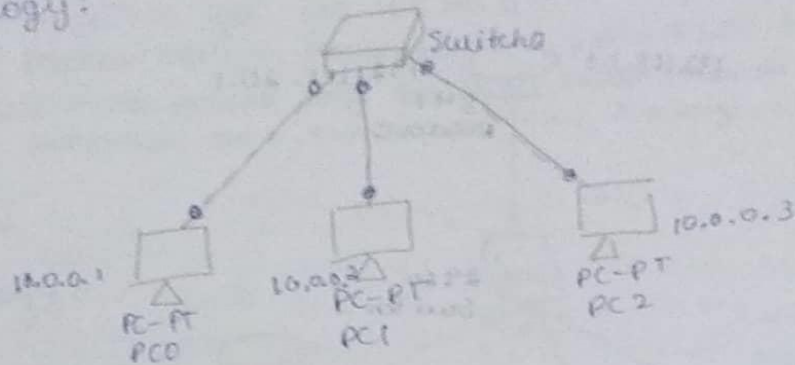**To construct simple LAN and understand the concept and operation of Address Resolution Protocol (ARP)**

ARP (Address Resolution Protocol)

Topology:

Procedure:

- arp-a → to check arp table (from command prompt)
- arp-d → to, clear arp
- click capture forward

Output:

In PC0,

arp -a

No ARP entries found

ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data

Reply from 10.0.0.2 : bytes= 32 time<12ms TTL=128

Reply from 10.0.0.2 : bytes= 32 time=12ms TTL=128

Reply from 10.0.0.2: bytes =32 time=12ms TTL=128

Reply from 10.0.0.2: bytes=32 time=12ms TTL=128

Ping statistics for 10.0.0.2:

Packets: Sent = 4, Recieved = 4, Lost = 0 (0% loss).

Approximate round trip time in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

arp -a

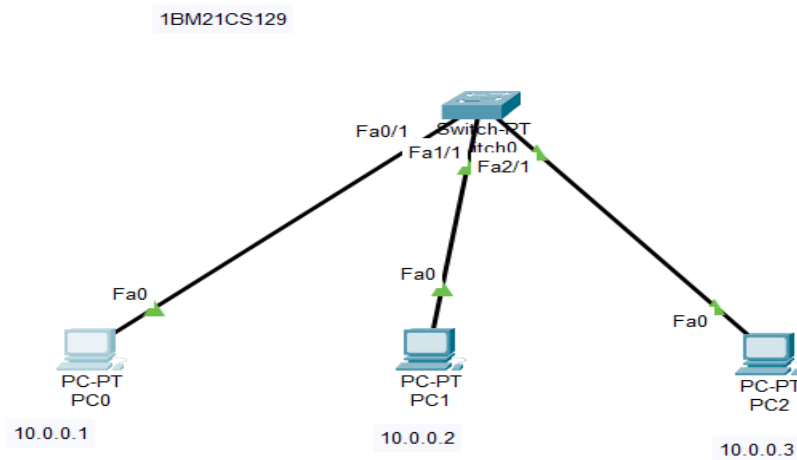| Internet Address	Physical address	Type
10.0.0.2	0001.423a.e7c8	dynamic

Topology:

1BM21CS129

Output:


```
PC0                                                           —    □

Physical    Config    Desktop    Programming    Attributes

Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>arp -a
No ARP Entries Found
C:\>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3: bytes=32 time<1ms TTL=128
Reply from 10.0.0.3: bytes=32 time<1ms TTL=128
Reply from 10.0.0.3: bytes=32 time<1ms TTL=128
Reply from 10.0.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 10.0.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>arp -a
  Internet Address        Physical Address        Type
  10.0.0.2                0050.0f21.c5d2          dynamic
  10.0.0.3                00d0.d326.7e75          dynamic

C:\>
```