Week#2 – Starting from Jan 11 - 2016

LEARN TO USE THE SIMULATION TOOL-CISCO PACKET TRACER

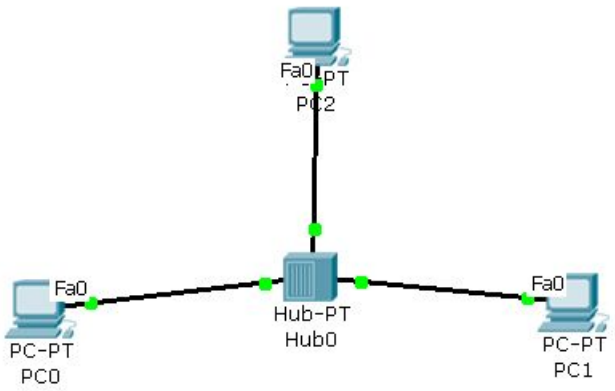
1.Learning objectives:

- **Get acquaintance with CISCO Packet Tracer**
  - Two modes – Real & Simulation
  - How to create topology of a simple Local Area Network ?
  - How to configure?
- Play in Real mode
  - How to test ?
  - **IP Address : Basic rules & Playing around subnet mask**
- Play in Simulation mode
  - Events
  - See how packets move.
  - Get a feel of layers
  - **How to analyse a Protocol Data Unit/Packet?**
- Difference between the simulation types – '**Auto capture / Play' & 'Capture forward'**

2.Pre-Laboratory assignment *(to be written in the observation book, before entering the lab]*

1. Explore 2 differences between SIMULATOR & EMULATOR
2. Name at least 3 popular simulators & Emulators

3.Topology



4.Conduction

PartA. Select 'Real mode'(Default mode is Real mode)

	do	What to observe	Write down / Answer the question
1			
2	Set up the network as shown in the diagram using a HUB		
3	Configure IP addresses PC0 : 1.1.1.1 PC1 : 1.1.1.2 PC2 : 1.1.1.3		**How many interfaces are available in PC0?** **What is the name of the interface?** **How many interfaces are there in HUB ?**
4	Ping from PC0 to PC1 Ping from PC0 to PC1	Result : Success or Failure ?	
5	Change the setting of PC1's interface to FULL DUPLEX mode		**What is the observation**
6	Set ii back to 'HALF DUPLEX ' mode.		
7	Set the IP address of PC1 to 2.2.2.2 & PING between PC0 & PC1	The status	**What is the observation ?** **What could be the reason ?**
8	Set it back to 1.1.1.2		
9	Change the bandwidth of one of the ports of HUB		**What is the observation ?**
10	Keep the cursor on PC0	IP address	**Write down the IP address, as displayed**
11	Change the subnet mask of PC0 to 255.255.0.0; Keep the cursor on PC0	IP address	**Write down the IP address, as displayed**

Part B. Select 'Simulation mode'

	do	What to observe	Write down / Answer the question
1	Ping from PC0 to PC1 & **Click Auto capture & Play**	Movement of the packet	
2		Event list	**How many events have occurred?**
			How much time is taken to complete

			pinging task ?
			What is the name of the protocol ?
	Analyse the first packet **Click on the info field of the first row in the event**	PDU Information at device PC0	
			How many layers are active out of 7 layers ?
	Click outbound PDU details		**How many fields are there in the link layer (Ethernet) frame ?**
			How many fields are there in the ICMP packet ?
			What is value of TTL in the IP header ?

5. Post-conduction assignment:

Write down at least 2 questions -emerged out of this experiment that can be discussed (as post-lab discussion) in the theory class,