

Engineering task - simple rate limiter

Implement web service that acts as third party rate limiter service.

Specifications

The service should:

1. Accept following arguments during the startup (command line args):
 - **threshold** - max number of requests per URL within a pre-defined time period (**ttl**).
 - **ttl** - The pre-defined time period in which URL visits will be counted.
2. Expose endpoint to report URL visit in the following format:

```
POST /report
Content-Type: application/json
{
  "url": "http://www.sample.com"
}
```

3. The response to each request should be "block" true/false - depends if the number of times the URL was reported passed the **threshold**:

```
{
  "block": true // if it passed the threshold
}
```

4. Track the number of times a URL was reported within the **ttl** period.
5. Each URL should be hashed in order to reduce memory usage.
6. The rate-limit per URL should be reset after **ttl** defined in ms.

Notes

- Do not use external services - it should be implemented in a single process by your code.
- Make sure service has no resource leaks.
- Clean code will be appreciated.