

CSC 469 HOMEWORK 2

CSC DEPARTMENT
NORTH CENTRAL COLLEGE

1. THE ASSIGNMENT

Write a Java TCP server that recognizes strings sent to it that are palindromes. A client connects to the server and sends a series of strings. For each string received, the server returns one of the responses

`palindrome`

or

`not a palindrome`

according to where the string sent by the client is a palindrome. Test your server with Putty.

Submit the entire Netbeans project folder so it is ready to run.

Homework 2 is due Sunday night at the end of week 3.

2. EXAMPLE NETWORK SERVER

To help you get started, here is the code of the TCP server we studied in class.

```
package netcalculator;

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
import java.io.PrintWriter;
import java.net.ServerSocket;
import java.net.Socket;
import java.util.Scanner;

public class NetCalculator
{

    public static void main(String[] args) throws IOException
    {
        System.out.println("Server is starting...");
        ServerSocket serverSock = new ServerSocket(50002);
        System.out.println("Accepted a connection...");
        while (true)
        {
            Socket sock = serverSock.accept();
            calcService(sock);
        }
    }
}
```

```
    }  
}  
  
static private void calcService(Socket sock) throws IOException  
{  
    BufferedReader in = new BufferedReader  
        (new InputStreamReader(sock.getInputStream()));  
    PrintWriter out = new PrintWriter(sock.getOutputStream(), true);  
  
    String line = in.readLine();  
    while (!line.equals("bye"))  
    {  
        System.err.println("Got the command: " + line);  
        Scanner scanner = new Scanner(line);  
        String cmd = scanner.next();  
        int x = 0, y = 0;  
        switch (cmd)  
        {  
            case "sum" :  
                x = scanner.nextInt();  
                y = scanner.nextInt();  
                out.println(x+y);  
                break;  
            case "prod" :  
                x = scanner.nextInt();  
                y = scanner.nextInt();  
                out.println(x*y);  
                break;  
            case "quotient" :  
                x = scanner.nextInt();  
                y = scanner.nextInt();  
                out.println(x/y);  
                break;  
            case "diff":  
                x = scanner.nextInt();  
                y = scanner.nextInt();  
                out.println(x-y);  
                break;  
            case "square":  
                x = scanner.nextInt();  
                out.println(x*x);  
                break;  
        }  
        line = in.readLine();  
    }  
    in.close();  
    out.close();  
    sock.close();  
}  
}
```