

```
1 import java.io.*;
2 import java.net.Socket;
3 import java.nio.charset.StandardCharsets;
4 import java.util.zip.CRC32;
5 import java.util.zip.Checksum;
6 import java.util.zip.GZIPOutputStream;
7 import java.util.Base64;
8
9 public class client {
10     public static void main(String[] args) {
11         try {
12             System.out.println("Connecting to the
server...");
13
14             // Create a socket and connect to the
server on localhost, port 8080
15             Socket socket = new Socket("localhost",
8080);
16
17             System.out.println("Connected to the
server.");
18
19             // Create output stream for communication
with the server
20             ObjectOutputStream objectOutputStream =
new ObjectOutputStream(
21                 new GZIPOutputStream(socket.
getOutputStream()));
22
23             // Specify the folder path on the client
side
24             String desktopPath = System.getProperty("
user.home") + "/Desktop" + "/Files";
25             File folder = new File(desktopPath);
26
27             // List files in the folder
28             File[] files = folder.listFiles();
29             if (files == null) {
30                 System.err.println("No files found in
the folder: " + desktopPath);
31                 return;
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32         }
33
34         // Send the number of files to expect
35         objectOutputStream.writeInt(files.length
36     );
37         objectOutputStream.flush();
38
39         // Send up to 20 files at a time
40         int filesToSend = Math.min(20, files.
41     length);
42         for (int i = 0; i < filesToSend; i++) {
43             File file = files[i];
44
45             // Read the file content
46             String fileContent = readFileContent(
47     file);
48
49             // Compute checksum for the content
50             long checksum = computeChecksum(
51     fileContent);
52
53             // Send the content and checksum to
54     the server
55             byte[] compressedContent = compress(
56     fileContent);
57             objectOutputStream.writeObject(
58     compressedContent);
59             objectOutputStream.writeLong(checksum
60     );
61             objectOutputStream.flush();
62         }
63
64         // Close the streams and socket
65         objectOutputStream.close();
66         socket.close();
67
68     } catch (IOException e) {
69         System.err.println("Connection failed.
70     Make sure the server is running and check your
71     firewall settings.");
72         e.printStackTrace();

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63     }
64 }
65
66     private static byte[] compress(String content)
    throws IOException {
67         ByteArrayOutputStream byteArrayOutputStream
        = new ByteArrayOutputStream();
68         try (GZIPOutputStream gzipOutputStream = new
        GZIPOutputStream(byteArrayOutputStream)) {
69             gzipOutputStream.write(content.getBytes(
        StandardCharsets.UTF_8));
70         }
71         return byteArrayOutputStream.toByteArray();
72     }
73
74     private static String readFileContent(File file
    ) throws IOException {
75         StringBuilder fileContent = new
        StringBuilder();
76         try (BufferedReader fileReader = new
        BufferedReader(new FileReader(file))) {
77             String line;
78             while ((line = fileReader.readLine
        ()) != null) {
79                 fileContent.append(line).append("\n"
        );
80             }
81         }
82         return fileContent.toString();
83     }
84
85     private static long computeChecksum(String data
    ) {
86         Checksum checksum = new CRC32();
87         checksum.update(data.getBytes(
        StandardCharsets.UTF_8), 0, data.length());
88         return checksum.getValue();
89     }
90 }
91
```