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# Scope of the Password Hashing Application

On high level, Password hashing application should allow users to create new passwords using POST operation and to retrieve created hash password by using GET method. The application should be able to retrieve statistics on total requests that was made on this application using GET method. Along with handling multiple connections, Application should also handle shutdowns gracefully by allowing to complete any in-flight/pending requests and therefore by rejecting new requests.

# Style

Behavior driven

# Types of testing covered

Positive Test cases, Negative Test case, Load test, Integrated test and End-End tests

# Pre-requisites

Please refer to REDME for details steps

# Test Cases

**TC 01:** When launched, the application should wait for http connections

**TC 02**: It should answer on the PORT specified in the PORT environment variable

**TC 03:** It should support three endpoints:

○ 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

○ A GET to /hash should accept a job identifier. It should return the base64 encoded password hash for the corresponding POST request.

○ 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

**TC 03.01**: Make sure to how many Bits/Bytes SHA512 should return

**TC 04:** The software should be able to process multiple connections simultaneously

**TC 05:** 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

**TC 06**: No additional password requests should be allowed when shutdown is pending

# Reports

Load test reports are included in the Report folder