**Toggle homework solution: Mahvish Syed**

**Description**:

**Technology used** :

Spring boot

Java

**Local Port used**:

3000

**Logic**:

ConcurrentHashMap used for storing key-value pair in memory.

When request occurs:

It checks request parameter(Key) and request body(value) respectively.

If key is invalid it return HttpStatus – BAD REQUEST.

Else it map them into local in memory map. Return HttpStatus –OK.

If map already contains that key, it overrides (nothing mention about duplicate key in document, so assume that it will override).

When request for get occurs:

It checks request parameter(Key).

If key is invalid it return HttpStatus – BAD REQUEST.

Else create a regex from given key and matches it given key-value pair in map.

If matches returns them in array format.

When request for delete occurs:

It checks request parameter(Key).

If key is invalid it return HttpStatus – BAD REQUEST.

Else create a regex from given key and matches it given key-value pair in map.

If matches returns delete them from map.

Returns HTTP status – OK, if key is valid else HttpStatus – BAD REQUEST.

**Metrics**:

* What is the algorithmic complexity of your program?

For post : 0(1) where n is number of request for post.

For get : 0(n) where n is number of entries in map.

For delete : 0(n) where n is number of entries in map.

* How does your server handle concurrent requests?

Used Spring Boot for handling post service, so can handle concurrent request.