Appendix: Formal specifications

```
HTTP Response := StatusLine + ResponseHeaderLines + EmptyLine + Exact file content
   -   StatusLine := "HTTP/1.0 200 OK\r\n" | "HTTP/1.0 404 Not Found\r\n"
                     | "HTTP/1.0 400 Bad Request\r\n"
   -   Header lines
          o   ResponseHeaderLine := FieldName + ": " + FieldValue + "\r\n"
          o   ResponseHeaderLines := ResponseHeaderLine*
                 ▪   Star (*) means the header line may occur zero or more times
          o   FieldName is case insensitive
          o   ResponseHeaderLine Examples:
                 ▪   VALID: "Connection: keep-alive\r\n"
                 ▪   VALID: "connEctIoN: close\r\n" (the field name is case insensitive)
   -   EmptyLine := "\r\n"
   -   Exact file content (Don't append a line break)
```

```
HTTP GET Request := RequestLine + Request Header Lines + EmptyLine
   -   RequestLine := "GET " + Path + " HTTP/1.0" + ENDL
          o   Spaces!!
          o   RequestLine Examples:
                 ▪   "GET /largeFile.html HTTP/1.0\n" (line ending: "\n")
                 ▪   "GET /shopping_list.txt HTTP/1.0\r\n" (line ending: "\r\n")
   -   Request header lines
          o   RequestHeaderLine := FieldName + SP* + ":" + SP* + FieldValue + ENDL
          o   RequestHeaderLines := RequestHeaderLine*
          o   FieldName is case insensitive
          o   RequestHeaderLine Examples:
                 ▪   VALID: "Connection: keep-alive\n"
                 ▪   VALID: "connEctIoN:close\n" (space is optional; field name is case insensitive)

   -   EmptyLine := ENDL
   -   SP   := " "
   -   ENDL := "\n" | "\r\n"
```