



File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

<default config>

Projects Files X

MV3500Cohort2018Janu...
MV3500Cohort2018July...
MV3500Cohort2019July...
homework1
homework2
Boron
Brennenstuhl
Fetterolf
Knobeloch
Knobeloch_
Knobeloch_
Knobeloch_
McCann
Schutt
Yurkovich
README.md
homework3
homework4
projects
test
README.md

Knobeloch_TCPIP_Client.java x Knobeloch_TCPIP_Server.java x

Source History

```
// port number at that IP (2017). This establishes
// a connection to that IP in the form of a Socket
// object; the server uses a ServerSocket to wait for
// connections.
socket = new Socket(LOCALHOST, 2317); // localhost?

// Now hook everything up (i.e. set up the streams), Java style:
is = socket.getInputStream();
isr = new InputStreamReader(is);
br = new BufferedReader(isr);

// Read a single line written by the server. We'd
// do things a bit differently if there were many lines to be read
// from the server instead of one only.
serverMessage = br.readLine();
System.out.println("\nCalculating...");
System.out.printf("\nPi with %.0f terms = %s", n, serverMessage);
// socket gets closed, either automatically/silently by this call (or possibly by
n++;
} // end while(true)
```

Output x

MV3500_Deliverables (run-single) x MV3500_Deliverables (run-single) #2 x

```
More precise :-) ?
Lets try one more term of the Gregory-Leibniz series!
Terms now: 108475
Calculating...

Pi with 108475 terms = 3.14160187230378260593723722601811054744302964536473155021667480468750
-----

More precise :-) ?
Lets try one more term of the Gregory-Leibniz series!
Terms now: 108476
Calculating...

Pi with 108476 terms = 3.14158343496078810487366823368804436000800706096924841403961181640625
-----

More precise :-) ?
Lets try one more term of the Gregory-Leibniz series!
```

Client

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

<default config>

Knobeloch_TCPIP_Client.java x Knobeloch_TCPIP_Server.java x

Source History

```
System.out.println("First approximation of PI: 4");

try {
    while (true) {
        System.out.println("\n-----");
        System.out.println("More precise :-) ?");
        System.out.println("Lets try one more term of the Gregory-Leibniz series!");
        System.out.printf("Terms now: %.0f", n);

        // We request an IP to connect to ("localhost") and
        // port number at that IP (2017). This establishes
        // a connection to that IP in the form of a Socket
        // object; the server uses a ServerSocket to wait for
        // connections.
        socket = new Socket(LOCALHOST, 2317); // localhost?

        // Now hook everything up (i.e. set up the streams), Java style:
        is = socket.getInputStream();
        isr = new InputStreamReader(is);
```

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Knobeloch_TCPIP_Client.java x Knobeloch_TCPIP_Server.java x

Source History

```
BigDecimal apprxiPi = new BigDecimal("4.0");

// Server is up and waiting (i.e. "blocked" or paused)
// Loop, infinitely, waiting for client connections.
// Stop the program somewhere else.
while (true) {

    // block until connected to a client
    try (Socket clientConnection = serverSocket.accept()) {
        // Now hook everything up (i.e. set up the streams), Java style:
        os = clientConnection.getOutputStream();
        ps = new PrintWriter(os);
        denominator = denominator * (-1);

        BigDecimal toAdd = new BigDecimal((denominator / (n + (n-1))) );
        apprxiPi = apprxiPi.add(toAdd);

        ps.println("" + apprxiPi); // this gets sent back to client

        // Notice the use of flush() and try-with-resources. Without
```

Server