```
package cop2805;

import java.io.*;
import java.net.ServerSocket;
import java.net.Socket;
import java.nio.charset.StandardCharsets;
import java.nio.file.Files;
import java.nio.file.Path;
import java.nio.file.Paths;
import java.util.ArrayList;
import java.util.List;

public class Server
{

    public static void main(String[] args)
    {
        ServerSocket server = null;
        boolean shutdown = false;
        try
        {
            server = new ServerSocket(1236);
            System.out.println("Ready. Accepting Connections");
        }
        catch (IOException e)
        {
            e.printStackTrace();
            System.exit(-1);
        }

        while (!shutdown)
        {
            Socket client = null;
            InputStream input = null;
            OutputStream output = null;

            try
            {
                client = server.accept();
                input = client.getInputStream();
                output = client.getOutputStream();

                int n = input.read();
                byte[] data = new byte[n];
                input.read(data);

                String clientInput = new String(data, StandardCharsets.UTF_8);
                clientInput = clientInput.replace("\n", "");


                Path filePath = Paths.get("hamlet.txt");
                String hamlet = filePath.toString();
                Path newFilePath = null;

                WordSearcher wordsearcher = null;
                try
                {
                    wordsearcher = new
WordSearcher(Files.readAllLines(Paths.get(hamlet)), clientInput);
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                    wordsearcher.getLines().replaceAll(String::toUpperCase);
                } catch (IOException e)
                {
                    e.printStackTrace();
                }

                List<Integer> returnList = new
ArrayList<>(wordsearcher.search(wordsearcher.getLines(),
wordsearcher.getWordSearch()));

                try
                {
                    Files.deleteIfExists(Paths.get("hamlet-index.txt"));
                    newFilePath = Files.createFile(Paths.get("hamlet-index.txt"));

                } catch (IOException e)
                {
                    e.printStackTrace();
                }

                String newFile = newFilePath.toString();
                WriteFile(returnList, newFile);

                System.out.println("Client said: " + clientInput);

                output.write(newFile.length());

                output.write(newFile.getBytes());
                client.close();


                if (clientInput.equalsIgnoreCase("shutdown"))
                {
                    System.out.println("Shutting down...");
                }

            }
            catch (IOException e)
            {
                e.printStackTrace();
                System.exit(-1);
            }

        }

    }

    public static void WriteFile(List<Integer> data, String newFile)
    {

        FileWriter FW = null;
        try
        {
            FW = new FileWriter(newFile);
        }
        catch (IOException e)
        {

            e.printStackTrace();
```

```
        }
        PrintWriter PW = new PrintWriter(FW);
        System.out.println(data);
        PW.println(data);
        PW.close();

    }
}
```