

11/8/21 Tina Martin

Acceptance Criteria:

The following is the requirement specification that was used in building the password hashing application. It describes what the application should do.

1. • When launched, the application should wait for http connections. • It should answer on the PORT specified in the PORT environment variable.
2. • It should support three endpoints:
 - a. ○ A POST to /hash should accept a password. It should return a job identifier immediately. It should then wait 5 seconds and compute the password hash. The hashing algorithm should be SHA512.
 - b. ○ A GET to /hash should accept a job identifier. It should return the base64 encoded password hash for the corresponding POST request.
 - i. **Defect: Returned the incorrect base64 encoded pwd**
 - c. ○ A GET to /stats should accept no data. It should return a JSON data structure for the total hash requests since the server started and the average time of a hash request in milliseconds.
 - i. **Defect: The request was in minutes, not milliseconds**
3. • The software should be able to process multiple connections simultaneously.
4. • The software should support a graceful shutdown request. Meaning, it should allow any in-flight password hashing to complete, reject any new requests, respond with a 200 and shutdown.
 - a. **Defect: Ungraceful shutdown: After post and close app receives -receives "Recv failure: Connection was reset"**
 - b. **Defect: Shutdown doesn't return 200 error**
5. • No additional password requests should be allowed when shutdown is pending.

Sample write up of a few of the above defects in **red**:

1. Defect: Ungraceful shutdown doesn't allow post to complete
 - a. Steps:
 - i. Enable port 8088 in environment variables
 - ii. Launch .exe app
 - iii. From command prompt type: curl -X POST -H "application/json" -d {"password":"angrymonkey"} <http://127.0.0.1:8088/hash>
 - iv. Immediately manually close the .exe app
 - b. Expected results: Should process the request and not error out
 - c. Actual results: On the command prompt received the following error: "Recv failure: Connection was reset" (Include a screencast video)
2. Defect: Get returns the incorrect base64 encoded password
 - a. Steps:
 - i. Enable port 8088 in environment variables
 - ii. Launch .exe app

- iii. From command prompt type: `curl -X POST -H "application/json" -d {"password\":"angrymonkey\"}" http://127.0.0.1:8088/hash`
- iv. From command prompt type: `curl -H "application/json" http://127.0.0.1:8088/hash/x` where x is the identifier
- v. Copy long password
- vi. Go to <https://www.base64decode.org/>>select decode button>copy in the returned encrypted password.
- b. Expected results:
 - i. Should return the password entered in step ii (angrymonkey)
- c. Actual results:
 - i. Returns this really cryptic password that isn't even close to (angrymonkey) (insert screenshot for developers)