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EXPERIMENT : 2(a)

**TITLE** : DESIGNING,CONFIGURE AND SIMULATE LAN NETWORKING USING

PACKET TRACER

OBJECTIVES : At the end of the experiment, students should be able to;

i. Design LAN network using Packet Tracer 5.0

ii. Configure IP address and subnet mask in terminal and switch using Packet Tracer 5.0

APPARATUS AND RESOURCES : Notebook with Windows XP Professional, Packet Tracer 5.0

THEORY (PACKET TRACER) : Packet Tracer is a interactive network simulation and learning tool for Cisco CCNA instructors and students. It allows users to create network topologies, configure devices, inject packets, and simulate a network with multiple visual representations. This release of Packet Tracer focuses on supporting more of the networking protocols taught in the CCNA curriculum.

THEORY (IP ADRESS) : IP is an address of a computer or other network device on a network using IP or TCP/IP. For example the number "166.70.10.23" is an example of such as an address. These addresses are similar to addresses used on houses and help data reach its appropriate destination on a network. There are five classes of available IP ranges: Class A. Class B, Class C, Class D and Class E, while only A, B and C are commonly used. Each class allows for a range of valid IP addresses. Below is a listing of these addresses.
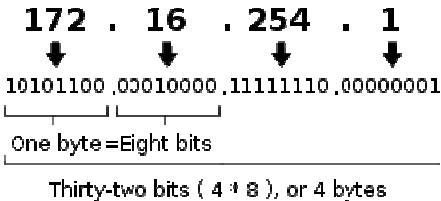
QUESTION :

Design the LAN network to produce DTK6 LAN Network using Packet Tracer 5.0 which consist of 10 terminals connecting with 3 switches. Configure it's IP address and subnet mask before you simulate the LAN connection. Produce the LAN network in your

report.
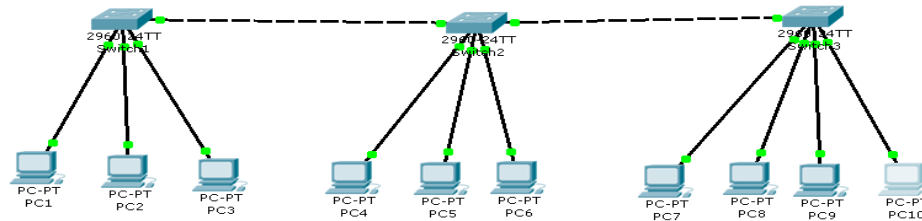
TERMINAL	IP ADDRESS	SUBNET MASK
COMPUTER 1	192.168.10.4	255.255.255.0
COMPUTER 2	192.168.10.5	255.255.255.0
COMPUTER 3	192.168.10.6	255.255.255.0
COMPUTER 4	192.168.10.7	255.255.255.0
COMPUTER 5	192.168.10.8	255.255.255.0
COMPUTER 6	192.168.10.9	255.255.255.0
COMPUTER 7	192.168.10.10	255.255.255.0
COMPUTER 8	192.168.10.11	255.255.255.0
COMPUTER 9	192.168.10.12	255.255.255.0
COMPUTER 10	192.168.10.13	255.255.255.0
SWITCH 1	192.168.10.1	255.255.255.0
SWITCH 2	192.168.10.2	255.255.255.0
SWITCH 3	192.168.10.3	255.255.255.0

DISCUSSION :

1. (a.) Ping from PC 1 to PC 4 (Print screen the output)
   (b.) Ping from PC 5 to PC 9 (Print screen the output)
   (c.) Ping from PC 10 to PC 2 (Print screen the output)

2.Differentiate between Hub, Switch, Router and Bridge in term of:

1.	Function	4. Diagram
2.	Speed	5. Price
3.	Characteristic	6. Which Topology (WAN, MAN, LAN) describe each equipment