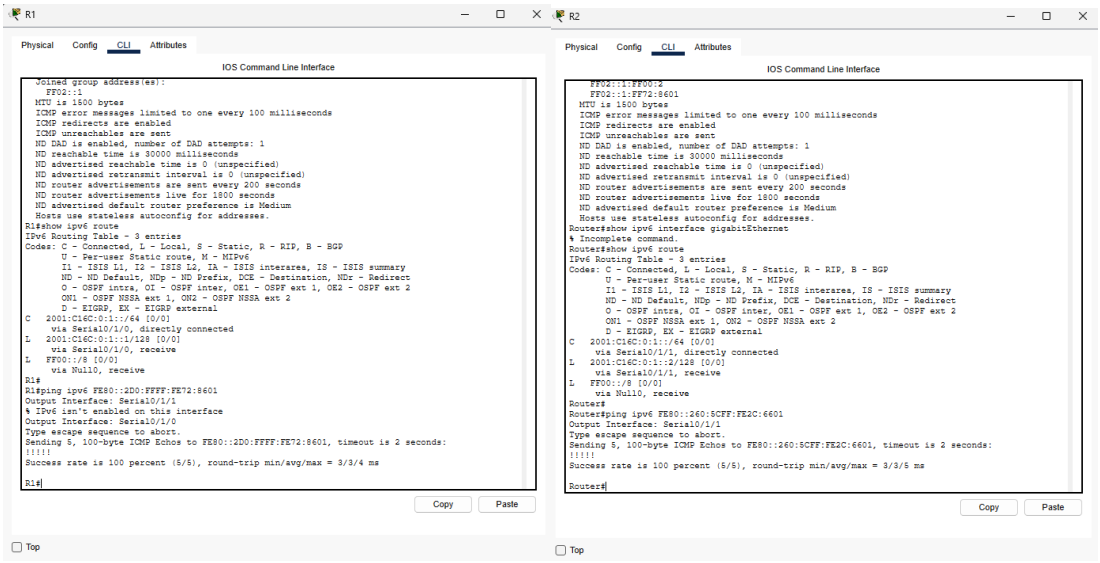
LANs Interfaces



Routing tables



Ping test



Questions – Answer the questions below and place in a word document.

1. List the 3 classes of IPv4 addresses that are used for assigning IP addresses and their default subnet masks.

   ClassA: 255.0.0.0 (/8)

   Class B: 255.255.0.0(/16)

   Class C: 255.255.255.0 (/24)

2. How do IPv6 addresses differ from IPv4 addresses?

   Longer address space (128 bits vs. 32 bits).
   No need for NAT (designed for end-to-end connectivity).
   Built-in security (IPsec) and auto-configuration (SLAAC).

3. How has the IETF come up with ways to extend the life of IPv4 addresses?

   NAT (Network Address Translation).

   CIDR (Classless Inter-Domain Routing).

DHCP (Dynamic Host Configuration Protocol).

4. How are IPv6 addresses abbreviated?

   Leading zeros in each hextet can be omitted.
   Consecutive hextets of zeros can be replaced with :: (once per address).

5. Abbreviate the following IPv6 addresses:

   a. 3278:AB12:0000:000F:B147:0000:0000:000C

1. 3278:AB12:0:F:B147::C

   b. 141:0000:0000:0000:0015:0000:0000:1000

2. 141::15:0:0:1000

   c. 2001:0000:3238:DFE1:0063:0000:0000:FEFB

3. 2001:0:3238:DFE1:63::FFFF