

NETWORK PROGRAMMING LAB

LAB 10 – MULTICASTING

NAME : SREENIDHI GANACHARI

REG NO : 19BCE7230

Q) Write a program in java for Multicasting a message using UDP Client/Server.

MulticastSocketServer.java

```
import java.io.IOException;
import java.net.DatagramPacket;
import java.net.DatagramSocket;
import java.net.InetAddress;
import java.net.UnknownHostException;

public class MulticastSocketServer {

    final static String INET_ADDR = "224.0.0.3";
    final static int PORT = 8888;

    public static void main(String[] args) throws UnknownHostException, InterruptedException {

        InetAddress addr = InetAddress.getByName(INET_ADDR);

        try (DatagramSocket serverSocket = new DatagramSocket()) {
            for (int i = 0; i < 5; i++) {
                String msg = "Sent message no " + i;
```

```

        DatagramPacket msgPacket = new DatagramPacket(msg.getBytes(),
            msg.getBytes().length, addr, PORT);
        serverSocket.send(msgPacket);

        System.out.println("Server sent packet with msg: " + msg);
        Thread.sleep(500);
    }
} catch (IOException ex) {
    ex.printStackTrace();
}
}
}

```

MulticastSocketClient.java

```

import java.io.IOException;
import java.net.DatagramPacket;
import java.net.InetAddress;
import java.net.MulticastSocket;
import java.net.UnknownHostException;

public class MulticastSocketClient {

    final static String INET_ADDR = "224.0.0.3";
    final static int PORT = 8888;

    public static void main(String[] args) throws UnknownHostException {

        InetAddress address = InetAddress.getByName(INET_ADDR);
        byte[] buf = new byte[256];
    }
}

```

```

try (MulticastSocket clientSocket = new MulticastSocket(PORT)){

    clientSocket.joinGroup(address);

    while (true) {

        DatagramPacket msgPacket = new DatagramPacket(buf, buf.length);

        clientSocket.receive(msgPacket);

        String msg = new String(buf, 0, buf.length);

        System.out.println("Socket 1 received msg: " + msg);

    }

} catch (IOException ex) {

    ex.printStackTrace();

}

}
}

```

OUTPUT –

```

Command Prompt
Microsoft Windows [Version 10.0.19042.1348]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Sreenidhi>cd Desktop

C:\Users\Sreenidhi\Desktop>javac MulticastSocketServer.java

C:\Users\Sreenidhi\Desktop>java MulticastSocketServer
Server sent packet with msg: Sent message no 0
Server sent packet with msg: Sent message no 1
Server sent packet with msg: Sent message no 2
Server sent packet with msg: Sent message no 3
Server sent packet with msg: Sent message no 4

```

```

Command Prompt - java MulticastSocketClient
Microsoft Windows [Version 10.0.19042.1348]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Sreenidhi>cd Desktop

C:\Users\Sreenidhi\Desktop>javac MulticastSocketClient.java

C:\Users\Sreenidhi\Desktop>java MulticastSocketClient
Socket 1 received msg: Sent message no 0
Socket 1 received msg: Sent message no 1
Socket 1 received msg: Sent message no 2
Socket 1 received msg: Sent message no 3
Socket 1 received msg: Sent message no 4

```