

Lab 6

HTTP, DNS and DHCP

6.1. Objective

To configure and understand the HTTP, DNS and DHCP service.

6.2. Devices Used

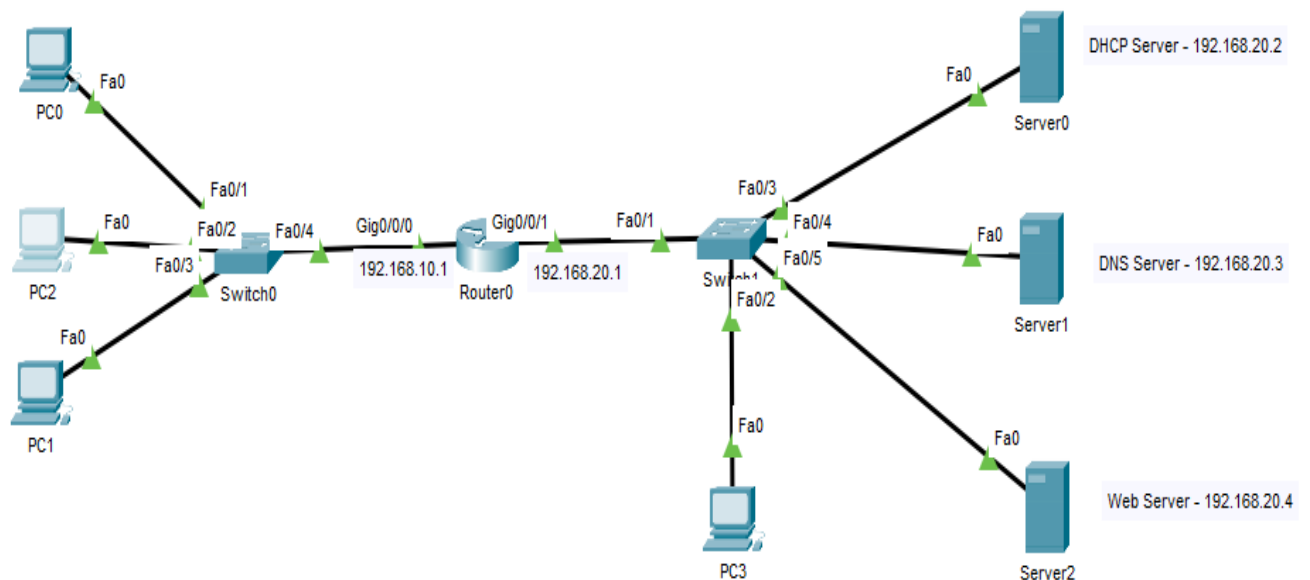
s. No.	Device	Model	Quantity
1.	PC	PC	4
2.	Switch	2960	2
3.	Router	4331	1
4.	Cable	Straight through	9
5.	Server	PT Server	3

6.3. IP Addressing

Device	Interface	IP	Subnet Mask	DNS Server	Default gateway
Router 0	gig 0/0/0	192.168.10.1	255.255.255.0	-	-
Router 0	gig 0/0/1	192.168.20.1	255.255.255.0	-	-
Server 0	NIC	192.168.20.2	255.255.255.0	192.168.20.3	192.168.20.1
Server 1	NIC	192.168.20.3	255.255.255.0	192.168.20.3	192.168.20.1
Server 2	NIC	192.168.20.4	255.255.255.0	192.168.20.3	192.168.20.1

All PC will get the IP address from the DHCP server dynamically.

6.4. Topology



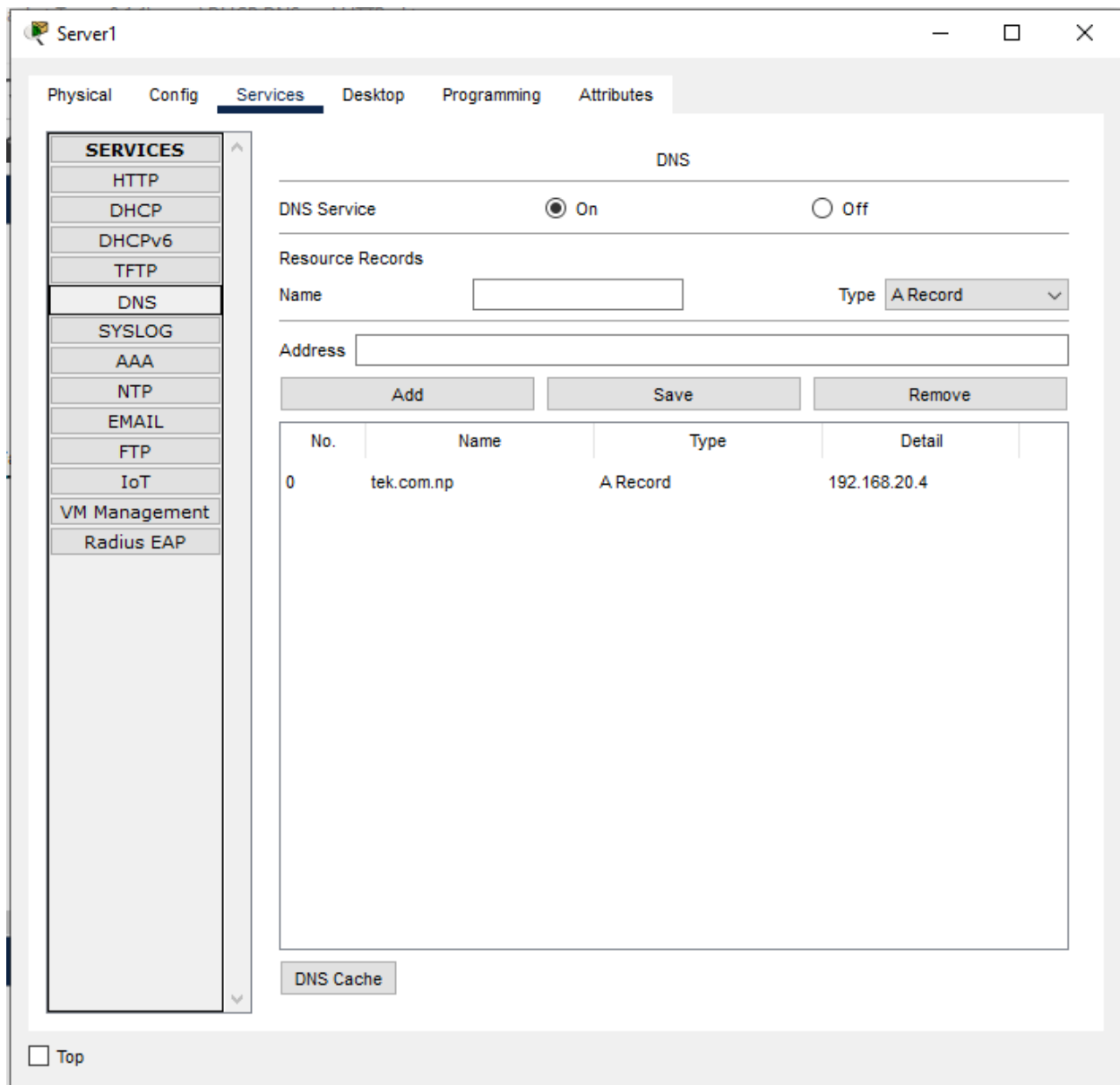
6.5. Procedure

1. Create the topology as shown above
2. Assign the IP address to each server as shown in IP table.
3. Set up the DHCP Server as shown below

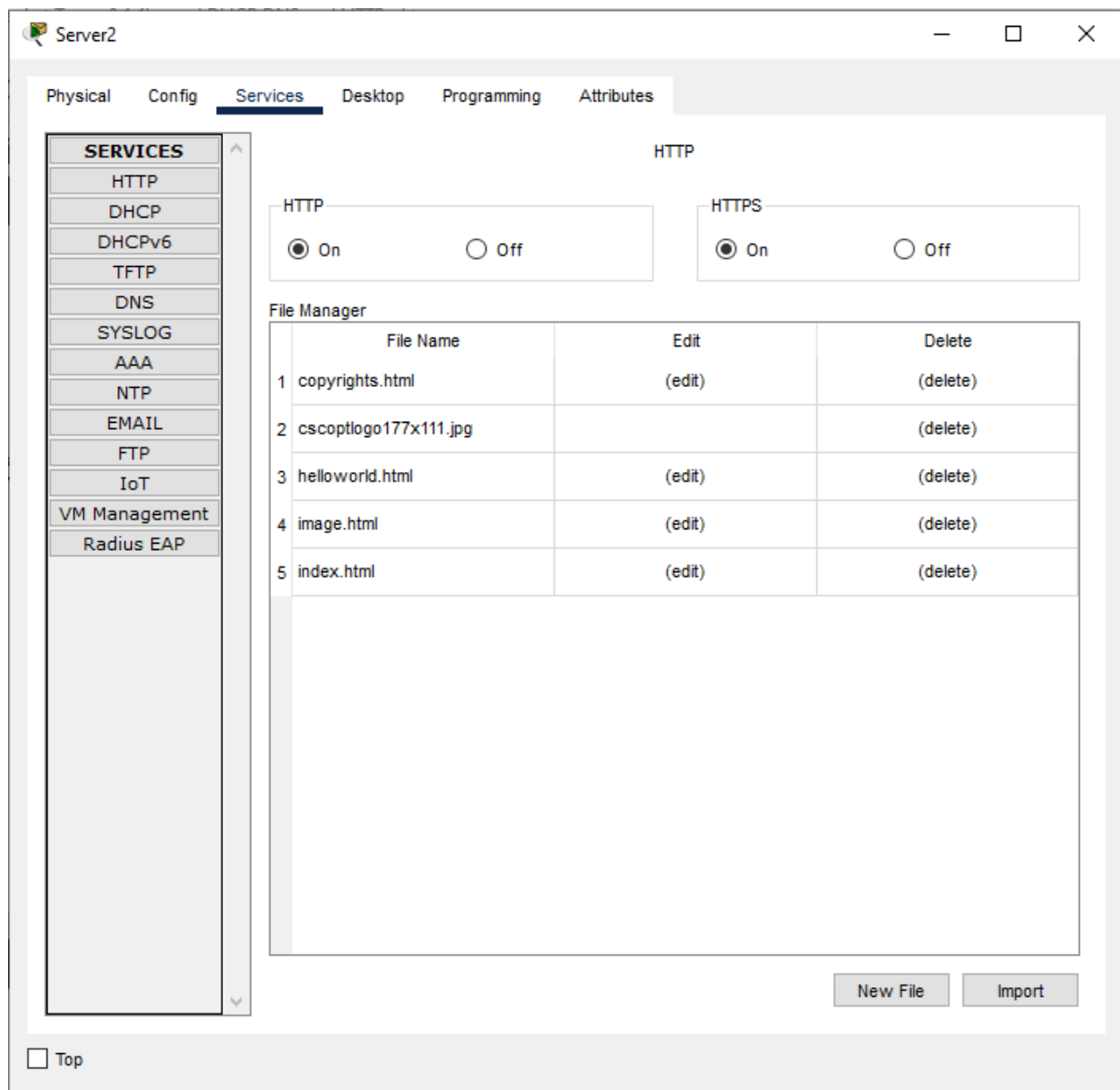
The screenshot shows the 'Server0' configuration window with the 'Services' tab selected. The 'DHCP' service is configured for the 'FastEthernet0' interface. The configuration includes a pool named 'serverPool' with a default gateway of 192.168.20.1, a DNS server of 192.168.20.3, and a start IP address of 192.168.20.5. The subnet mask is 255.255.255.0, and the maximum number of users is 50. The TFTP and WLC addresses are both 0.0.0.0. A table at the bottom lists the configured DHCP pools.

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool1	192.168....	192.168....	192.168....	255.255....	50	0.0.0.0	0.0.0.0
serverPool	192.168....	192.168....	192.168....	255.255....	50	0.0.0.0	0.0.0.0

4. Set up the DNS server as shown below



5. Setup the Web server as shown below



You can also edit existing files and add new your own files as well.

6. Setup the router interface as:

```
Router>enable
```

```
Router#configure terminal
```

```
Router(config)#interface GigabitEthernet0/0/0
```

```
Router(config-if)#ip address 192.168.10.1 255.255.255.0
```

```
Router(config-if)#no shutdown
```

```
Router(config-if)#exit
```

```
Router(config)#interface GigabitEthernet0/0/1
```

```
Router(config-if)#ip address 192.168.20.1 255.255.255.0
```

```
Router(config-if)#no shutdown
```

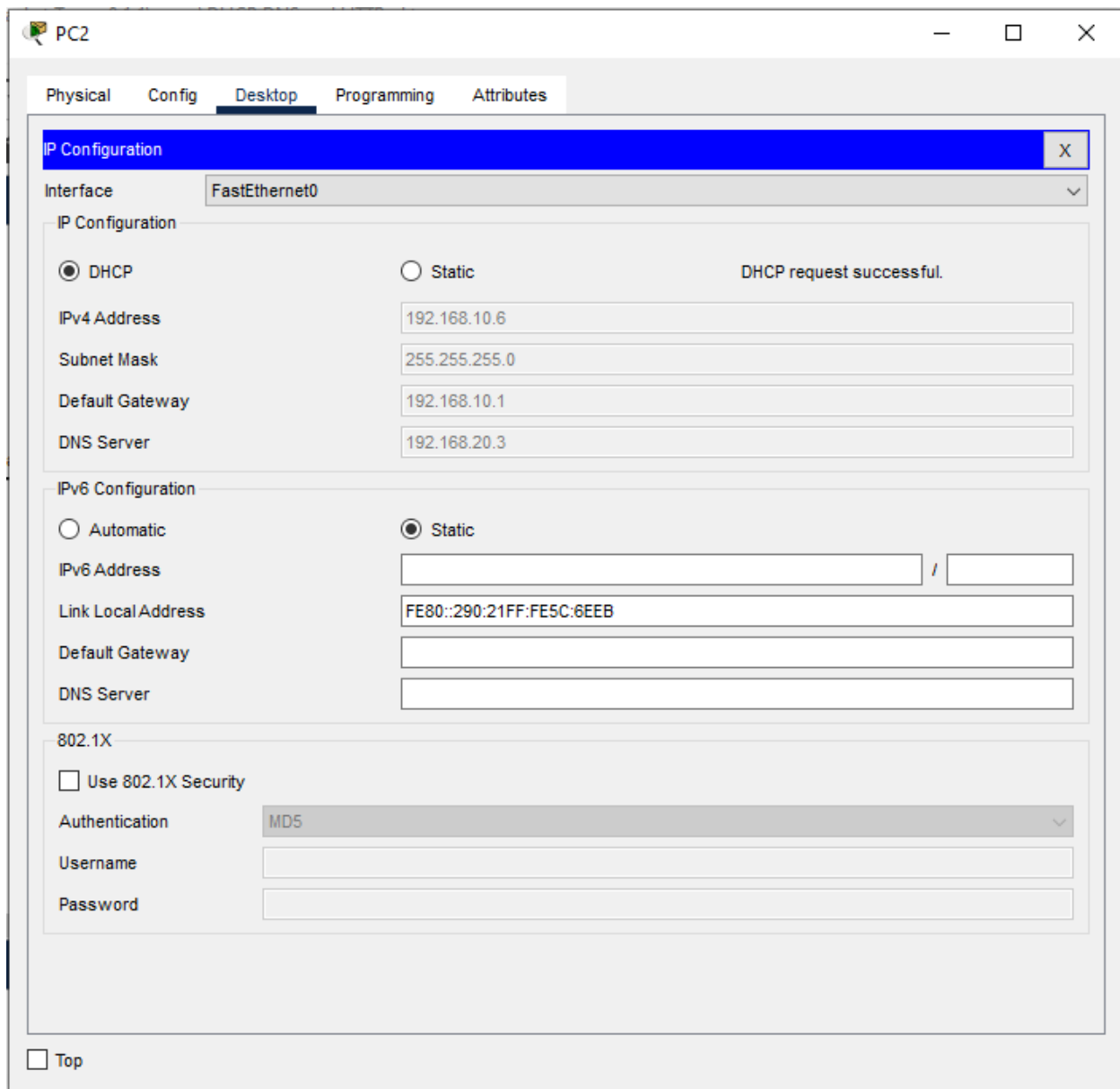
```
Router(config-if)#exit
```

To forward broadcast message to DHCP server:

```
Router(config)#interface gig 0/0/0
```

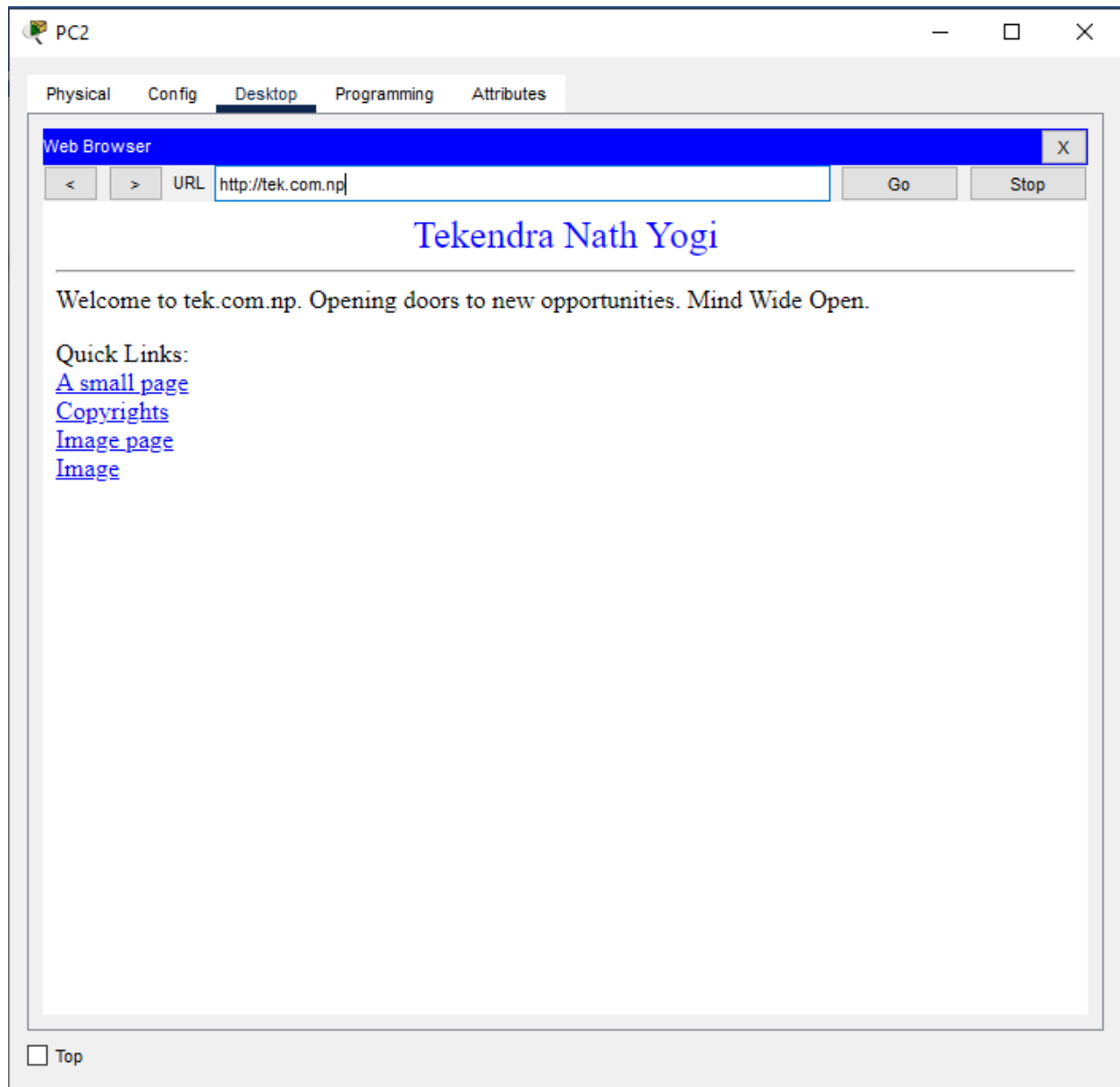
```
Router(config-if)#ip helper-address 192.168.20.2
```

7. Get the IP in each PC by selecting DHCP Option as: click on PC-> click on desktop tab and the select the DHCP then DHCP request sent to the DHCP server and server will assign the IP as shown below.



6.6. Verification

Click in any one PC select desktop tab select web browser and then enter tek.com.np then you will get the following response from the Web server after resolving domain name tek.com.np into ip address 192.168.20.4 by the DNS server.



6.7. Conclusion

In this way we can setup DHCP, DNS and Web server in our network and these services works in close association as shown in this experiment.