

1. Server is created and listening on port 60001, then a client is also created on the same port

<pre>alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring2025/SysNet2/Projects/P2/SN2_P2\$ make server ./httpServer Server starting. Server address: 3 ===== Server listening on port 60001... ----- █</pre>	<pre>alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring2025/SysNet2/Projects/P2/SN2_P2\$./httpClient Client starting. ===== Please enter the server address and file name or 'exit' to quit. Example: 127.0.0.1 index.html To send a message instead, precede your input with: msg: Example: msg: Hello World! ----- █</pre>
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2. Client handles bad IP request

<pre>alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring2025/SysNet2/Projects/P2/SN2_P2\$ make server ./httpServer Server starting. Server address: 3 ===== Server listening on port 60001... ----- █</pre>	<pre>alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring2025/SysNet2/Projects/P2/SN2_P2\$./httpClient Client starting. ===== Please enter the server address and file name or 'exit' to quit. Example: 127.0.0.1 index.html To send a message instead, precede your input with: msg: Example: msg: Hello World! ----- 123.0.0.0 index.html Client input: 123.0.0.0 index.html ERROR: Server connection failed.: Operation now in progress Error: No response from server at 123.0.0.0 ===== Please enter the server address and file name or 'exit' to quit. Example: 127.0.0.1 index.html To send a message instead, precede your input with: msg: Example: msg: Hello World! ----- █</pre>
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3. Client handles malformed request

<pre>alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring2025/SysNet2/Projects/P2/SN2_P2\$ make server ./httpServer Server starting. Server address: 3 ===== Server listening on port 60001... ----- █</pre>	<pre>alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring2025/SysNet2/Projects/P2/SN2_P2\$./httpClient Client starting. ===== Please enter the server address and file name or 'exit' to quit. Example: 127.0.0.1 index.html To send a message instead, precede your input with: msg: Example: msg: Hello World! ----- 12A.malformed index.html Client input: 12A.malformed index.html ERROR: Invalid address/Address not supported. =====</pre>
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4. Client sends successful IP and filename request

```
alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring20
25/SysNet2/Projects/P2/SN2_P2$ make server
./httpServer
Server starting.
```

```
Server address: 3
```

```
Server listening on port 60001...
```

```
Client Request:
```

```
method: GET
```

```
path: /index.html
```

```
Server response:
```

```
HTTP/1.1 200 OK
```

```
Content-Type: text/html
```

```
Content-Length: 622
```

```
Server closed client socket: 4
```

```
Server listening on port 60001...
```

```
[]
```

```
Example: msg: Hello World!
```

```
127.0.0.1 index.html
```

```
Client input: 127.0.0.1 index.html
```

```
Client request:
```

```
GET /index.html HTTP/1.1
```

```
Host: localhost
```

```
Connection: close
```

```
Server Response:
```

```
HTTP/1.1 200 OK
```

```
Content-Type: text/html
```

```
Content-Length: 622
```

```
<HTML>
```

```
<HEAD><TITLE>TEST TEXT</TITLE></HEAD>
```

```
<BODY BGCOLOR="#99cc99" TEXT="#000000" LINK="#2020ff" VLINK="#4040cc">
```

```
<P>
```

```
TEST....
```

```
<P>
```

```
<H3> The server has successfully started and is sending you this page. </H3>
```

```
<P>
```

```
IMAGE LINK: If the server can successfully find and send you the image, it will show  
on this link for an image. </A>.
```

```
<P>
```

```
NONEXISTANT LINK <A HREF="fake.html">click here to test the non-existent link </A>.
```

```
<form action="/" method="post">
```

```
<input type="text" name="message">
```

```
<input type="submit" value="Send">
```

```
</form>
```

```
</BODY>
```

```
</HTML>
```

5. Client sends message to server, server responds

```
Client Request:
```

```
method: POST
```

```
path: /
```

```
Client Request Body: This is my custom message. Sincerely, Kevin.
```

```
Server response:
```

```
HTTP/1.1 206 No Content
```

```
Content-Type: text/html
```

```
Content-Length: 45
```

```
Server closed client socket: 4
```

```
Server listening on port 60001...
```

```
[]
```

```
To send a message instead, precede your input with: msg:
```

```
Example: msg: Hello World!
```

```
msg: This is my custom message. Sincerely, Kevin.
```

```
Client input: msg: This is my custom message. Sincerely, Kevin.
```

```
msgBody: +This+is+my+custom+message.+Sincerely,+Kevin.
```

```
Client request:
```

```
POST / HTTP/1.1
```

```
Host: localhost
```

```
Content-Length: 45
```

```
Content-Type: application/x-www-form-urlencoded
```

```
message=+This+is+my+custom+message.+Sincerely,+Kevin.
```

```
Server Response:
```

```
HTTP/1.1 206 No Content
```

```
Content-Type: text/html
```

```
Content-Length: 45
```

6. A new client can be created and run on the same server

```
-----
Client Request:
  method: POST
  path: /

Client Request Body: This is my custom message. Sincerely, Kevin.

Server response:
HTTP/1.1 206 No Content
Content-Type: text/html
Content-Length: 45

Server closed client socket: 4

-----
=====
Server listening on port 60001...

-----
Client Request:
  method: POST
  path: /

Client Request Body: This is message from the new client to the same
old server.

Server response:
HTTP/1.1 206 No Content
Content-Type: text/html
Content-Length: 60

Server closed client socket: 4

-----
=====
Server listening on port 60001...

-----
exit
Client socket closed.
alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring2025/SysNet2/P
./httpClient
Client starting.

=====
Please enter the server address and file name or 'exit' to quit.
Example: 127.0.0.1 index.html

To send a message instead, precede your input with: msg:
Example: msg: Hello World!

-----
msg: This is message from the new client to the same old server.
Client input: msg: This is message from the new client to the same old server.

msgBody: +This+is+message+from+the+new+client+to+the+same+old+server.
Client request:
POST / HTTP/1.1
Host: localhost
Content-Length: 60
Content-Type: application/x-www-form-urlencoded

message=+This+is+message+from+the+new+client+to+the+same+old+server.

Server Response:
HTTP/1.1 206 No Content
Content-Type: text/html
Content-Length: 60

=====
Please enter the server address and file name or 'exit' to quit.
Example: 127.0.0.1 index.html

To send a message instead, precede your input with: msg:
Example: msg: Hello World!
```

7. Client notifies user that the server is no longer communicating

```
Server response:
HTTP/1.1 206 No Content
Content-Type: text/html
Content-Length: 60

Server closed client socket: 4

-----
=====
Server listening on port 60001...

-----
^Cmake: *** [Makefile:26: server] Interrupt

alabeja@k-alb:/mnt/c/Users/k-alb/Documents/Kev/School/a UWF/a Spring20
25/SysNet2/P...

-----
127.0.0.1 index.html
Client input: 127.0.0.1 index.html

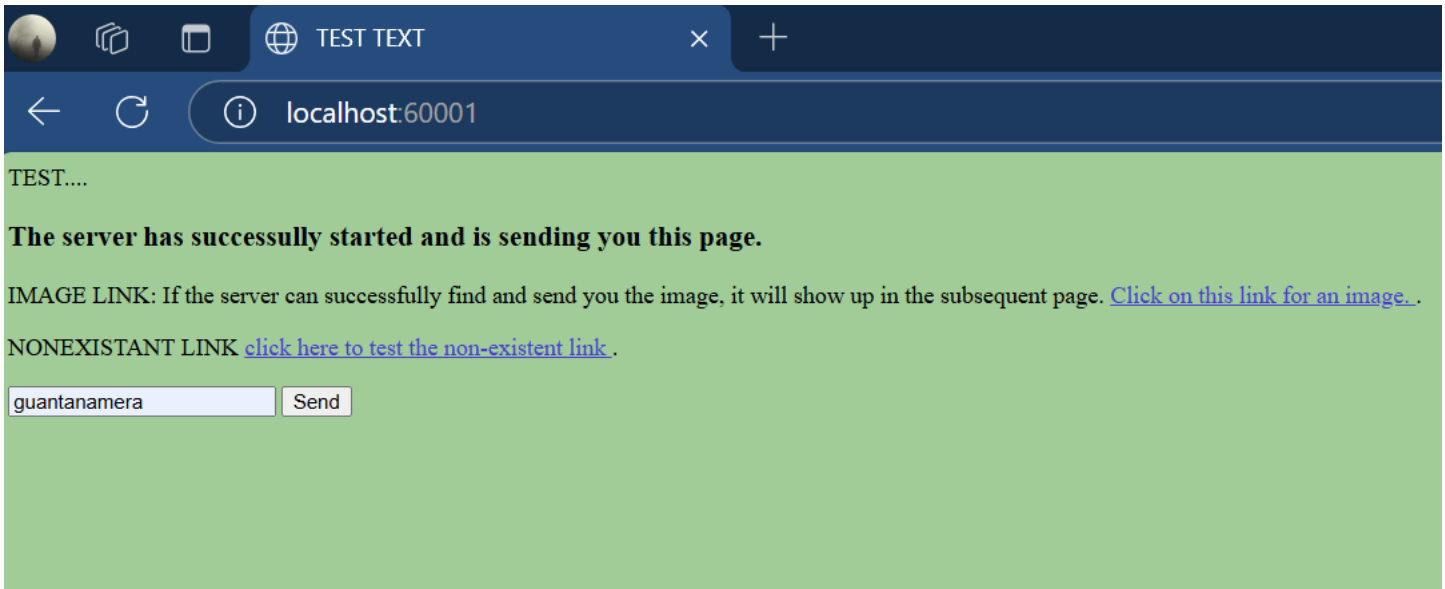
ERROR: Server connection failed.: Connection refused
Error: No response from server at 127.0.0.1

=====
Please enter the server address and file name or 'exit' to quit.
Example: 127.0.0.1 index.html

To send a message instead, precede your input with: msg:
Example: msg: Hello World!

-----
```

8. Enter localhost:60001 in browser correctly pulls up content from index.html



```
=====
Server listening on port 60001...

-----
Client Request:
  method: POST
  path: /

Client Request Body: guantanamo

Server response:
HTTP/1.1 206 No Content
Content-Type: text/html
Content-Length: 12

Server closed client socket: 4

=====
Server listening on port 60001...

=====
□
```