COMPUTER NETWORKS

EXP 12

Implementation of Network Address Translation using Packet Tracer

OCTOBER 26, 2021

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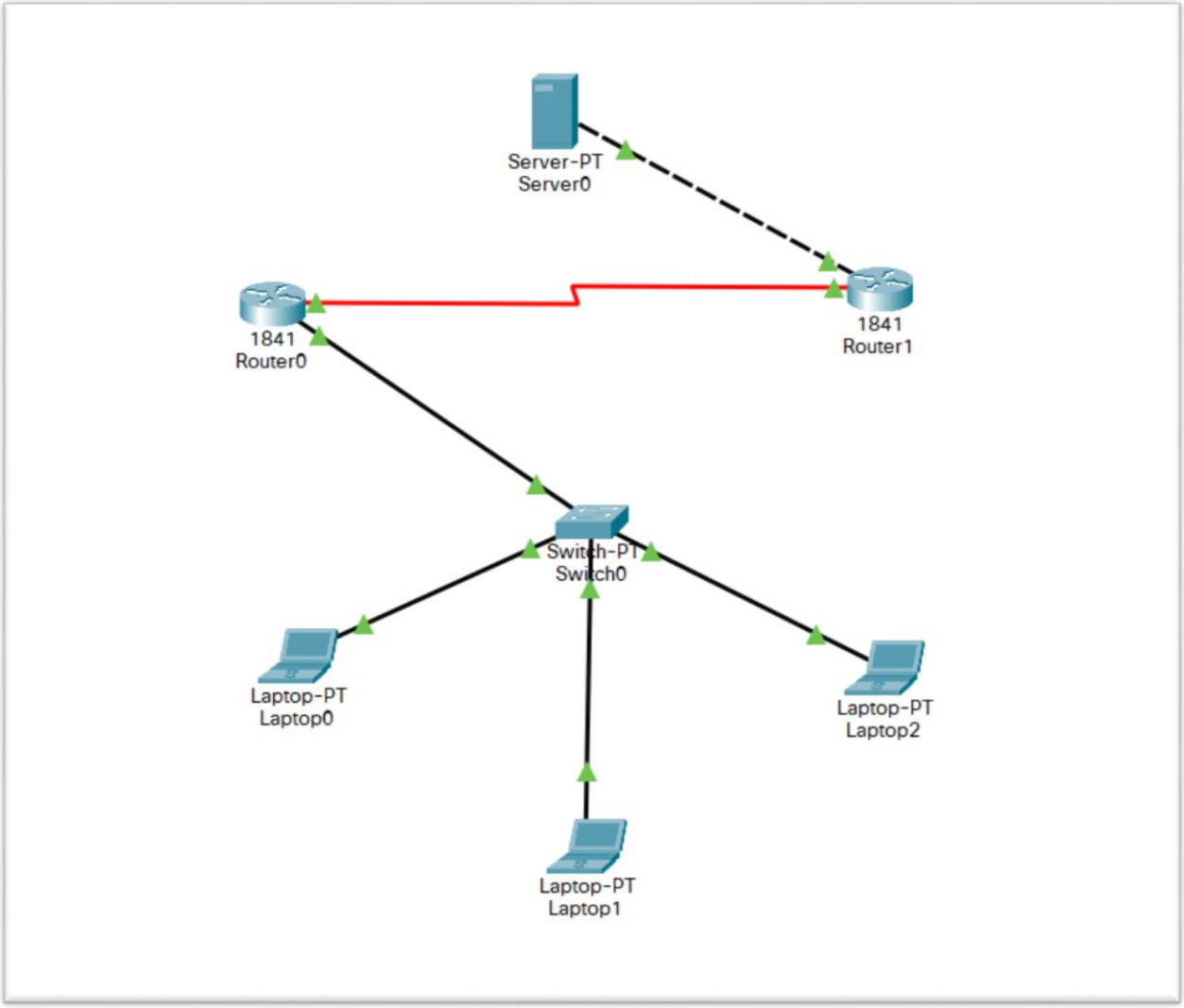
Aim:

To design a NAT (Network Address Translation) on Cisco Packet Tracer.

Diagram:



Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
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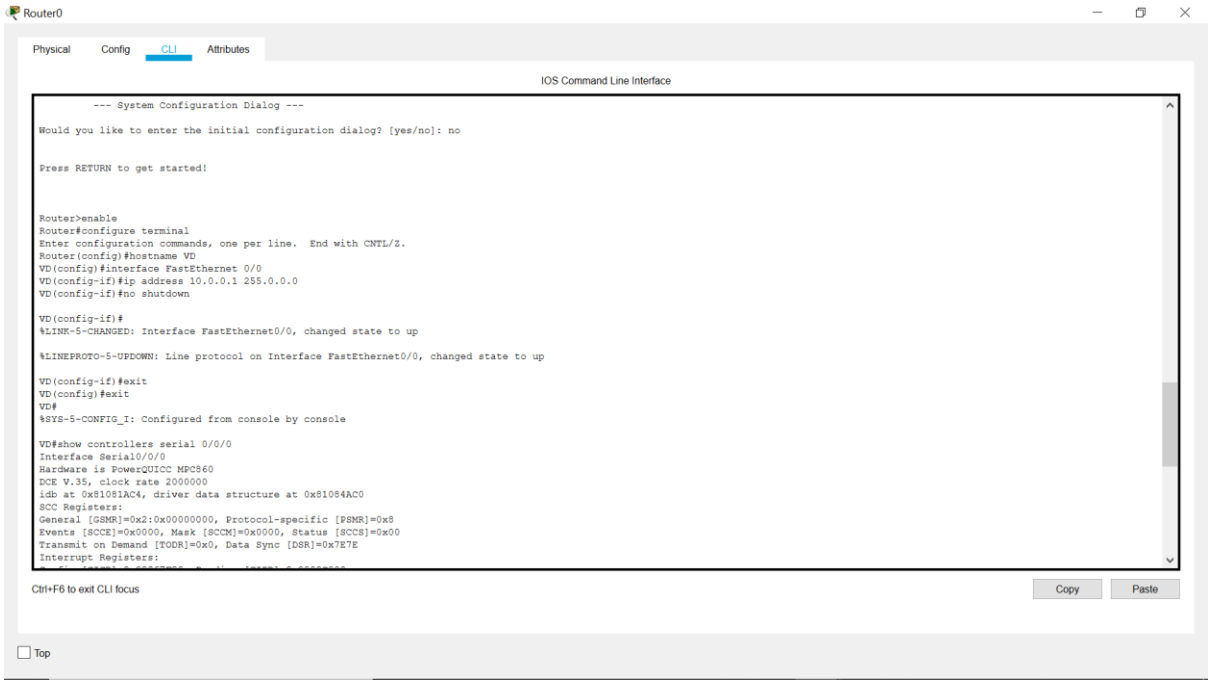
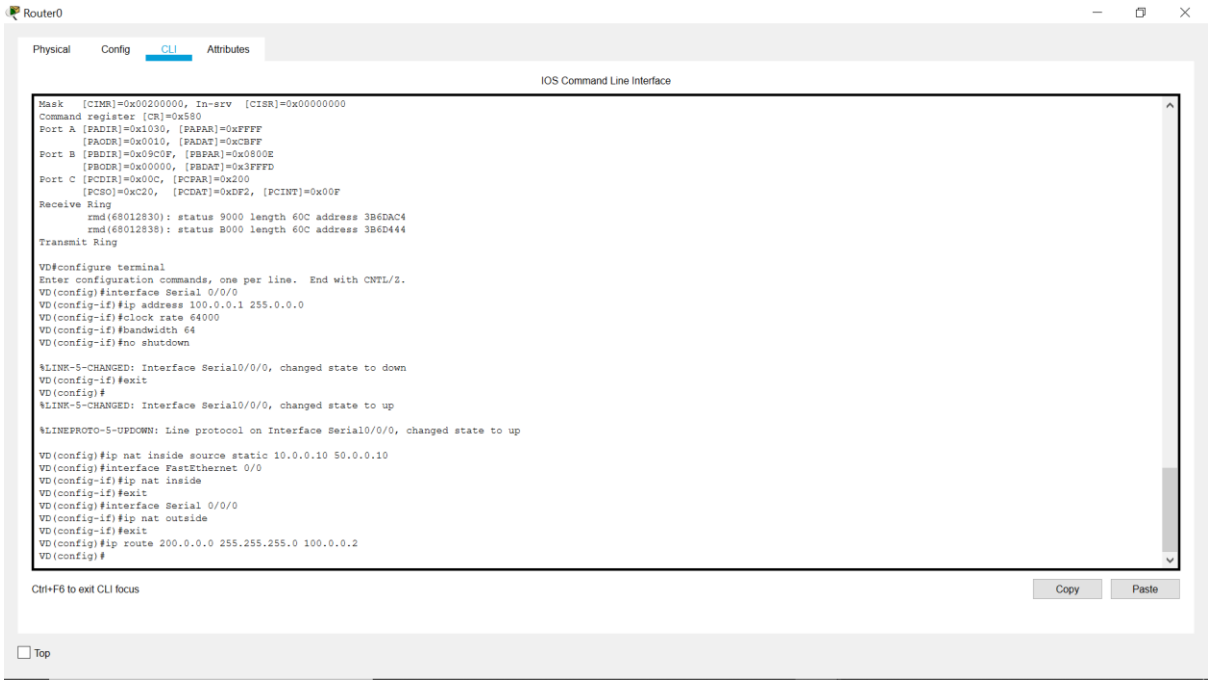
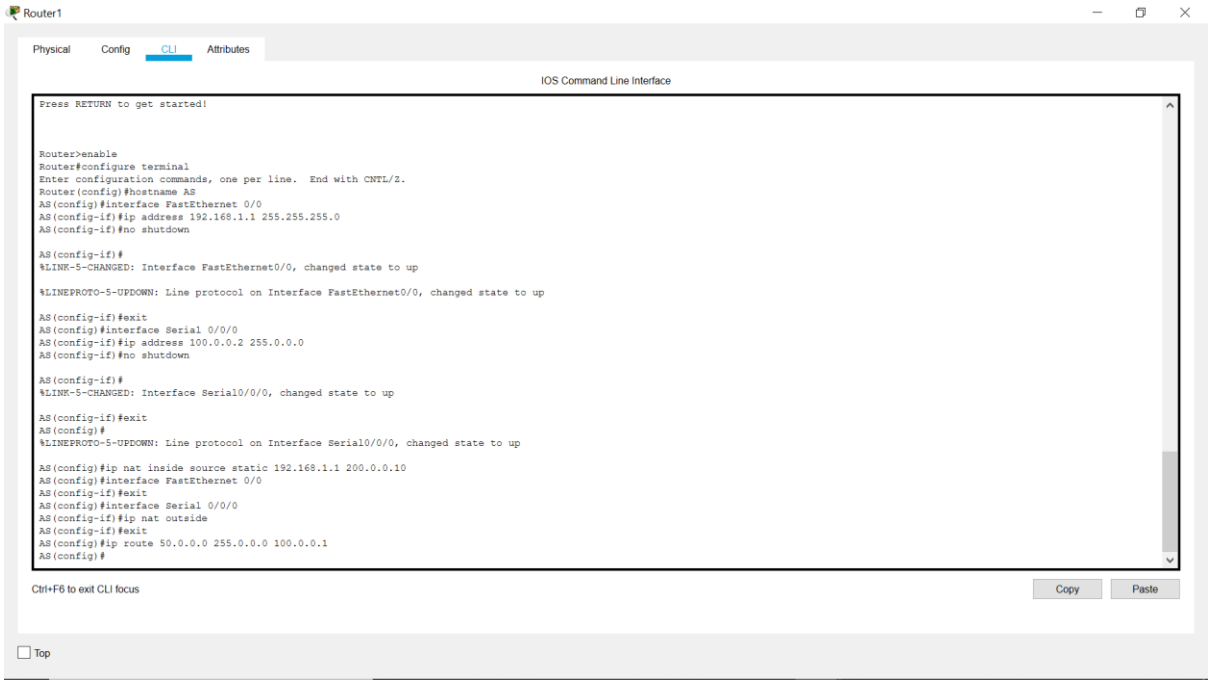
	Successful	Laptop2	Laptop1	ICMP		0.000	N	1	(edit)	(delete)
	Successful	Laptop0	Laptop2	ICMP		0.000	N	2	(edit)	(delete)

Router 0 CLI

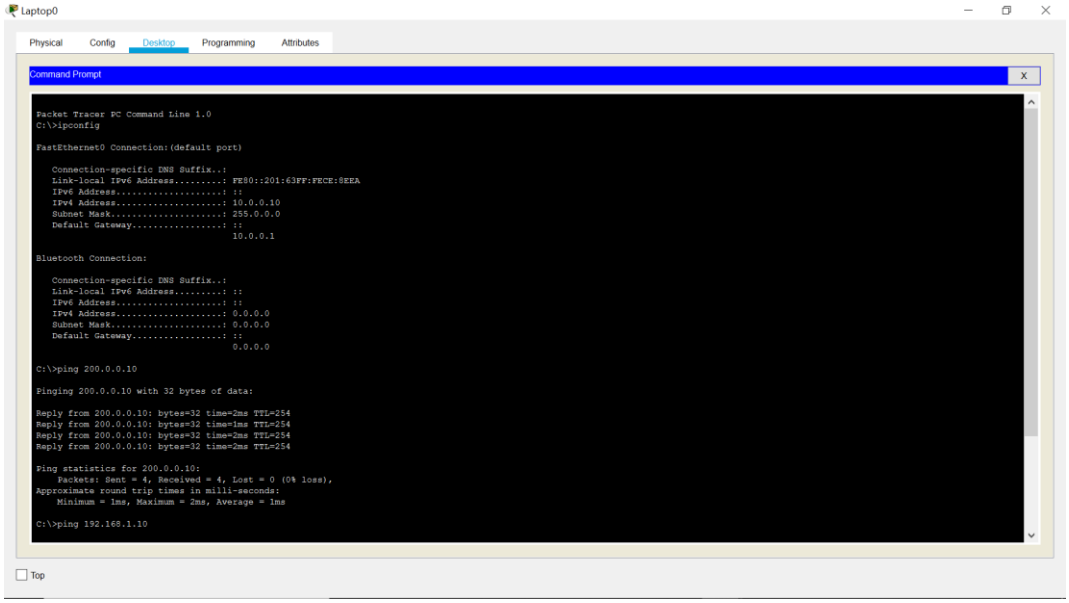

Router0
Physical
Config
CLI
Attributes
IOS Command Line Interface
--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]: no
Press RETURN to get started!
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname VD
VD(config)#interface FastEthernet 0/0
VD(config-if)#ip address 10.0.0.1 255.0.0.0
VD(config-if)#no shutdown
VD(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
VD(config-if)#exit
VD(config)#exit
VD#
%SYS-5-CONFIG_I: Configured from console by console
VD#show controllers serial 0/0/0
Interface Serial0/0/0
Hardware is PowerQUICC MPC860
DCE V.35, clock rate 2000000
idb at 0x81081AC4, driver data structure at 0x81084AC0
SCC Registers:
General [GSMR]=0x2:0x00000000, Protocol-specific [PSMR]=0x8
Events [SCCE]=0x0000, Mask [SCCM]=0x0000, Status [SCCS]=0x00
Transmit on Demand [TODR]=0x0, Data Sync [DSR]=0x7E7E
Interrupt Registers:
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

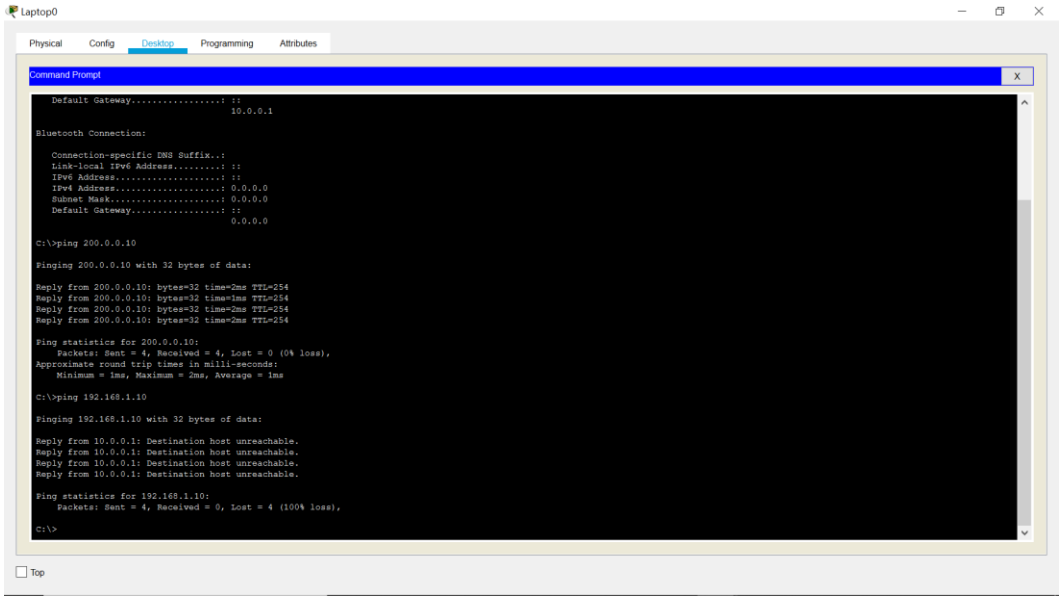

Router0
Physical
Config
CLI
Attributes
IOS Command Line Interface
Mask [CIMR]=0x00200000, In-srv [CISR]=0x00000000
Command register [CR]=0x580
Port A [PADIR]=0x1030, [PAPAR]=0xFFFF
[PAODR]=0x0010, [PADAT]=0xCBFF
Port B [PBDIR]=0x09C0F, [PBPAR]=0x0800E
[PBODR]=0x00000, [PBDAT]=0x3FFFD
Port C [PCDIR]=0x00C, [PCPAR]=0x200
[PCSO]=0xC20, [PCDAT]=0xDF2, [PCINT]=0x00F
Receive Ring
rmd(68012830): status 9000 length 60C address 3B6DAC4
rmd(68012838): status B000 length 60C address 3B6D444
Transmit Ring
VD#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
VD(config)#interface Serial 0/0/0
VD(config-if)#ip address 100.0.0.1 255.0.0.0
VD(config-if)#clock rate 64000
VD(config-if)#bandwidth 64
VD(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to down
VD(config-if)#exit
VD(config)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up
VD(config)#ip nat inside source static 10.0.0.10 50.0.0.10
VD(config)#interface FastEthernet 0/0
VD(config-if)#ip nat inside
VD(config-if)#exit
VD(config)#interface Serial 0/0/0
VD(config-if)#ip nat outside
VD(config-if)#exit
VD(config)#ip route 200.0.0.0 255.255.255.0 100.0.0.2
VD(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

Router 1 CLI

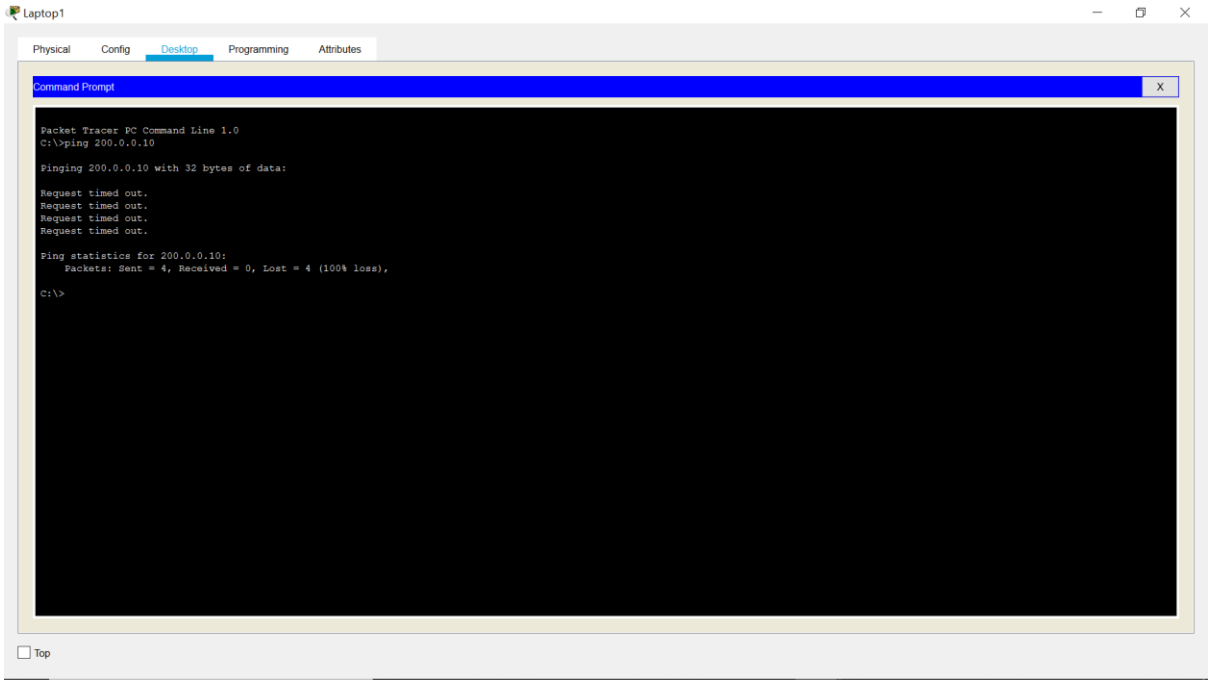


Laptop 0 CMD

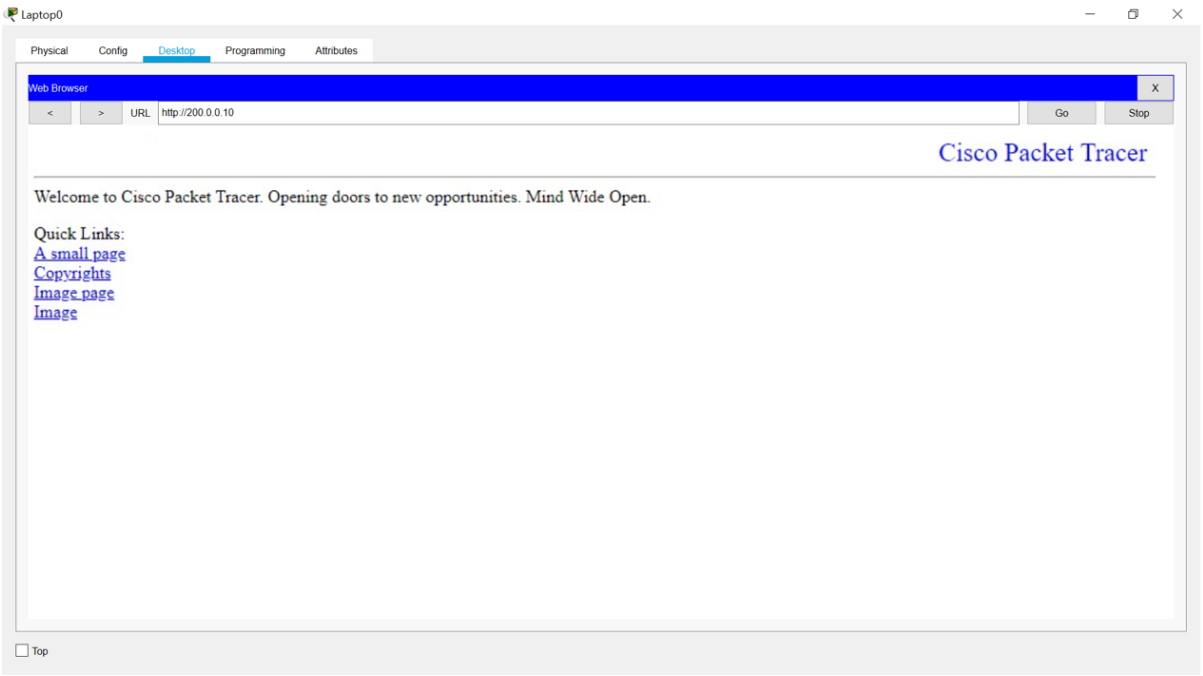




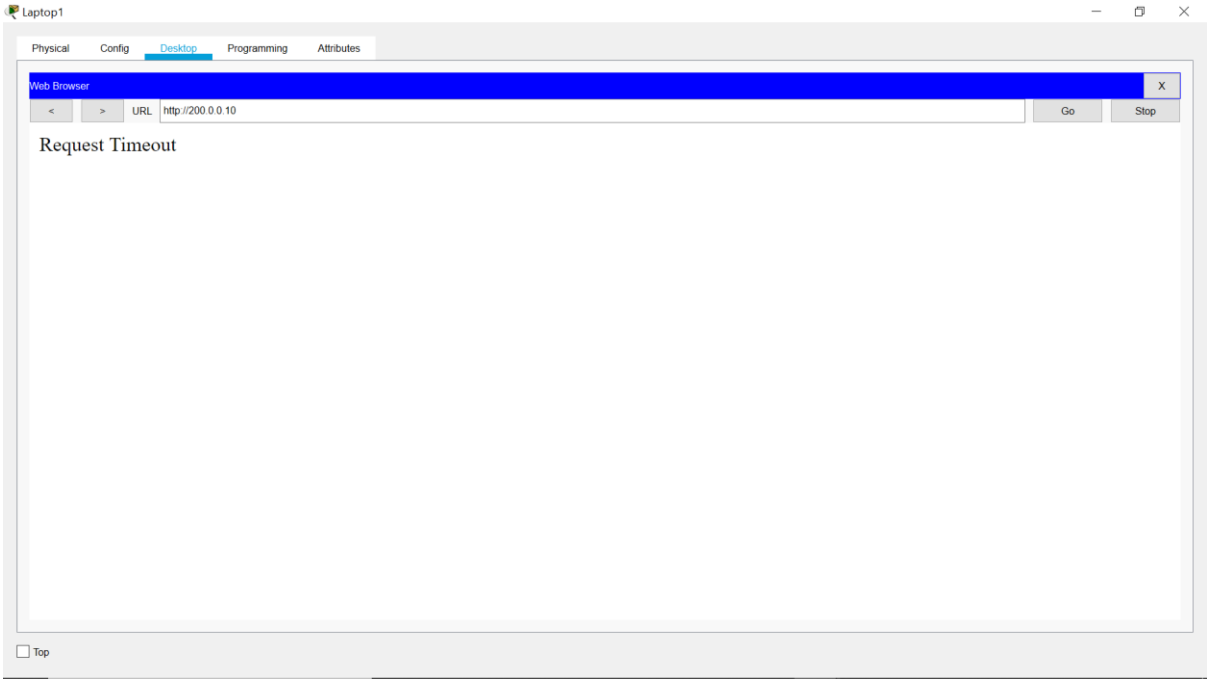
Laptop 1 CMD



Laptop 0 Browser



Laptop 1 Browser



RESULT

The above aim has been successfully achieved and verified.