

INSTITUTE OF COMPUTER TECHNOLOGY

B-TECH COMPUTER SCIENCE ENGINEERING 2025-26

SUBJECT: COMPUTER NETWORKS

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ENRLL NO: 23162171020

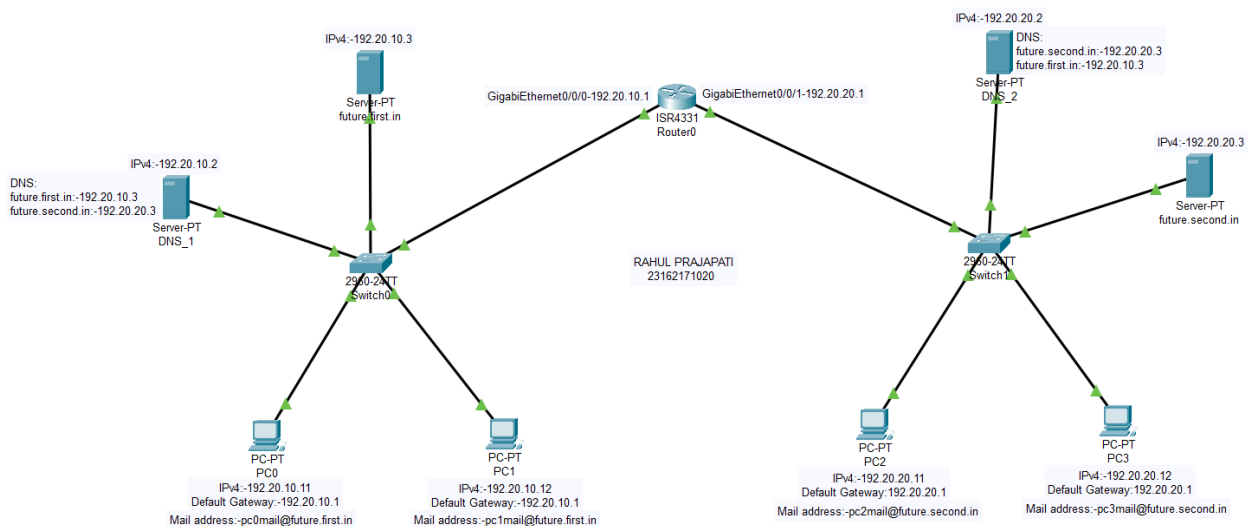
BRANCH: CYBER SECURITY

BATCH: 52

PRACTICAL_02

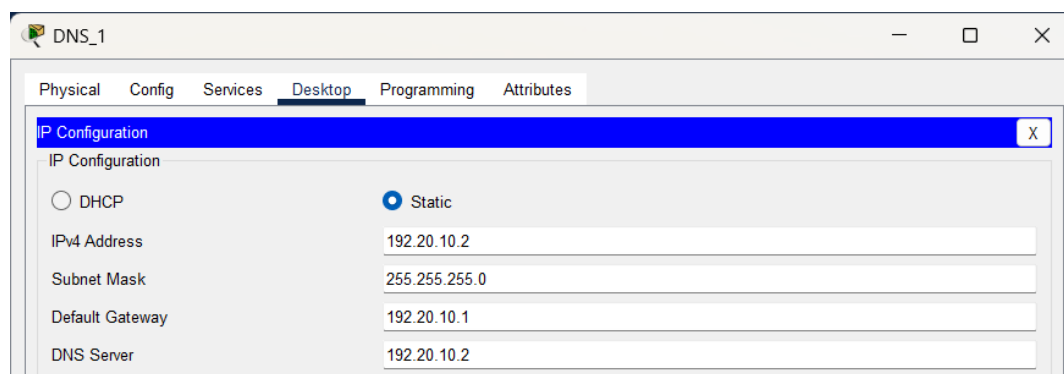
Aim: To demonstrate configuration of Mail Server (SMTP).

Network Design:-

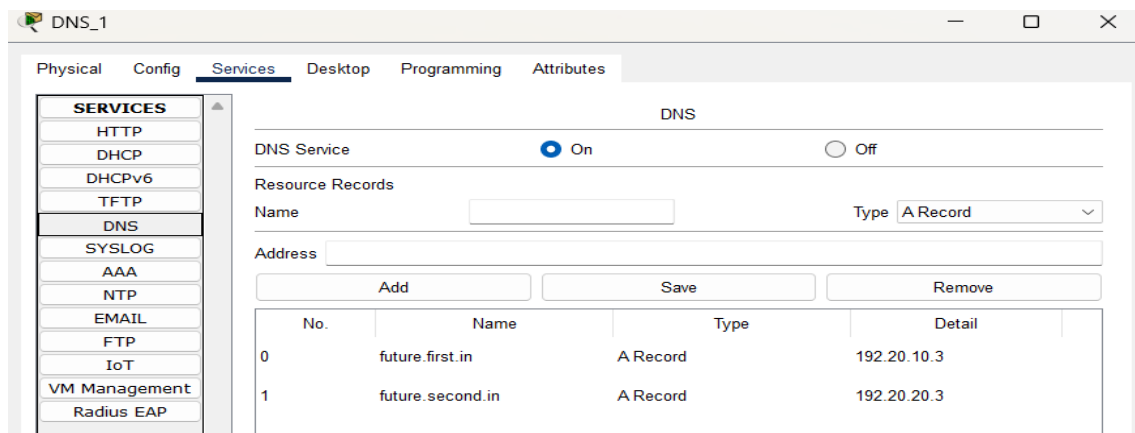


DNS Server Configuration:-

DNS_1 IP Configuration:-



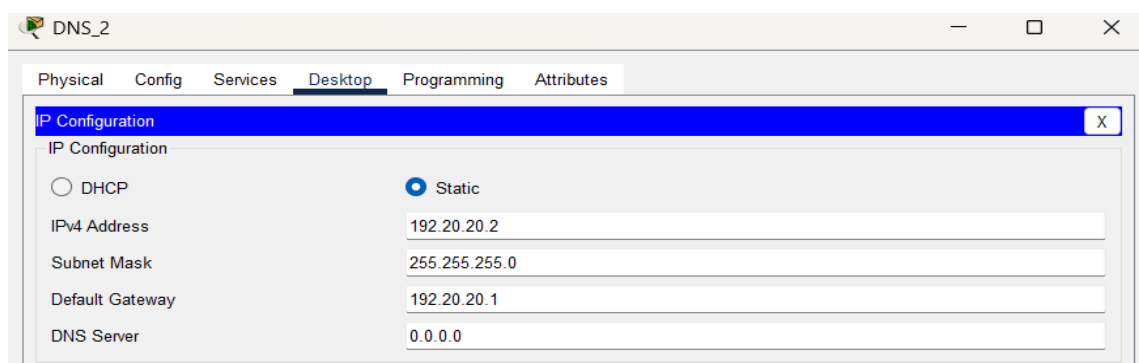
DNS_1 Service Configuration:-



The screenshot shows the 'DNS_1' configuration window with the 'Services' tab selected. On the left, a list of services includes HTTP, DHCP, DHCPv6, TFTP, DNS (highlighted), SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, and Radius EAP. The main area is titled 'DNS' and shows 'DNS Service' as 'On'. Below this, 'Resource Records' are listed in a table with columns for No., Name, Type, and Detail. Two records are present: 'future.first.in' (A Record, 192.20.10.3) and 'future.second.in' (A Record, 192.20.20.3). Above the table, there are input fields for Name, Address, and Type (set to 'A Record'), along with 'Add', 'Save', and 'Remove' buttons.

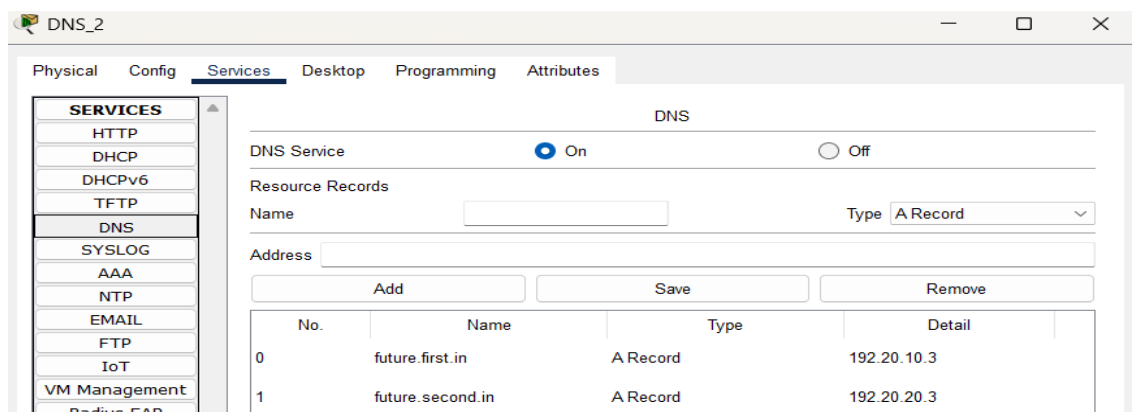
No.	Name	Type	Detail
0	future.first.in	A Record	192.20.10.3
1	future.second.in	A Record	192.20.20.3

DNS_2 IP Configuration:-



The screenshot shows the 'DNS_2' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is active, showing 'Static' as the selected option. Below this, several fields are filled: 'IPv4 Address' is 192.20.20.2, 'Subnet Mask' is 255.255.255.0, 'Default Gateway' is 192.20.20.1, and 'DNS Server' is 0.0.0.0.

DNS_2 Service Configuration:-

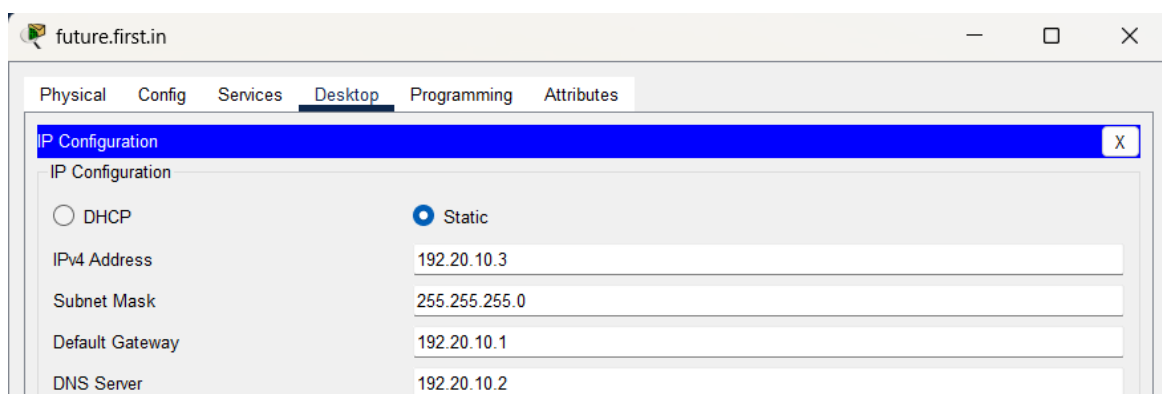


This screenshot is identical to the one above, showing the 'DNS_2' configuration window with the 'Services' tab selected. The 'DNS' service is 'On', and the resource records table contains the same two entries: 'future.first.in' (A Record, 192.20.10.3) and 'future.second.in' (A Record, 192.20.20.3).

No.	Name	Type	Detail
0	future.first.in	A Record	192.20.10.3
1	future.second.in	A Record	192.20.20.3

Mail Server Configuration:-

future.first.in IP Configuration:-



The screenshot shows the 'future.first.in' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is active, showing 'Static' as the selected option. The fields are filled with: 'IPv4 Address' 192.20.10.3, 'Subnet Mask' 255.255.255.0, 'Default Gateway' 192.20.10.1, and 'DNS Server' 192.20.10.2.

future.first.in Service Configuration:-

The screenshot shows the 'future.first.in' web interface with the 'Services' tab selected. On the left, a 'SERVICES' menu lists various protocols, with 'EMAIL' highlighted. The main area is titled 'EMAIL' and contains two service configuration boxes: 'SMTP Service' and 'POP3 Service'. Both have radio buttons for 'ON' (selected) and 'OFF'. Below these is a 'Domain Name' field containing 'future.first.in' and a 'Set' button. A 'User Setup' section includes a 'User' field with 'pc0mail' and a 'Password' field with '1234'. A list box below shows 'pc0mail' and 'pc1mail', with 'pc0mail' selected.

future.second.in IP Configuration:-

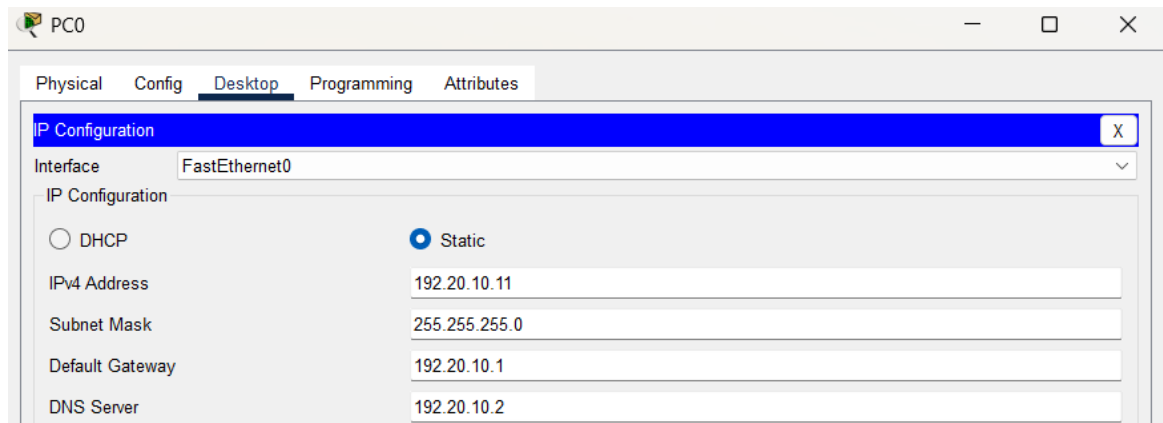
The screenshot shows the 'future.second.in' web interface with the 'Desktop' tab selected. A blue header bar at the top says 'IP Configuration' with a close button 'X'. Below, the 'IP Configuration' section has radio buttons for 'DHCP' and 'Static' (selected). Fields for 'IPv4 Address' (192.20.20.3), 'Subnet Mask' (255.255.255.0), 'Default Gateway' (192.20.20.1), and 'DNS Server' (192.20.20.2) are present.

future.second.in Service Configuration:-

The screenshot shows the 'future.second.in' web interface with the 'Services' tab selected. The 'SERVICES' menu on the left has 'EMAIL' highlighted. The 'EMAIL' configuration section shows 'SMTP Service' and 'POP3 Service' both set to 'ON'. The 'Domain Name' is 'future.second.in'. The 'User Setup' section shows 'User' as 'pc2mail' and 'Password' as '123'. A list box below shows 'pc2mail' and 'pc3mail', with 'pc2mail' selected.

PC's Configurations:

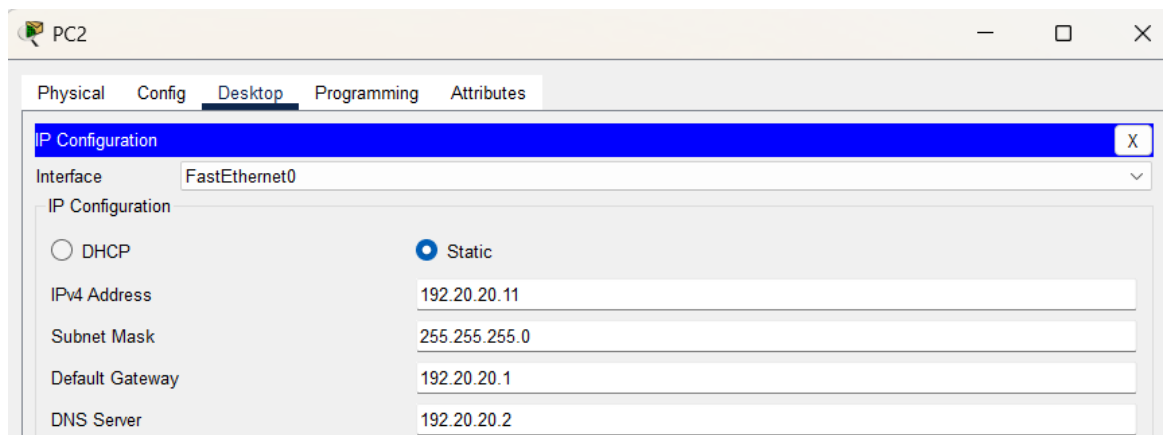
Department_1 PC0's Configuration:



The screenshot shows the configuration window for PC0. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for the IP configuration method. The fields are filled with the following values:

Field	Value
IPv4 Address	192.20.10.11
Subnet Mask	255.255.255.0
Default Gateway	192.20.10.1
DNS Server	192.20.10.2

Department_2 PC2's Configuration:



The screenshot shows the configuration window for PC2. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for the IP configuration method. The fields are filled with the following values:

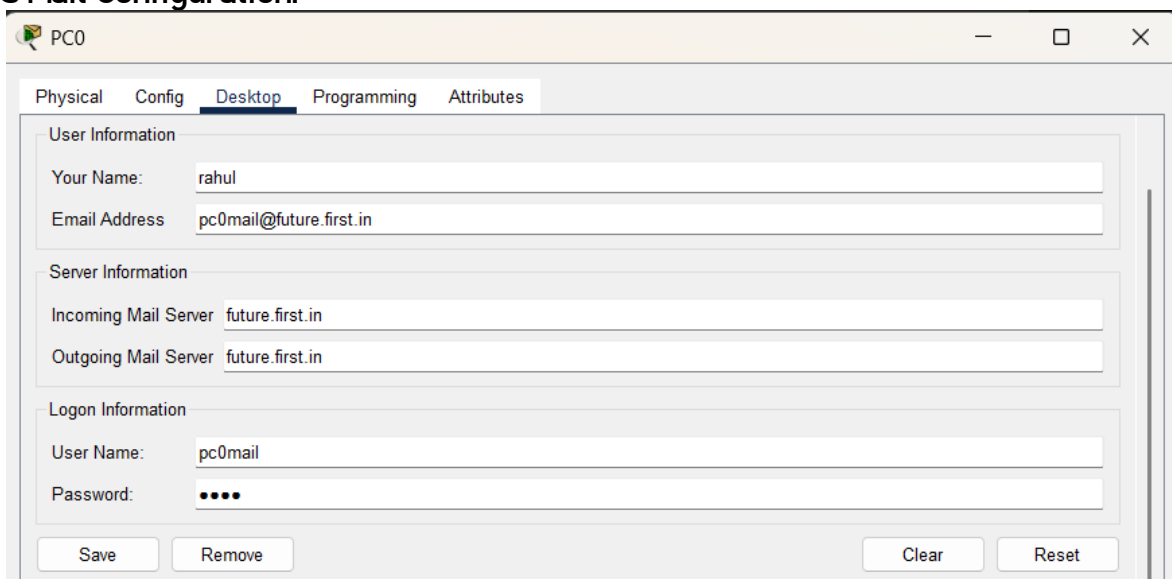
Field	Value
IPv4 Address	192.20.20.11
Subnet Mask	255.255.255.0
Default Gateway	192.20.20.1
DNS Server	192.20.20.2

Router's Configurations:

- GigabitEthernet 0/0/0:-192.20.10.1
- GigabitEthernet 0/0/1:-192.20.20.1

PC's Mail Configuration:-

PC0's Mail Configuration:

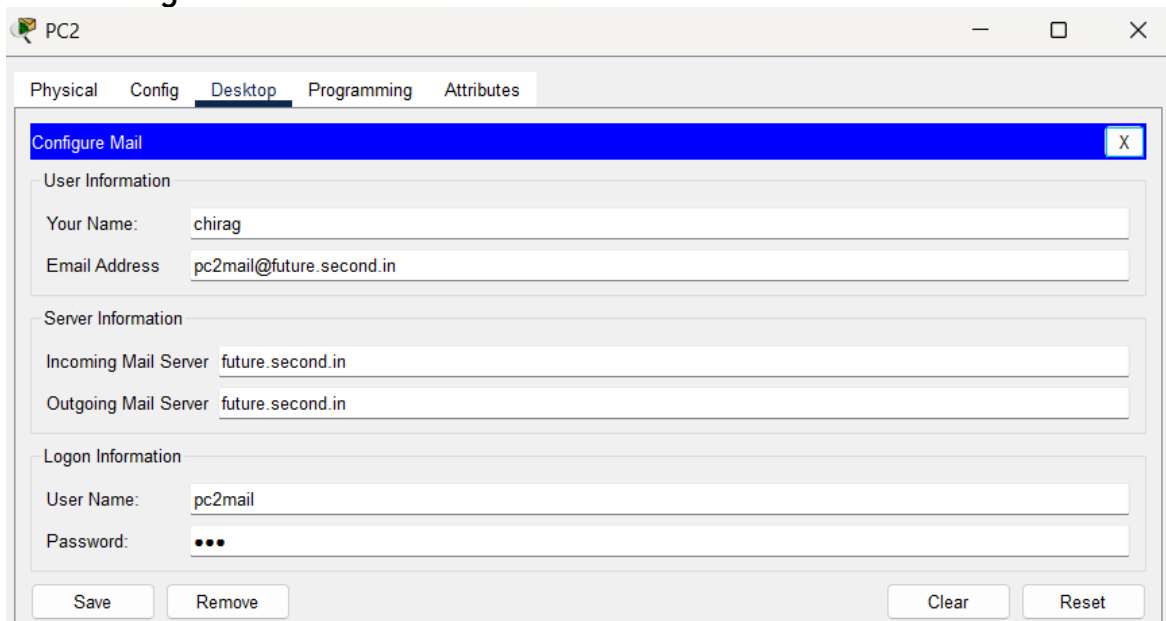


The screenshot shows a window titled "PC0" with a tabbed interface. The "Desktop" tab is selected, displaying a "Configure Mail" dialog. The dialog has three sections: "User Information", "Server Information", and "Logon Information".

Section	Field	Value
User Information	Your Name:	rahul
	Email Address	pc0mail@future.first.in
Server Information	Incoming Mail Server	future.first.in
	Outgoing Mail Server	future.first.in
Logon Information	User Name:	pc0mail
	Password:	••••

At the bottom of the dialog are four buttons: "Save", "Remove", "Clear", and "Reset".

PC2's Mail Configuration:



The screenshot shows a window titled "PC2" with a tabbed interface. The "Desktop" tab is selected, displaying a "Configure Mail" dialog. The dialog has three sections: "User Information", "Server Information", and "Logon Information".

Section	Field	Value
User Information	Your Name:	chirag
	Email Address	pc2mail@future.second.in
Server Information	Incoming Mail Server	future.second.in
	Outgoing Mail Server	future.second.in
Logon Information	User Name:	pc2mail
	Password:	•••

At the bottom of the dialog are four buttons: "Save", "Remove", "Clear", and "Reset".

TEST CASE_1:-SENDING MAIL FROM PC0 TO PC2.

PC0 Compose mail:-

PC0

Physical Config **Desktop** Programming Attributes

Compose Mail

Send

To: pc2mail@future.second.in

Subject: test

This mail is from PC0.
Domain:-future.first.in

Sending mail to pc2mail@future.second.in , with subject : test .. Mail Server: future.first.in
DNS resolving. Resolving name: future.first.in by querying to DNS Server: 192.20.10.2 DNS resolved ip address: 192.20.10.3
Send Success.

Cancel

Send/Receive

☐ Top

PC2 Receive mail:-

PC2

Physical Config **Desktop** Programming Attributes

MAIL BROWSER

Mails

Compose

Reply

Receive

Delete

Configure Mail

	From	Subject	Received
1	pc0mail@future.first.in	test	Sat Aug 9 2025 21:00:34

test
pc0mail@future.first.in
Sent : Sat Aug 9 2025 21:00:34

This mail is from PC0.
Domain:-future.first.in

Receiving mail from POP3 Server future.second.in
DNS resolving. Resolving name: future.second.in by querying to DNS Server: 192.20.20.2 DNS resolved ip address: 192.20.20.3
Receive Mail Success.

Cancel

Send/Receive

☐ Top

PC2 Reply mail to PC0:-

The screenshot shows the 'PC2' application window with the 'Desktop' tab selected. The 'Reply Mail' window is open, displaying the following details:

- To:** pc0mail@future.first.in
- Subject:** RE: test
- Message Body:** test case successfull.
- Header:** Subject : test, From : pc0mail@future.first.in, Sent : Sat Aug 9 2025 21:00:34
- Footer:** This mail is from PC0. Domain:-future.first.in

At the bottom, a status bar indicates: "Sending mail to pc0mail@future.first.in , with subject : RE: test .. Mail Server: future.second.in DNS resolving. Resolving name: future.second.in by querying to DNS Server: 192.20.20.2 DNS resolved ip address: 192.20.20.3 Send Success." Buttons for "Cancel" and "Send/Receive" are visible.

PC0 Receive Reply From PC2:-

The screenshot shows the 'PC0' application window with the 'Desktop' tab selected. The 'MAIL BROWSER' window is open, displaying the following details:

- Buttons:** Compose, Reply, Receive, Delete, Configure Mail
- Mail List Table:**

	From	Subject	Received
1	pc2mail@future.second.in	RE: test	Sat Aug 9 2025 21:13:26

Below the table, the selected email details are shown:

- Header:** RE: test, pc2mail@future.second.in, Sent : Sat Aug 9 2025 21:13:26
- Message Body:** test case successfull.
- Header:** Subject : test, From : pc0mail@future.first.in, Sent : Sat Aug 9 2025 21:00:34
- Footer:** This mail is from PC0. Domain:-future.first.in

At the bottom, a status bar indicates: "Receiving mail from POP3 Server future.first.in DNS resolving. Resolving name: future.first.in by querying to DNS Server: 192.20.10.2 DNS resolved ip address: 192.20.10.3 Receive Mail Success." Buttons for "Cancel" and "Send/Receive" are visible.

CONCLUSION:- In this practical, we learned how DNS and SMTP servers work together to send and receive emails within a network. We set up a system where all users could communicate through email without relying on external services.