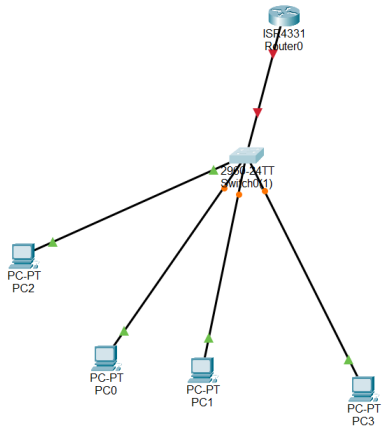
King Saud University College of Computer and Information Sciences Computer Science Department			
Course Code	CSC 329		
Course Title	Computer Networks		
Section No.			
Semester	Spring 24		
Exam	Homework- Simulation application		
Date	02nd May	**Submission date**	9th May 2024
Student Name	Abdullah Alrajhi 442102895 Abdulrahman almyman 441170135		
Student ID			

Course Learning Outcomes		**Relevant question**	**Full mark**	**Student mark**
CLO 1	**The ability to describe major networking terms, topologies, types, protocols, devices, and components.**	Q1		
CLO2	**The ability to explain the main services, type of addressing, and protocols associated with each layer of the OSI model.**	NA		
CLO 3	**The ability to recognize signal types, characteristics, impairments, encoding methods, transmission media.**	Q2 & Q4		
CLO 4	**The ability to recognize the functions and protocols of the data link layer (**framing, error control, flow control, medium access control.)	Q1, Q2, Q3 & Q4		
CLO 5	**The ability to explain the functions and protocols of the network layer and to describe the different routing approaches:** (datagram , VC , addressing, Routing).	NA		
CLO 6	**The ability to compare the features of network components and to measure and analyze the time performances of a network.**	Q3		

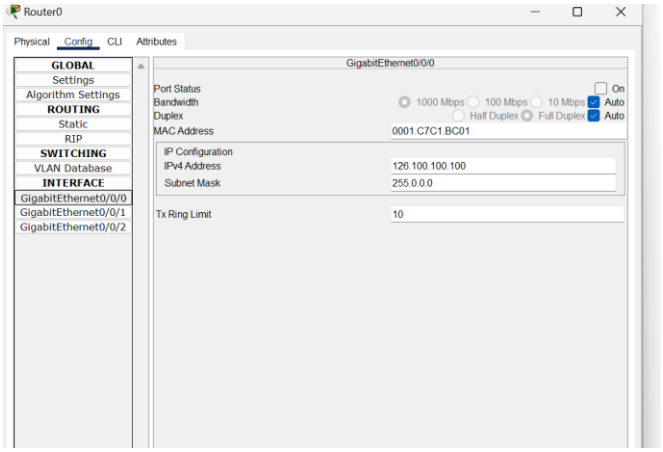
Feedback/Comments:				

Description of the required simulation using Packet Tracer

1. Create with *packet tracer* a local network composed of
   - One router.
   - A switcher connected to the router.
   - 4 Computers connected to the switcher.



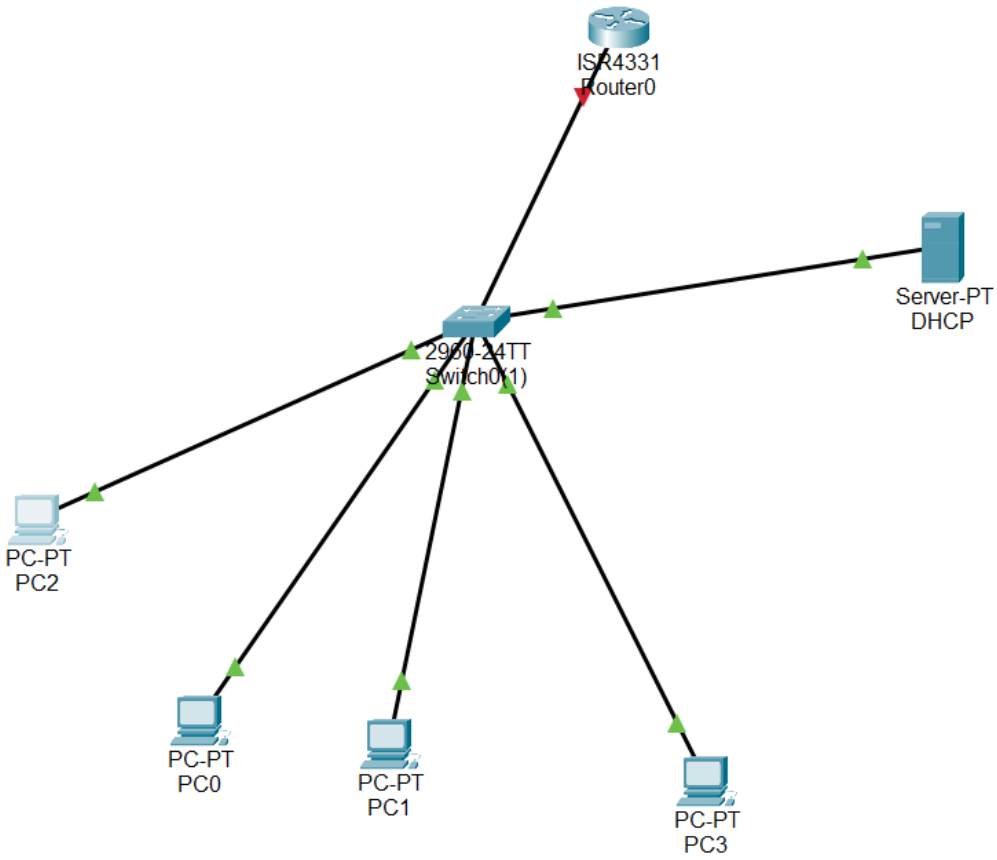
2. Assign IP addresses to the different components of the network using the class A.



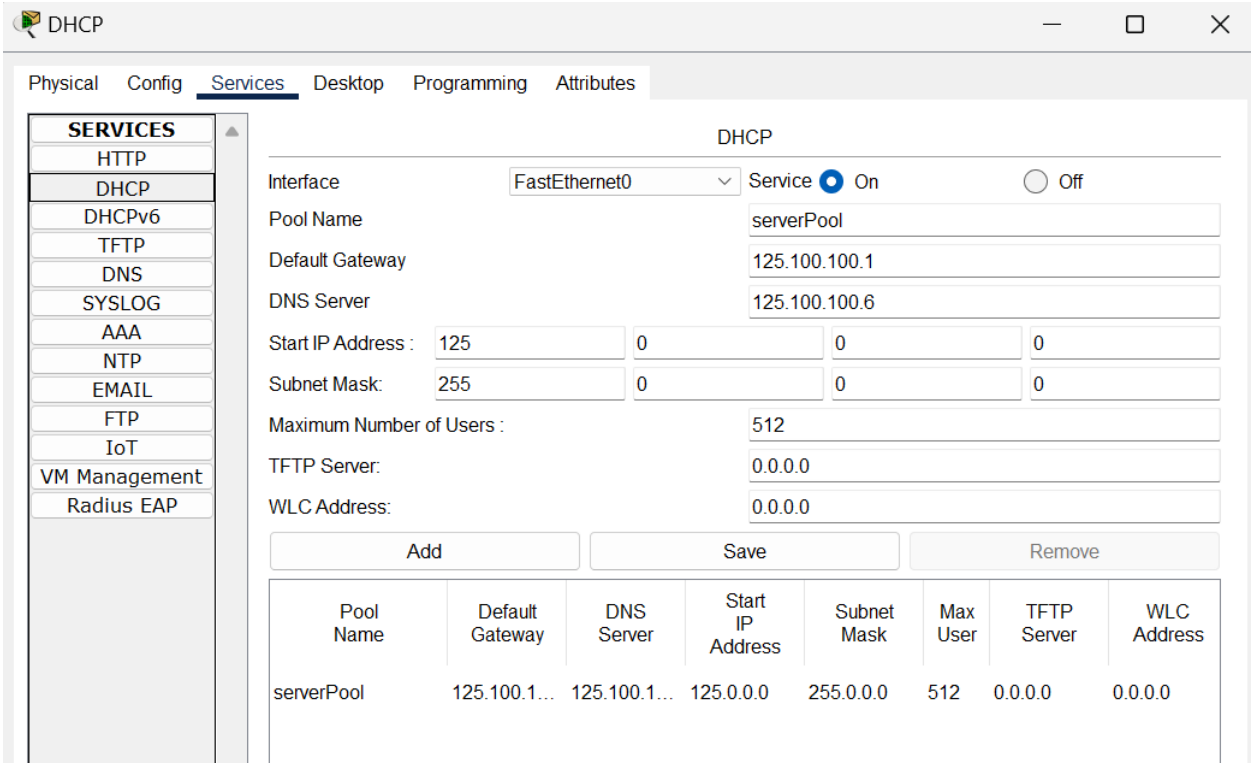
3. Verify the connectivity between the different computers and the router using the CMD command ping.

```
Pinging 120.144.144.144 with 32 bytes of data:

Reply from 120.144.144.144: bytes=32 time=3ms TTL=128
Reply from 120.144.144.144: bytes=32 time=5ms TTL=128
Reply from 120.144.144.144: bytes=32 time<1ms TTL=128
Reply from 120.144.144.144: bytes=32 time=7ms TTL=128

Ping statistics for 120.144.144.144:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 7ms, Average = 3ms
```

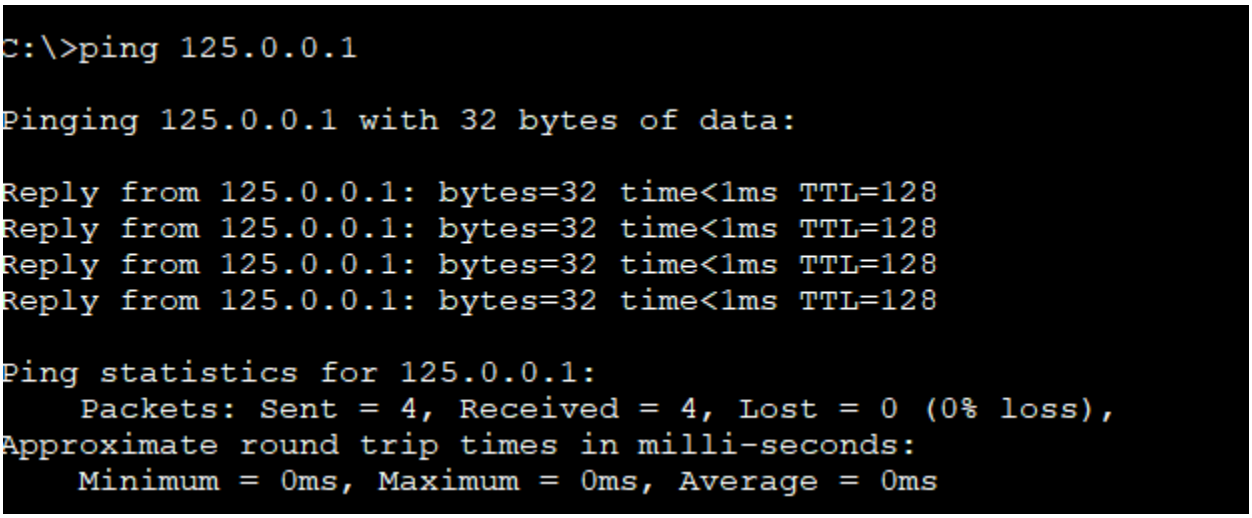
4. Add a DHCP server to the network and connected to the switcher.


ISR4331
Router0
Server-PT
DHCP
2960-24TT
Switch0(1)
PC-PT
PC2
PC-PT
PC0
PC-PT
PC1
PC-PT
PC3

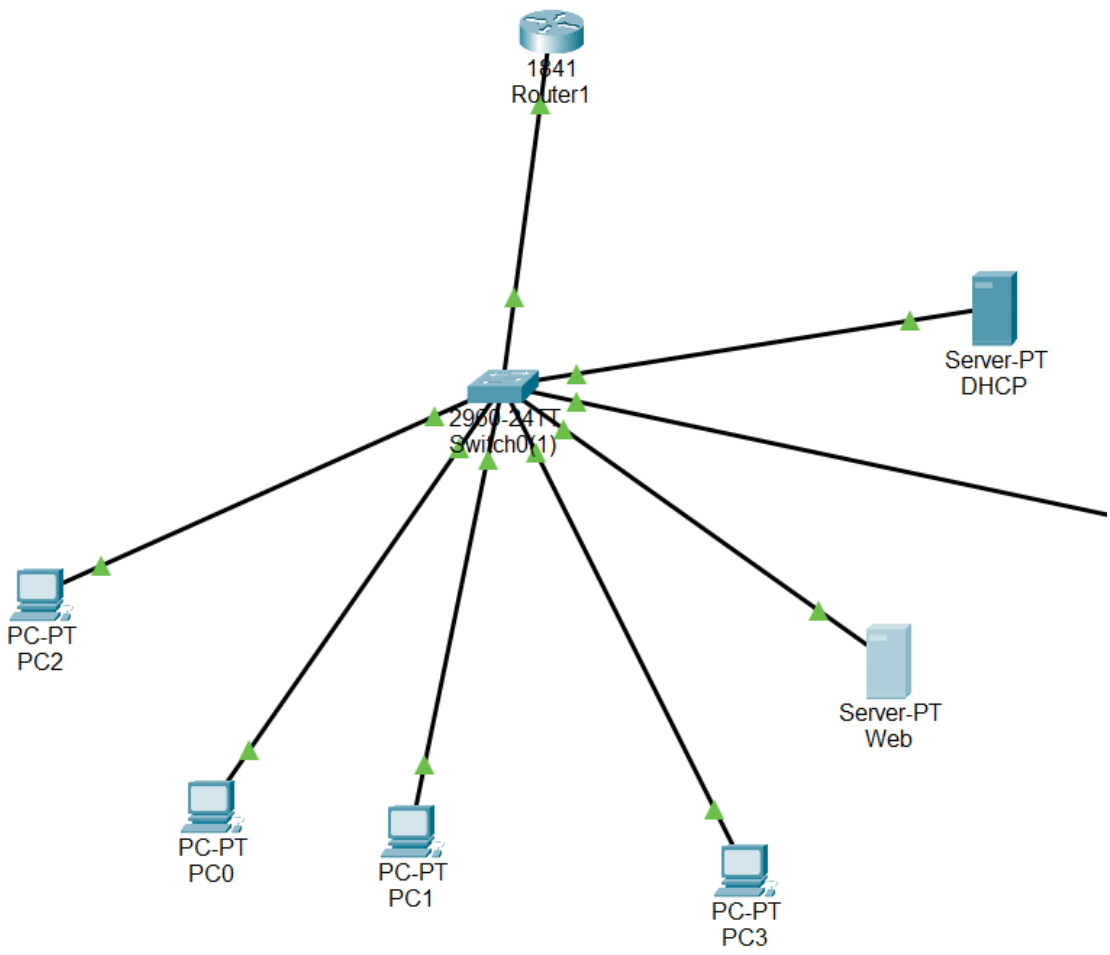
5. Configure the server to assign dynamic IP addresses using the DHCP server.

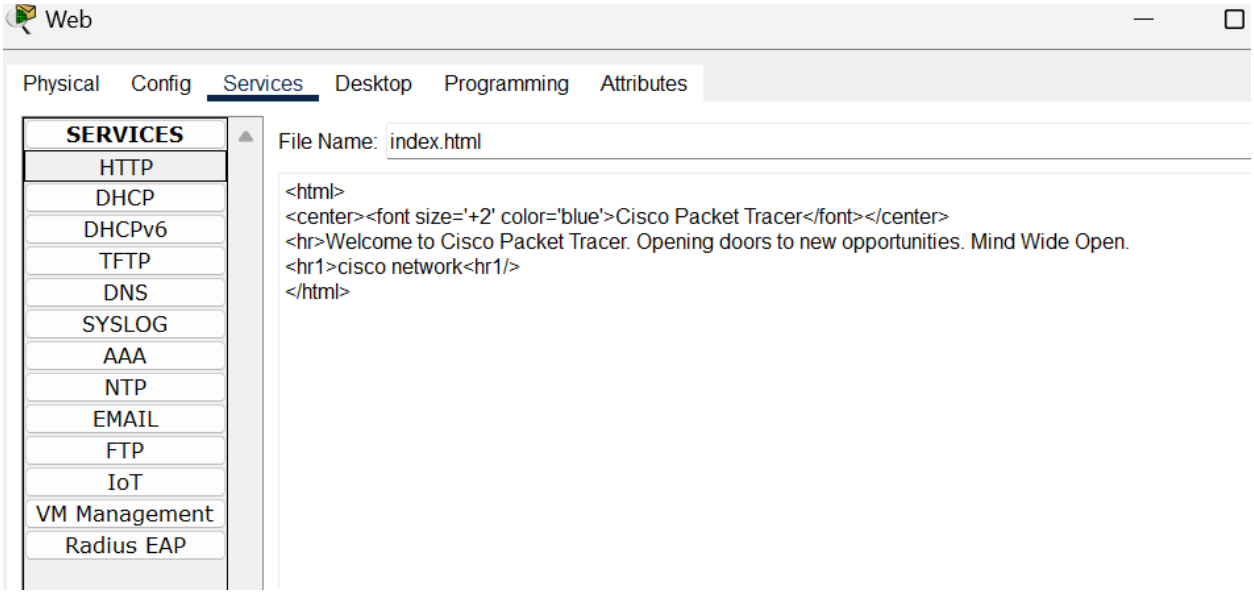


6. Repeat the step #3.

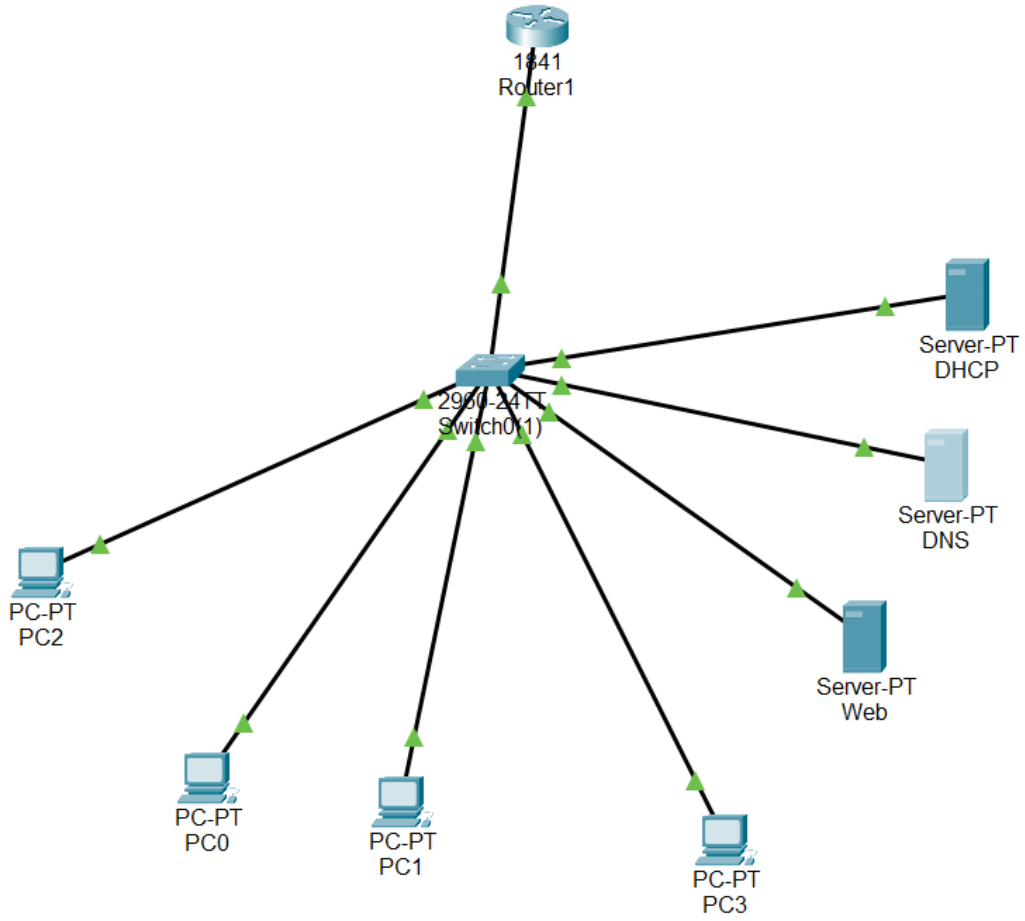


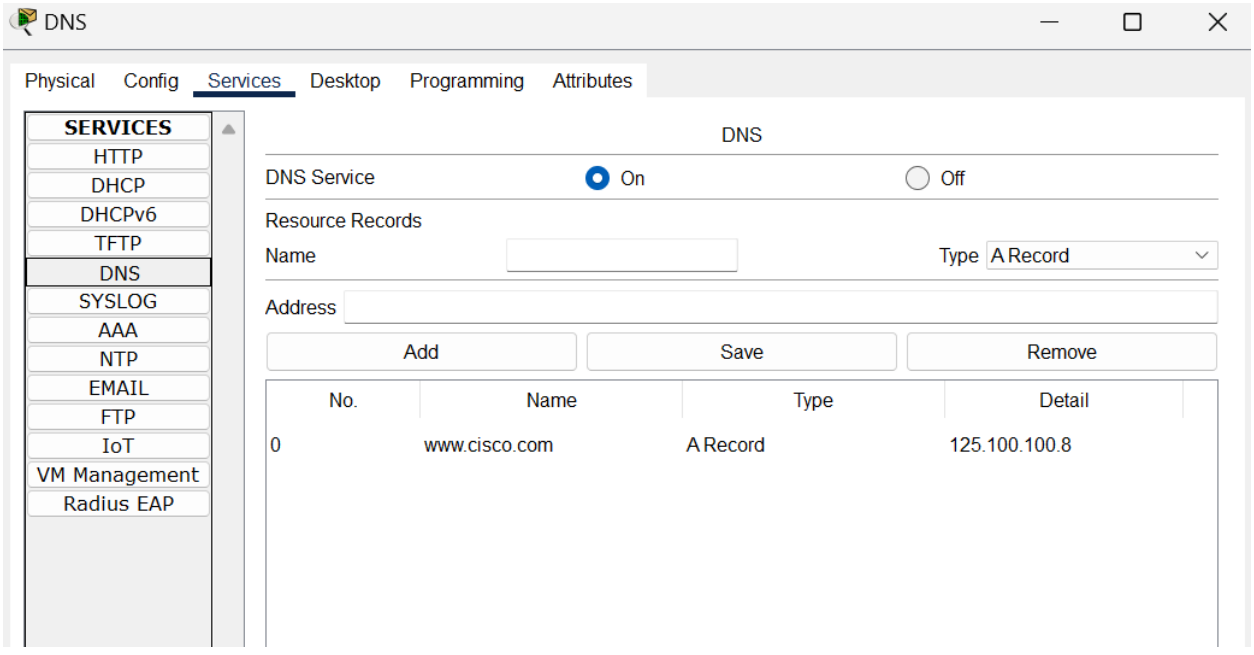
7. Add a web server connected to the switcher.


1841
Router1
Server-PT
DHCP
2960-24TT
Switch0(1)
PC-PT
PC2
Server-PT
Web
PC-PT
PC0
PC-PT
PC1
PC-PT
PC3


Web
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
File Name: index.html
<html>
Cisco Packet Tracer
<hr>Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
<hr1>cisco network<hr1/>
</html>

8. Add a DNS server to declare the web server.





9. Document all these steps in a word file, convert it to PDF and submit it through LMS.

The application will need to be demonstrated on a date that will be decided later.