11/8/21 Test cases by Tina Martin

Depending on test case mgmt tool, you can write prerequisites to running test cases and then specify to review prereq.
Prereq:
1. PORT set to 8088 in system environment variables
2. Launch .exe app
3. Open command prompt

Test cases:

1. Verify after launch DOES not wait for https connection
    a. Steps:
        i. Launch .exe app
        ii. From command prompt type: curl https://127.0.0.1:8088/stats
        iii. Expected result: Should not return stats
2. Verify after launch waits for http connection
    a. Steps:
        i. Launch .exe app
        ii. From command prompt type: curl http://127.0.0.1:8088/stats
        iii. Expected result: Should not return stats
3. Verify incorrect port does not grant access
    a. Steps:
        i. Launch .exe app
        ii. From command prompt type: curl http://127.0.0.1:8089/stats
        iii. Expected result: Should return connection refused message
4. Verify valid port grants access
    a. Steps:
        i. Launch .exe app
        ii. From command prompt type: curl http://127.0.0.1:8088/stats
        iii. Expected result: Should return connection refused message
5. Verify post to /hash accepts password with special characters.
    a. Steps:
        i. Launch .exe app
        ii. From command prompt type: curl -X POST -H "application/json" -d "{\"password\":\"angrymonkey\"}" http://127.0.0.1:8088/hash
        iii. Expected results: Should return job identifier NOTE: Write down job identifier as it will be used in next test case
6. Verify get DOES NOT return plain text password
    a. Steps:
        i. Launch .exe app

        ii.   From command prompt type: curl -H "application/json" http://127.0.0.1:8088/hash/x where x is the identifier

        iii.   Expected results:

            1. Should not return plain text password

            2. Should return base64 encoded password (NOTE: Go to https://www.base64decode.org/>select decode button>copy in the returned encrypted password. After converting it should match password.

7. Verify stats match requests sent in milliseconds
   a. Steps:
      i. Launch .exe app
      ii. From command prompt type: curl http://127.0.0.18088/stats
      iii. Expected result:
         1. Should return TotalRequests that match how many POSTS you did
         2. Should return AverageTime in milliseconds

8. Verify app can handle multiple connections
   a. Launch .exe app
   b. Launch 2 command windows and in each one change the password in this line: curl -X POST -H "application/json" -d "{\"password\":\"angrymonkey\"}" http://127.0.0.1:8088/hash
   c. Hit enter in both
   d. Expected results: Each command should process and increment the identifier by number of requests

9. Verify number of requests is reset with server restart
   a. Launch .exe app
   b. From command prompt type: curl -X POST -H "application/json" -d "{\"password\":\"angrymonkey\"}" http://127.0.0.1:8088/hash
   c. From command prompt type: curl http://127.0.0.1:8088/stats
   d. Close .exe app
   e. Retype your curl http://127.0.0.1:8088/stats
   f. Expected results: Stats should return back to 0 for TotalRequests & AverageTime

10. Verify post is processed before ungraceful shutdown is completed.
   a. Steps:
      i. From command prompt type: curl -X POST -H "application/json" -d "{\"password\":\"angrymonkey\"}" http://127.0.0.1:8088/hash
      ii. Close .exe app
      iii. Expected results: Should process the request and not error out

11. Verify post is processed before shutdown is completed.
   a. Open 2 command prompts
   b. Command prompt 1: curl -X POST -H "application/json" -d "{\"password\":\"angrymonkey\"}" http://127.0.0.1:8088/hash
   c. Command prompt 2: curl -X POST -d "shutdown" http://127.0.0.1:8088/hash

       d. Expected result:
            i. Command 1: Should return identifier code
           ii. Should close .exe open app

12. Verify shutdown returns 200 code
    a. Steps:
         i. From command prompt type: curl -X POST -d "shutdown" http://127.0.0.1:8088/hash
        ii. Expected results:
             1. Should return 200 code
             2. Should close .exe open app

13. Verify no password requests when app is shutdown
    a. Open 2 command prompts
    b. Command prompt 1: curl -X POST -d "shutdown" http://127.0.0.1:8088/hash
    c. Command prompt 2: curl -X POST -H "application/json" -d "{\"password\":\"angrymonkey\"}" http://127.0.0.1:8088/hash
    d. Expected result: On command prompt 2 should connection refused error msg

14. Verify GET is rejected when server is shutdown
    a. Make sure .exe is closed
    b. From command prompt type: curl -H "application/json" http://127.0.0.1:8088/hash/x where x is the identifier
    c. Expected result: Should receive connection refused msg