Prime Generator

Building and Running the Prime Generator

Perform the following steps to build and run:

```
$ mvn clean package
$ java -cp target/primeserver-1.0-jar-with-dependencies.jar
primeserver.Main
```

Example Queries and Responses

Return all primes between 2 and 100

Enter the following URL in your browser:

`http://localhost:1080/primes?max=100`


```
{"data":[2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,7
9,83,89,97],"max":100,"time":6265538,"status":"OK","algorithm":"Sieve
OfSundaram"}
```


Return all primes between 2 and 100 using the Trial Division algorithm

Enter the following URL in your browser:

`http://localhost:1080/primes?max=100&algorithm=trialdivis
ion`


```
{"data":[2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,7
9,83,89,97],"max":100,"time":212519,"status":"OK","algorithm":"TrialD
ivision"}
```


Return all primes between 2 and 100 using an invalid algorithm (error condition)

Enter the following URL in your browser:

`http://localhost:1080/primes?max=100&algorithm=foo`


```
{"message":"Unknown algorithm: [foo]","status":"error"}
```


Algorithm Profiles

Profiles of each algorithm. Timings in **µs** per number examimed.

Max	TrialDivision	SieveOfEratosthenes	SieveOfSundaram
10	0	0	0
100	0	0	0
1000	2	3	1
10000	0.8	0.5	0.3
100000	0.95	0.13	0.13
1000000	5.216	0.068	0.04
10000000	36.5547	0.0841	0.0768