ECHO server:

```java
import java.io.*;
import java.net.*;
public class EchoServer {
    public static void main(String[] args) {
        int port = 12345;
try (ServerSocket serverSocket = new ServerSocket(port)) {
            System.out.println("Echo Server started. Listening on port " + port);
            while (true) {
                Socket clientSocket = serverSocket.accept();
                System.out.println("Client connected: " + clientSocket.getInetAddress());
                handleClient(clientSocket);
            }
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
    private static void handleClient(Socket clientSocket) {
        try (
            BufferedReader in = new BufferedReader(new
InputStreamReader(clientSocket.getInputStream()));
            PrintWriter out = new PrintWriter(clientSocket.getOutputStream(), true);
        ) {
            String inputLine;
            while ((inputLine = in.readLine()) != null) {
                System.out.println("Received from client: " + inputLine);
                out.println("Echo: " + inputLine);

                if ("bye".equalsIgnoreCase(inputLine.trim())) {
                    System.out.println("Client requested to end connection.");
                    break;
```

```
        }
      }
    } catch (IOException e) {
      e.printStackTrace();
    } finally {
      try {
        clientSocket.close();
      } catch (IOException e) {
        e.printStackTrace();
      }
    }
  }
}
```
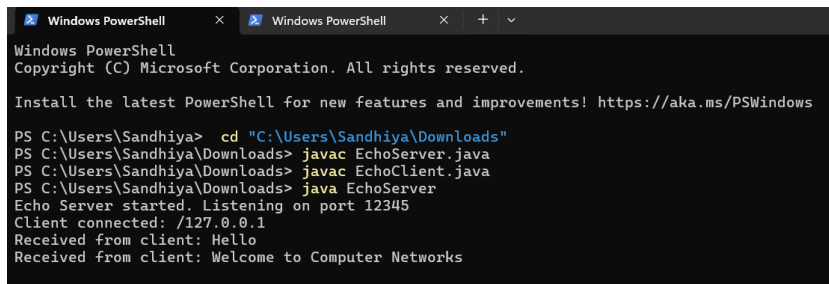
ECHO Client:

```java
import java.io.*;
import java.net.*;
public class EchoClient {
  public static void main(String[] args) {
    String serverAddress = "localhost";
    int port = 12345;
    try (
      Socket socket = new Socket(serverAddress, port);
      BufferedReader consoleReader = new BufferedReader(new
InputStreamReader(System.in));
      PrintWriter out = new PrintWriter(socket.getOutputStream(), true);
      BufferedReader in = new BufferedReader(new
InputStreamReader(socket.getInputStream()));
    ) {
      System.out.println("Connected to server at " + serverAddress + ":" + port);
      String userInput;
      while (true) {
```

```
System.out.print("Enter message (type 'bye' to quit): ");

userInput = consoleReader.readLine();

if (userInput == null || userInput.trim().equalsIgnoreCase("bye")) {

    out.println("bye");

    break;

}

out.println(userInput);

String response = in.readLine();

System.out.println("Server replied: " + response);

}

System.out.println("Client exiting.");

} catch (IOException e) {

e.printStackTrace();

}

}

}

}
```
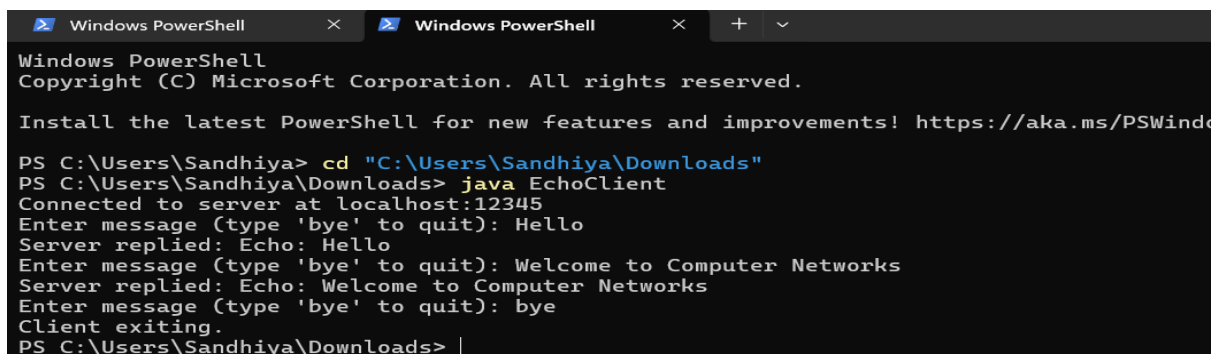
Output: