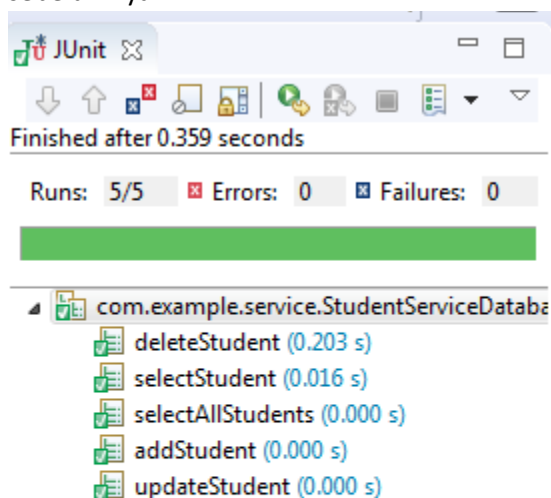
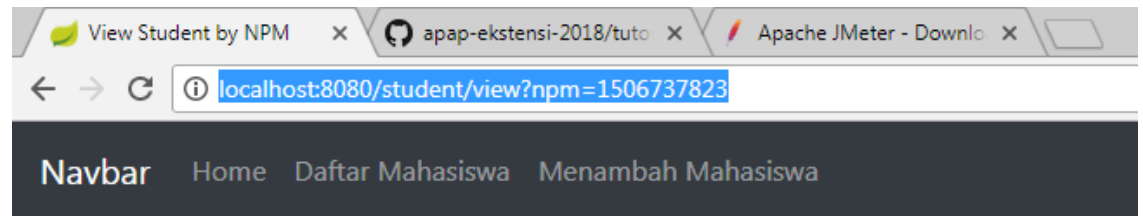


Latihan Unit Testing

- pada `@Test public void selectAllStudent`, yang dilakukan adalah melakukan testing method `selectAllStudent` yang ada pada `StudentService`. Method `selectAllStudent` pada `Student Service` akan memanggil method `selectAllStudent` pada `StudentMapper` yang kemudian akan memanggil seluruh student pada database. Untuk dapat melakukan unit testing ini maka hasil select student dilakukan konfigurasi/set demikian sehingga yang akan diselect oleh `studentMapper` adalah data yang sudah pasti. Oleh karena itu dibuatlah 2 buah object `StudentModel` yang mempunyai value yang sama. Satu object akan dijadikan return dari `StudentMapper` dan object yang lain akan digunakan untuk pengecekan. Konfigurasi/set `student Mapper` dengan memanggil method `BDDMockito.given`. Barulah setelah itu dipanggil method `selectAllStudent` yang ada pada `studentService`. Kemudian dilakukan beberapa test atau pengecekan diantaranya yaitu pengecekan bahwa hasil pemanggilan `selectAllStudent` tidak null, tidak empty, ukuran list `StudentModel` adalah satu, dan value `studentModel` sama dengan yang telah di-set.
- Sedangkan yang terjadi pada `@Test public void addStudent` adalah melakukan testing method `addStudent` yang ada pada `StudentService`. Method `addStudent` pada `Student Service` akan memanggil method `addStudent` pada `StudentMapper` yang akan melakukan query insert to pada database. Return pada method `addStudent` adalah boolean, jadi jika sukses insert maka akan mengembalikan nilai true. Pada unit test dibuat 2 buah object `StudentModel` yang mempunyai value yang sama. Satu object akan dijadikan return dari `addStudent` pada `studentService` dan object yang lain akan digunakan untuk pengecekan. Kemudian akan dilakukan konfigurasi/set demikian sehingga ketika `addStudent` pada `studentService` dipanggil akan mengembalikan object `studentModel`. Barulah dipanggil method `addStudent` pada `StudentService`. Kemudian dilakukan pengecekan bahwa value yang dihasilkan oleh method `addStudent` sama dengan yang telah diset sebelumnya.



- Latihan Load Testing
 - SelectStudent berhasil



NPM = 1506737823

Name = Kermie

GPA = 3.32

○

View Results in Table

Name: View Results in Table

Comments:

Write results to file / Read from file

Filename: http://localhost:8080/student/view?npm=1506737823

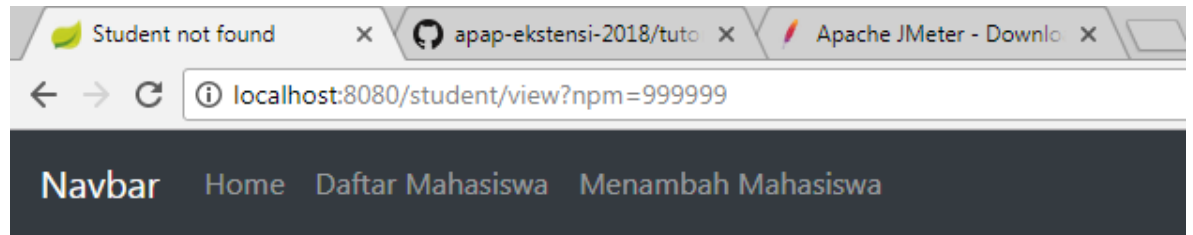
Browse... Log/Display Only: ☐ Errors ☒ Successes ☐ Configure

Sample #	Start Time	Thread Name	Label	Sample Time(m...)	Status	Bytes	Sent Bytes	Latency	Connect Time(...)
75	23:52:38.144	Thread Group 1...	HTTP Request	4	✓	3878	113	4	1
76	23:52:38.231	Thread Group 1...	HTTP Request	4	✓	3878	113	4	1
77	23:52:38.328	Thread Group 1...	HTTP Request	12	✓	3878	113	12	7
78	23:52:38.428	Thread Group 1...	HTTP Request	7	✓	3878	113	7	2
79	23:52:38.544	Thread Group 1...	HTTP Request	4	✓	3878	113	4	2
80	23:52:38.628	Thread Group 1...	HTTP Request	6	✓	3878	113	6	2
81	23:52:38.729	Thread Group 1...	HTTP Request	6	✓	3878	113	6	2
82	23:52:38.833	Thread Group 1...	HTTP Request	4	✓	3878	113	4	1
83	23:52:38.944	Thread Group 1...	HTTP Request	3	✓	3878	113	3	1
84	23:52:39.027	Thread Group 1...	HTTP Request	3	✓	3878	113	3	1
85	23:52:39.127	Thread Group 1...	HTTP Request	5	✓	3878	113	5	3
86	23:52:39.228	Thread Group 1...	HTTP Request	2	✓	3878	113	2	1
87	23:52:39.344	Thread Group 1...	HTTP Request	2	✓	3878	113	2	1
88	23:52:39.429	Thread Group 1...	HTTP Request	2	✓	3878	113	2	0
89	23:52:39.527	Thread Group 1...	HTTP Request	3	✓	3878	113	3	1
90	23:52:39.628	Thread Group 1...	HTTP Request	7	✓	3878	113	7	3
91	23:52:39.745	Thread Group 1...	HTTP Request	6	✓	3878	113	6	2
92	23:52:39.828	Thread Group 1...	HTTP Request	8	✓	3878	113	8	2
93	23:52:39.944	Thread Group 1...	HTTP Request	6	✓	3878	113	6	2
94	23:52:40.029	Thread Group 1...	HTTP Request	6	✓	3878	113	6	2
95	23:52:40.156	Thread Group 1...	HTTP Request	6	✓	3878	113	6	2
96	23:52:40.250	Thread Group 1...	HTTP Request	6	✓	3878	113	6	2
97	23:52:40.359	Thread Group 1...	HTTP Request	5	✓	3878	113	5	1
98	23:52:40.452	Thread Group 1...	HTTP Request	11	✓	3878	113	11	2
99	23:52:40.546	Thread Group 1...	HTTP Request	7	✓	3878	113	7	3
100	23:52:40.655	Thread Group 1...	HTTP Request	7	✓	3878	113	6	2

☐ Scroll automatically? ☐ Child samples? No of Samples 100 Latest Sample 7 Average 6 Deviation 4

○

- SelectStudent gagal



Student not found

NPM = 999999

○

View Results in Table

Name: View Results in Table

Comments:

Write results to file / Read from file

Filename: ☐ Log/Display Only: ☐ Errors ☐ Successes

Sample #	Start Time	Thread Name	Label	Sample Time(m...)	Status	Bytes	Sent Bytes	Latency	Connect Time(...)
1	23:55:34.268	Thread Group 1...	HTTP Request	3		3878	113	3	1
2	23:55:34.381	Thread Group 1...	HTTP Request	2		3878	113	2	1
3	23:55:34.475	Thread Group 1...	HTTP Request	6		3878	113	6	2
4	23:55:34.585	Thread Group 1...	HTTP Request	6		3878	113	6	2
5	23:55:34.678	Thread Group 1...	HTTP Request	7		3878	113	7	3
6	23:55:34.787	Thread Group 1...	HTTP Request	6		3878	113	6	2
7	23:55:34.880	Thread Group 1...	HTTP Request	4		3878	113	4	1
8	23:55:34.974	Thread Group 1...	HTTP Request	6		3878	113	6	2
9	23:55:35.084	Thread Group 1...	HTTP Request	5		3878	113	5	1
10	23:55:35.177	Thread Group 1...	HTTP Request	12		3878	113	12	3
11	23:55:35.287	Thread Group 1...	HTTP Request	6		3878	113	6	2
12	23:55:35.374	Thread Group 1...	HTTP Request	7		3878	113	7	1
13	23:55:35.473	Thread Group 1...	HTTP Request	5		3878	113	5	2
14	23:55:35.573	Thread Group 1...	HTTP Request	6		3878	113	6	2
15	23:55:35.672	Thread Group 1...	HTTP Request	7		3878	113	7	2
16	23:55:35.772	Thread Group 1...	HTTP Request	7		3878	113	7	2
17	23:55:35.872	Thread Group 1...	HTTP Request	8		3878	113	6	2
18	23:55:35.972	Thread Group 1...	HTTP Request	5		3878	113	5	1
19	23:55:36.072	Thread Group 1...	HTTP Request	6		3878	113	6	2
20	23:55:36.172	Thread Group 1...	HTTP Request	7		3878	113	6	2
21	23:55:36.272	Thread Group 1...	HTTP Request	6		3878	113	6	2
22	23:55:36.375	Thread Group 1...	HTTP Request	10		3878	113	10	2
23	23:55:36.473	Thread Group 1...	HTTP Request	2		3878	113	2	0
24	23:55:36.573	Thread Group 1...	HTTP Request	6		3878	113	6	2
25	23:55:36.673	Thread Group 1...	HTTP Request	6		3878	113	6	2
26	23:55:36.774	Thread Group 1...	HTTP Request	5		3878	113	5	1

☐ Scroll automatically? ☐ Child samples? No of Samples 100 Latest Sample 5 Average 6 Deviation 2

○

○ SelectAllStudent

View Results in Table

Name: View Results in Table

Comments:

Write results to file / Read from file

Filenamehttp://localhost:8080/student/viewall

Browse...

Log/Display Only:

ErrorsSuccesses

Configure

Sample #	Start Time	Thread Name	Label	Sample Time(m...	Status	Bytes	Sent Bytes	Latency	Connect Time(...
75	23:57:13.111	Thread Group 1...	HTTP Request	6	<div></div>	3878	113	6	2
76	23:57:13.209	Thread Group 1...	HTTP Request	11	<div></div>	3878	113	11	3
77	23:57:13.314	Thread Group 1...	HTTP Request	7	<div></div>	3878	113	7	2
78	23:57:13.407	Thread Group 1...	HTTP Request	4	<div></div>	3878	113	4	1
79	23:57:13.517	Thread Group 1...	HTTP Request	6	<div></div>	3878	113	5	2
80	23:57:13.610	Thread Group 1...	HTTP Request	6	<div></div>	3878	113	6	2
81	23:57:13.704	Thread Group 1...	HTTP Request	6	<div></div>	3878	113	6	2
82	23:57:13.802	Thread Group 1...	HTTP Request	7	<div></div>	3878	113	7	2
83	23:57:13.902	Thread Group 1...	HTTP Request	4	<div></div>	3878	113	3	1
84	23:57:14.002	Thread Group 1...	HTTP Request	5	<div></div>	3878	113	5	2
85	23:57:14.102	Thread Group 1...	HTTP Request	6	<div></div>	3878	113	6	2
86	23:57:14.204	Thread Group 1...	HTTP Request	5	<div></div>	3878	113	5	1
87	23:57:14.306	Thread Group 1...	HTTP Request	6	<div></div>	3878	113	6	2
88	23:57:14.402	Thread Group 1...	HTTP Request	4	<div></div>	3878	113	4	2
89	23:57:14.503	Thread Group 1...	HTTP Request	7	<div></div>	3878	113	7	2
90	23:57:14.603	Thread Group 1...	HTTP Request	6	<div></div>	3878	113	6	2
91	23:57:14.719	Thread Group 1...	HTTP Request	14	<div></div>	3878	113	14	1
92	23:57:14.802	Thread Group 1...	HTTP Request	4	<div></div>	3878	113	4	1
93	23:57:14.902	Thread Group 1...	HTTP Request	2	<div></div>	3878	113	2	1
94	23:57:15.002	Thread Group 1...	HTTP Request	2	<div></div>	3878	113	2	1
95	23:57:15.102	Thread Group 1...	HTTP Request	2	<div></div>	3878	113	2	0
96	23:57:15.202	Thread Group 1...	HTTP Request	3	<div></div>	3878	113	3	1
97	23:57:15.302	Thread Group 1...	HTTP Request	2	<div></div>	3878	113	2	1
98	23:57:15.420	Thread Group 1...	HTTP Request	8	<div></div>	3878	113	8	2
99	23:57:15.502	Thread Group 1...	HTTP Request	4	<div></div>	3878	113	4	1
100	23:57:15.603	Thread Group 1...	HTTP Request	5	<div></div>	3878	113	5	1

Scroll automatically?Child samples?

No of Samples 100

Latest Sample 5

Average 5

Deviation 3