httpclient1.py (Page 1 of 1)

```python
 1: #!/usr/bin/env python
 2:
 3: #-----------------------------------------------------------------
 4: # httpclient1.py
 5: # Author: Bob Dondero
 6: #-----------------------------------------------------------------
 7:
 8: import sys
 9: import socket
10:
11: def main():
12:
13:     if len(sys.argv) != 4:
14:         print(f'usage: python {sys.argv[0]} host port file',
15:             file=sys.stderr)
16:         sys.exit(1)
17:
18:     try:
19:         host = sys.argv[1]
20:         port = int(sys.argv[2])
21:         file_name = sys.argv[3]
22:
23:         with socket.socket() as sock:
24:             sock.connect((host, port))
25:
26:             with sock.makefile(
27:                 mode='w', encoding='iso-8859-1') as out_flo:
28:
29:                 out_flo.write('GET ' + file_name + ' HTTP/1.1\r\n')
30:                 out_flo.write('Host: ' + host + '\r\n')
31:                 out_flo.write('\r\n')
32:                 #out_flo.flush()
33:
34:             with sock.makefile(
35:                 mode='r', encoding='iso-8859-1') as in_flo:
36:
37:                 # Read the response headers from the socket, and write
38:                 # them to stdout.
39:                 for line in in_flo:
40:                     print(line, end='')
41:                     if line == '\n':
42:                         break
43:
44:                 # A smarter program would examine the Content-type
45:                 # header to determine how to interpret the response
46:                 # content. Here, assume that the content consists of
47:                 # iso-8859-1 characters, and write them to stdout.
48:                 for line in in_flo:
49:                     print(line, end='')
50:
51:     except Exception as ex:
52:         print(f'{sys.argv[0]}: {ex}', file=sys.stderr)
53:         sys.exit(1)
54:
55: if __name__ == '__main__':
56:     main()
```

httpclient2.py (Page 1 of 1)

```python
 1: #!/usr/bin/env python
 2:
 3: #-----------------------------------------------------------------
 4: # httpclient2.py
 5: # Author: Bob Dondero
 6: #-----------------------------------------------------------------
 7:
 8: import sys
 9: import urllib.request
10:
11: def main():
12:
13:     if len(sys.argv) != 2:
14:         print(f'usage: python {sys.argv[0]} url', file=sys.stderr)
15:         sys.exit(1)
16:
17:     try:
18:         url = sys.argv[1]
19:
20:         # Read the response headers from a socket.
21:         with urllib.request.urlopen(url) as in_flo:
22:
23:             # Write the response headers to stdout.
24:             print(in_flo.info(), end='')
25:
26:             # Read the response content from the socket.
27:             file_bytes = in_flo.read()
28:
29:             # A smarter program would examine the Content-type
30:             # header to determine how to interpret the response
31:             # content. Here, assume that the content consists of
32:             # iso-8859-1 characters, and write them to stdout.
33:             file_str = file_bytes.decode('iso-8859-1')
34:             print(file_str, end='')
35:
36:     except Exception as ex:
37:         print(f'{sys.argv[0]}: {ex}', file=sys.stderr)
38:         sys.exit(1)
39:
40: if __name__ == '__main__':
41:     main()
```

fund.html (Page 1 of 2)

```
  1: <!DOCTYPE html>
  2:
  3: <!-- ================================================================ -->
  4: <!-- fundamentals.html                                               -->
  5: <!-- Author: Bob Dondero                                             -->
  6: <!-- ================================================================ -->
  7:
  8: <html>
  9:    <head>
 10:       <title>Show HTML Fundamentals</title>
 11:    </head>
 12:
 13:    <body>
 14:       <!-- ========================================================= -->
 15:       <h1>Heading 1</h1>
 16:       <h2>Heading 2</h2>
 17:       <h3>Heading 3</h3>
 18:       <h4>Heading 4</h4>
 19:       <h5>Heading 5</h5>
 20:       <h6>Heading 6</h6>
 21:
 22:       <!-- ========================================================= -->
 23:       <hr>
 24:       <h1>Non-Rendered Elements</h1>
 25:
 26:       <div>Division1</div>
 27:       <div>Division2</div>
 28:       <span>Span1</span>
 29:       <span>Span2</span>
 30:
 31:       <!-- ========================================================= -->
 32:       <hr>
 33:       <h1>Paragraphs</h1>
 34:
 35:       <p>Paragraph</p>
 36:       <p align="center">Centered paragraph</p>
 37:
 38:       <br>
 39:
 40:       <!-- ========================================================= -->
 41:       <hr>
 42:       <h1>Physical Character Formatting Elements</h1>
 43:
 44:       <b>boldface</b><br>
 45:       <i>italics</i><br>
 46:       <u>underline</u><br>
 47:       <strike>strikethrough</strike><br>
 48:       <big>big font</big><br>
 49:       <small>small font</small><br>
 50:       normal <sup>superscript</sup> <sub>subscript</sub><br>
 51:       <tt>teletype</tt><br>
 52:
 53:       <!-- ========================================================= -->
 54:       <hr>
 55:       <h1>Logical Character Formatting Elements</h1>
 56:
 57:       <strong>strong</strong><br>
 58:       <em>emphasize</em><br>
 59:       <cite>citation</cite><br>
 60:       <code>code listing</code><br>
 61:       <samp>sample output from code</samp><br>
 62:       <pre>pre   formatted</pre>
 63:
 64:       <!-- ========================================================= -->
 65:       <hr>
```

fund.html (Page 2 of 2)

```
 66:       <h1>Character Entities</h1>
 67:
 68:       &lt;<br>
 69:       &gt;<br>
 70:       &quot;<br>
 71:       &amp;<br>
 72:        <br>
 73:       &cent;<br>
 74:       &pound;<br>
 75:       &copy;<br>
 76:       &Agrave;<br>
 77:
 78:       <!-- See https://dev.w3.org/html5/html-author/charref for
 79:       the full set. -->
 80:
 81:       <!-- ========================================================= -->
 82:       <hr>
 83:       <h1>Lists</h1>
 84:
 85:       <ul>
 86:          <li>Unordered list item 1.</li>
 87:          <li>Unordered list item 2.</li>
 88:       </ul>
 89:
 90:       <ol>
 91:          <li>Ordered list item 1.</li>
 92:          <li>Ordered list item 2.</li>
 93:       </ol>
 94:
 95:       <!-- ========================================================= -->
 96:       <hr>
 97:       <h1>Tables</h1>
 98:       <table border="5" cellpadding="5" cellspacing="5">
 99:          <thead>
100:             <tr>
101:                <td>header col 1</td>
102:                <td>header col 2</td>
103:                <td>header col 3</td>
104:             </tr>
105:          </thead>
106:          <tbody>
107:             <tr>
108:                <td>row 1 col 1</td>
109:                <td>row 1 col 2</td>
110:                <td>row 1 col 3</td>
111:             </tr>
112:             <tr>
113:                <td>row 2 col 1</td>
114:                <td>row 2 col 2</td>
115:                <td>row 2 col 3</td>
116:             </tr>
117:             <tr>
118:                <td>row 3 col 1</td>
119:                <td colspan="2">row 3 cols 2 and 3</td>
120:             </tr>
121:          </tbody>
122:          <tfoot>
123:             <tr>
124:                <td colspan="3">footer cols 1, 2, and 3</td>
125:             </tr>
126:          </tfoot>
127:       </table>
128:    </body>
129: </html>
```

links.html (Page 1 of 1)

```
 1: <!DOCTYPE html>
 2:
 3: <!-- ================================================================= -->
 4: <!-- links.html                                                        -->
 5: <!-- Author: Bob Dondero                                               -->
 6: <!-- ================================================================= -->
 7:
 8: <html>
 9:    <head>
10:       <title>Show HTML Page Links</title>
11:    </head>
12:
13:    <body>
14:
15:       <hr>
16:       <h1>These are links:</h1>
17:       <hr>
18:
19:       <a href="/yogi.txt">Link to yogi.txt</a><br>
20:
21:       <a href="/fund.html">Link to fund.html</a><br>
22:
23:    </body>
24: </html>
```

forms.html (Page 1 of 1)

```
 1: <!DOCTYPE html>
 2:
 3: <!-- ================================================================= -->
 4: <!-- forms.html                                                        -->
 5: <!-- Author: Bob Dondero                                               -->
 6: <!-- ================================================================= -->
 7:
 8: <html>
 9:    <head>
10:       <title>Show HTML Forms</title>
11:    </head>
12:
13:    <body>
14:
15:       <hr>
16:       <h1>These are forms:</h1>
17:       <hr>
18:
19:       <form action="/yogi.txt">
20:          <input type="submit" value="Form to yogi.txt">
21:       </form>
22:
23:       <form action="/fund.html">
24:          <input type="submit" value="Form to fund.html">
25:       </form>
26:
27:    </body>
28: </html>
```