14. Write a program in C/C++/ JAVA/ Python for socket programming and share your file from one system to another system.

Socket_programming.java :-

```
import java.io.*;
import java.net.Socket;
public class Socket_programming {
    private static DataOutputStream dataOutputStream = null;
  private static DataInputStream dataInputStream = null;
  public static void main(String[] args)
  {
    // Create Client Socket connect to port 900
    try (Socket socket = new Socket("localhost", 900)) {
    dataInputStream = new DataInputStream( socket.getInputStream());
      dataOutputStream = new DataOutputStream(
        socket.getOutputStream());
      System.out.println("Sending the File to the Server");
    // Call SendFile Method
    sendFile("./Asif.txt");
      dataInputStream.close();
      dataInputStream.close();
    }
    catch (Exception e) {
      e.printStackTrace();
    }
  }
  // sendFile function define here
  private static void sendFile(String path)
    throws Exception
  {
    int bytes = 0;
    // Open the File where it is located in your pc
```

```
        File file = new File(path);
        FileInputStream fileInputStream
            = new FileInputStream(file);
        // Here we send the length of File to Server
        dataOutputStream.writeLong(file.length());
        // Here we break file into chunks
        byte[] buffer = new byte[4 * 1024];
        while ((bytes = fileInputStream.read(buffer))
            != -1) {
        // Send the file to Server Socket
        dataOutputStream.write(buffer, 0, bytes);
            dataOutputStream.flush();
        }
        // close the file here
        fileInputStream.close();
    }
}
```

Server.java :-

```
import java.io.DataInputStream;
import java.io.DataOutputStream;
import java.io.FileOutputStream;
import java.net.ServerSocket;
import java.net.Socket;
public class Server {
    private static DataOutputStream dataOutputStream = null;
    private static DataInputStream dataInputStream = null;
    public static void main(String[] args)
    {
        // Here we define Server Socket running on port 900
        try (ServerSocket serverSocket = new ServerSocket(900)) {
```

```
        System.out.println("Server is Starting in Port 900");
        // Accept the Client request using accept method
        Socket clientSocket = serverSocket.accept();
        System.out.println("Connected");
        dataInputStream = new DataInputStream(clientSocket.getInputStream());
        dataOutputStream = new DataOutputStream( clientSocket.getOutputStream());
        // Here we call receiveFile define new for that
        // file
        receiveFile("NewFile1.txt");
        dataInputStream.close();
        dataOutputStream.close();
        clientSocket.close();
    }
    catch (Exception e) {
        e.printStackTrace();
    }
}
// receive file function is start here
private static void receiveFile(String fileName)
    throws Exception
{
    int bytes = 0;
    FileOutputStream fileOutputStream = new FileOutputStream(fileName);
    long size  = dataInputStream.readLong(); // read file size
    byte[] buffer = new byte[4 * 1024];
    while (size > 0 && (bytes = dataInputStream.read(buffer, 0,
                (int)Math.min(buffer.length, size))) != -1) {
        // Here we write the file using write method
        fileOutputStream.write(buffer, 0, bytes);
        size -= bytes; // read upto file size
    }
```

```
        // Here we received file
        System.out.println("File is Received");
        fileOutputStream.close();
    }
}
```

Output :-

Server.java

```
Server is Starting in Port 900
Connected
File is Received
PS C:\Users\safet\OneDrive\Desktop\Practice Tech\java_practice>
```

Socket_programming.java

```
Sending the File to the Server
PS C:\Users\safet\OneDrive\Desktop\Practice Tech\Advance_Java_Projects\Socket_Programming>
```