Grading Policy

100 points in total.

- [20 pts] Correctly parsing HTTP request and sending HTTP response
    - E.g. read/write socket according to the HTTP protocol, extract Content-Length, etc. (15pts)
    - Limit max buffer size to 16. (5pts)
- [30 pts] Implement /api/evalexpression (15pts for tests and 15pts for code implementation)
    - Correctly parse the expression from HTTP POST request.
    - Able to evaluate expressions only involving integers, '+', and '-' correctly.
    - Correctly send HTTP response.
    - For unsupported expression, correctly send HTTP 400 response.
- [10 pts] Implement /api/gettime (5pts for tests and 5pts for code implementation)
- [30 pts] Implement /status (15pts for tests and 15pts for code implementation)
    - Can correctly show accumulated stats for /api/evalexpression and /api/gettime
    - Can correctly show the latest 10 expressions clients sent.
- [10 pts] For other URLs, return HTTP 404 response (5pts for tests and 5pts for code implementation)

Tests via Postman

Get http://IP-Address:Port/status.html
Get http://IP-Address:Port/api/gettime

Post http://IP-Address:Port/api/evalexpression "1"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "1+1"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "-2"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "-2-3"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "-2+3"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "7+9-11+6"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "7+9-11+6-5+4-3+2-1+0+110"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "1+2-3+4-5+6-7+8-9+10"

Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "67-963+81+117-90"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression
"1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1
+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1
+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1
+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1
+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression
"2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2
+2+2+2+2+2+2+2+2+2+2+2+2+2+2+111"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "1*2*2*3/6"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "(1+3)*8/4"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/wrongpath "1+2+3+4+5"

Get http://IP-Address:Port/wrongapi

The following tests are mainly used for testing "last 24 hours" and "lifetime" status information.

Get http://IP-Address:Port/status.html
Get http://IP-Address:Port/api/gettime

Post http://IP-Address:Port/api/evalexpression "9+16+25-100"
Get http://IP-Address:Port/status.html

Post http://IP-Address:Port/api/evalexpression "23+17-56-47+89"
Get http://IP-Address:Port/status.html