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Course Code and Name : Computer Networks (2CS502)

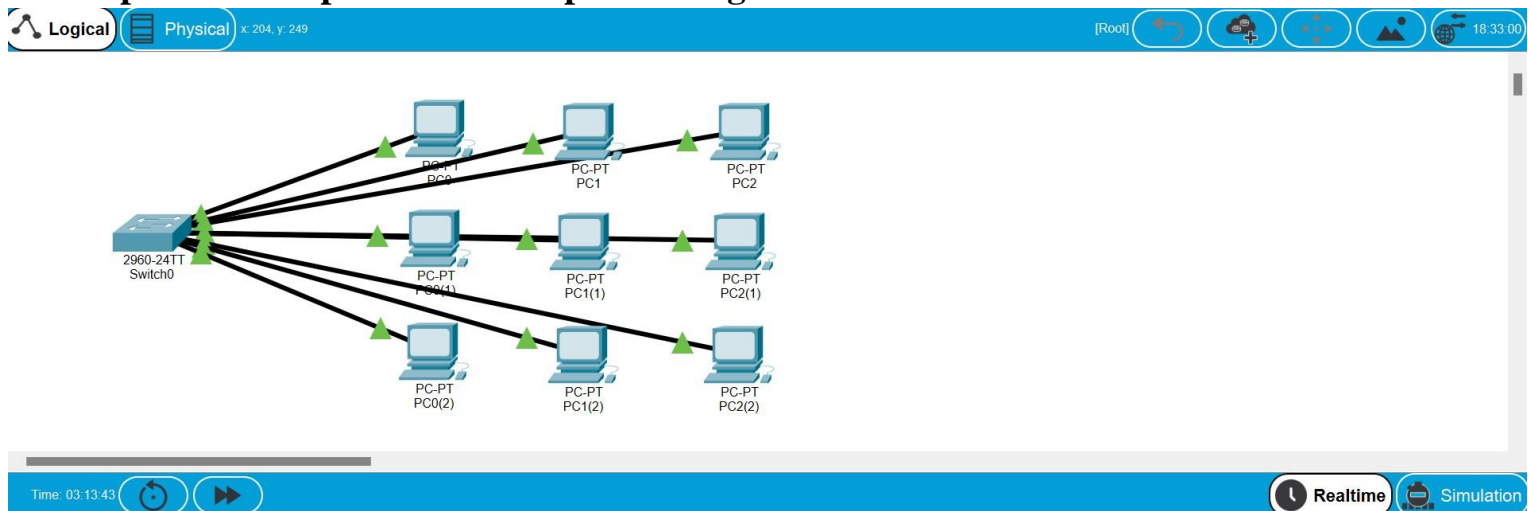
Experiment No : 5

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- **Aim:** Virtual LAN: Simulate Virtual LAN configuration using CISCO Packet Tracer Simulation.

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1. Implement Simple Switch-computer using Cisco Packet Tracer



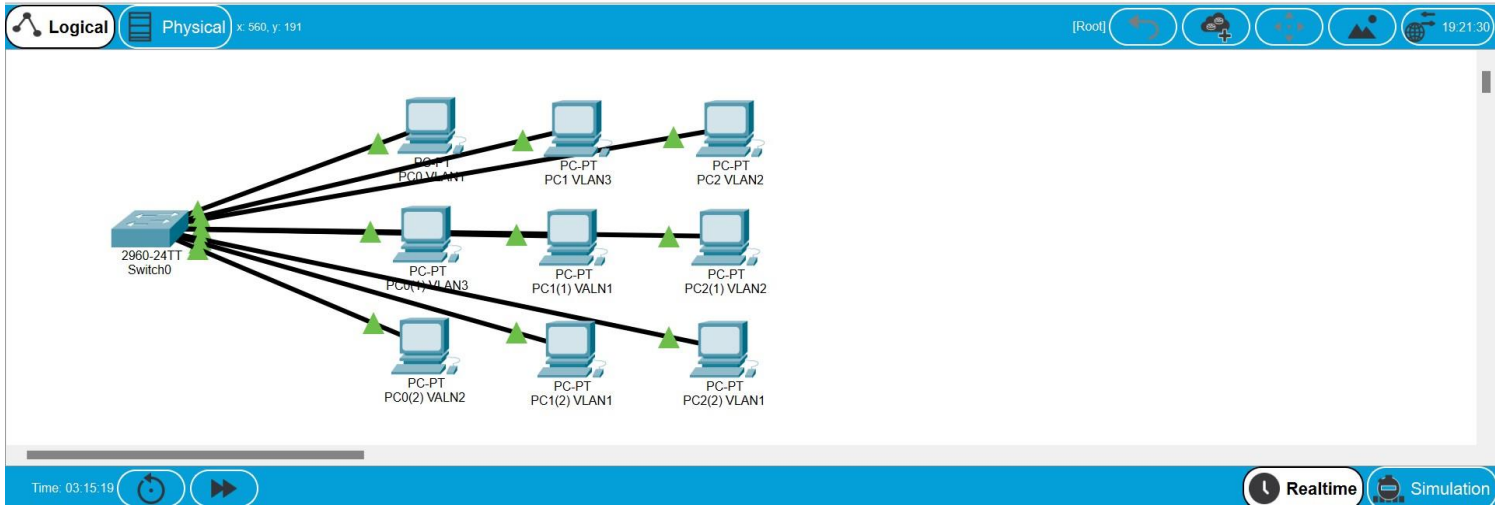
2. Simulation

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic
	Successful	PC0	PC2(1)	IC...		0.000	N

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic
	Successful	PC0	PC2(1)	IC...		0.000	N
	Successful	PC0(2)	PC2(2)	IC...		0.000	N

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic
	Successful	PC0	PC2(1)	IC...		0.000	N
	Successful	PC0(2)	PC2(2)	IC...		0.000	N
	Successful	PC0(2)	PC2	IC...		0.000	N

3. Now, we'll apply VLAN in database



i) VLAN1 (Default)

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/1

FastEthernet0/2

FastEthernet0/3

FastEthernet0/4

FastEthernet0/5

FastEthernet0/6

FastEthernet0/7

FastEthernet0/8

FastEthernet0/9

FastEthernet0/10

FastEthernet0/11

FastEthernet0/12

VLAN Configuration

VLAN Number1

VLAN Namedefault

AddRemove

VLAN No	VLAN Name
1	default
2	VLAN2
3	VLAN3
1002	fddi-default
1003	token-ring-default
1004	fddinet-default
1005	trnet-default

Equivalent IOS Commands

VLAN 2 modified:

Name: VLAN2

Switch(vlan)#vlan 3 name VLAN3

VLAN 3 modified:

Name: VLAN3

Switch(vlan)#

☐ Top

ii)VLAN2

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/1

FastEthernet0/2

FastEthernet0/3

FastEthernet0/4

FastEthernet0/5

FastEthernet0/6

FastEthernet0/7

FastEthernet0/8

FastEthernet0/9

FastEthernet0/10

FastEthernet0/11

FastEthernet0/12

VLAN Configuration

VLAN Number2

VLAN NameVLAN2

AddRemove

VLAN No	VLAN Name
1	default
2	VLAN2
3	VLAN3
1002	fddi-default
1003	token-ring-default
1004	fddinet-default
1005	trnet-default

Equivalent IOS Commands

VLAN 2 modified:

Name: VLAN2

Switch(vlan)#vlan 3 name VLAN3

VLAN 3 modified:

Name: VLAN3

Switch(vlan)#

☐ Top

iii)VLAN3

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/1

FastEthernet0/2

FastEthernet0/3

FastEthernet0/4

FastEthernet0/5

FastEthernet0/6

FastEthernet0/7

FastEthernet0/8

FastEthernet0/9

FastEthernet0/10

FastEthernet0/11

FastEthernet0/12

VLAN Configuration

VLAN Number3

VLAN NameVLAN3

AddRemove

VLAN No

VLAN Name

1default

2VLAN2

3VLAN3

1002fddi-default

1003token-ring-default

1004fddinet-default

1005trnet-default

Equivalent IOS Commands

VLAN 2 modified:
Name: VLAN2
Switch(vlan)#vlan 3 name VLAN3
VLAN 3 modified:
Name: VLAN3
Switch(vlan)#

Top

4. change Ethernet1, Ethernet2, Ethernet3 to VLAN1, VLAN3, VLAN2 Respectively.

Physical

Config

CLI

Attributes

FastEthernet0/8

FastEthernet0/9

FastEthernet0/10

FastEthernet0/11

FastEthernet0/12

FastEthernet0/13

FastEthernet0/14

FastEthernet0/15

FastEthernet0/16

FastEthernet0/17

FastEthernet0/18

FastEthernet0/19

FastEthernet0/20

FastEthernet0/11

Port Status

On

Bandwidth

100 Mbps

10 Mbps

Auto

Duplex

Half Duplex

Full Duplex

Auto

Access

VLAN

1

Tx Ring Limit

10

Physical

Config

CLI

Attributes

FastEthernet0/8

FastEthernet0/9

FastEthernet0/10

FastEthernet0/11

FastEthernet0/12

FastEthernet0/13

FastEthernet0/14

FastEthernet0/15

FastEthernet0/16

FastEthernet0/17

FastEthernet0/18

FastEthernet0/19

FastEthernet0/20

FastEthernet0/12

Port Status

Bandwidth

Duplex

Access

VLAN

Tx Ring Limit

☒ On

☐ 100 Mbps

☐ 10 Mbps

☒ Auto

☐ Half Duplex

☐ Full Duplex

☒ Auto

3

10

Physical

Config

CLI

Attributes

FastEthernet0/8

FastEthernet0/9

FastEthernet0/10

FastEthernet0/11

FastEthernet0/12

FastEthernet0/13

FastEthernet0/14

FastEthernet0/15

FastEthernet0/16

FastEthernet0/17

FastEthernet0/18

FastEthernet0/19

FastEthernet0/20

FastEthernet0/13

Port Status

Bandwidth

Duplex

Access

VLAN

Tx Ring Limit

☒ On

☐ 100 Mbps

☐ 10 Mbps

☒ Auto

☐ Half Duplex

☐ Full Duplex

☒ Auto

2

10

5. change Ethernet4, Ethernet5, Ethernet6 to VLAN3, VLAN1, VLAN2 Respectively.

- FastEthernet0/8
- FastEthernet0/9
- FastEthernet0/10
- FastEthernet0/11
- FastEthernet0/12
- FastEthernet0/13
- FastEthernet0/14**
- FastEthernet0/15
- FastEthernet0/16
- FastEthernet0/17
- FastEthernet0/18
- FastEthernet0/19
- FastEthernet0/20

FastEthernet0/14

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☒ Half Duplex ☐ Full Duplex ☒ Auto

Access

Tx Ring Limit

- FastEthernet0/8
- FastEthernet0/9
- FastEthernet0/10
- FastEthernet0/11
- FastEthernet0/12
- FastEthernet0/13
- FastEthernet0/14
- FastEthernet0/15**
- FastEthernet0/16
- FastEthernet0/17
- FastEthernet0/18
- FastEthernet0/19
- FastEthernet0/20

FastEthernet0/15

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☒ Half Duplex ☐ Full Duplex ☒ Auto

Access

Tx Ring Limit

Physical **Config** CLI Attributes

FastEthernet0/8
FastEthernet0/9
FastEthernet0/10
FastEthernet0/11
FastEthernet0/12
FastEthernet0/13
FastEthernet0/14
FastEthernet0/15
FastEthernet0/16
FastEthernet0/17
FastEthernet0/18
FastEthernet0/19
FastEthernet0/20

FastEthernet0/16

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☐ Full Duplex ☒ Auto

Access VLAN

Tx Ring Limit

6.change Ethernet7, Ethernet8, Ethernet9 to VLAN2, VLAN1, VLAN1 Respectively.

Physical **Config** CLI Attributes

FastEthernet0/8
FastEthernet0/9
FastEthernet0/10
FastEthernet0/11
FastEthernet0/12
FastEthernet0/13
FastEthernet0/14
FastEthernet0/15
FastEthernet0/16
FastEthernet0/17
FastEthernet0/18
FastEthernet0/19
FastEthernet0/20

FastEthernet0/17

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☐ Full Duplex ☒ Auto

Access VLAN

Tx Ring Limit

FastEthernet0/18	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
Access	VLAN 1
Tx Ring Limit	10

FastEthernet0/19	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
Access	VLAN 1
Tx Ring Limit	10

7.Simulation

- i) PC-PT PC0 to PC-PT PC1 (Between LAN1)

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic
	Successful	PC0	PC2(1)	IC...		0.000	N
	Successful	PC0(2)	PC2(2)	IC...		0.000	N
	Successful	PC0(2)	PC2	IC...		0.000	N
	Successful	PC0	PC1	IC...		0.000	N

ii) PC-PT PC0(1) to PC-PT PC1(1) (Between LAN2)

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Per
	Successful	PC0(2)	PC2(2)	IC...		0.000	
	Successful	PC0(2)	PC2	IC...		0.000	
	Successful	PC0	PC1	IC...		0.000	
	Successful	PC0(1)	PC1(1)	IC...		0.000	

iii) PC-PT PC0(2) to PC-PT PC1(2) (Between LAN3)

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Per
	Successful	PC0(2)	PC2	IC...		0.000	
	Successful	PC0	PC1	IC...		0.000	
	Successful	PC0(1)	PC1(1)	IC...		0.000	
	Successful	PC0(2)	PC1(2)	IC...		0.000	

8. Now with different VLAN

i) PC-PT PC0(1) to PC-PT PC1(2) (LAN12 to LAN13)

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Per
	Successful	PC0	PC1	IC...		0.000	
	Successful	PC0(1)	PC1(1)	IC...		0.000	
	Successful	PC0(2)	PC1(2)	IC...		0.000	
	Failed	PC0(1)	PC1(2)	IC...		0.000	

ii) PC-PT PC0(2) to PC-PT PC1 (LAN13 to LAN11)

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Per
	Successful	PC0(1)	PC1(1)	IC...		0.000	
	Successful	PC0(2)	PC1(2)	IC...		0.000	
	Failed	PC0(1)	PC1(2)	IC...		0.000	
	Failed	PC0(2)	PC1	IC...		0.000	

- **Conclusion:**

By learning this practical, I learn how to Simulate Virtual LAN configuration using CISCO Packet Tracer Simulation.
