

API	hr0-count	hr0-success	hr2-count	hr2-failed	...	hr23-count	hr23-success	Number of REQUESTS	Avg. Response TIME

For Query 2 and Query 3 this will help.  
 on every request we will update, its according to at what HOUR that request came  
 and will update # requests and new average response time.

∴ for query 1, we will check average response time

for query 3, we will check/calculate error percentage of each API for each  
 hour.

~~on~~ on each new request,

we will update the ~~average~~ average response time  
and increment number of request by 1.

Calculation for average response time  $\rightarrow$

$$\text{new average time} = \frac{\text{previous average response time} + \text{current request response time}}{1 + \text{previous number of requests}}$$

## Query 2

API	USER ID	number of requests	average

for each user and API pair we will have one entry.

on request of query 2

we will make **SECONDARY INDEX ON USER ID FIELD (non-key)**

and will return <sup>API with max.</sup> average ~~response time~~ ~~of each~~ for each user.

on each request we will update average response time also.