

1. Mengapa perlu menginisiasi object PilotModel, sedangkan yang di test hanya FlightModel?  
Karena ada atribut Pilot yang dipakai sehingga dibutuhkan object dari PilotModel
2. Jelaskan apa yang akan terjadi jika object PilotModel dihapus dan tidak dilakukan setPilot pada FlightModel?  
Akan muncul error, karena ada constraint pada database yang tidak memperbolehkan licenseNumber bernilai null. licenseNumber pada FlightModel ada dan dihubungkan oleh pilotModel.
3. Jelaskan apa yang dilakukan oleh code  

```
Mockito.when(flightDb.findByFlightNumber(flight.get().getFlightNumber())).thenReturn(flight);
```

  
Mengkonfigurasi supaya Mocek mereturn object flight ketika method findByFlightNumber() dipanggil
4. Jelaskan apa yang dilakukan oleh code  

```
Mockito.when(flightService.getFlightDetailByFlightNumber(flight.get().getFlightNumber())).thenReturn(flight);
```

  
Mengkonfigurasi agar Mock mereturn object flight ketika method getFlightByFlightNumber() dipanggil
5. Jelaskan apa yang ditest oleh code  

```
.andExpect(MockMvcResultMatchers.status().isOk())
```

  
Memeriksa response status http yang diterima adalah OK
6. Jelaskan apa yang ditest oleh code  

```
.andExpect(MockMvcResultMatchers.jsonPath("$.flightNumber", Matchers.is(flight.get().getFlightNumber())));
```

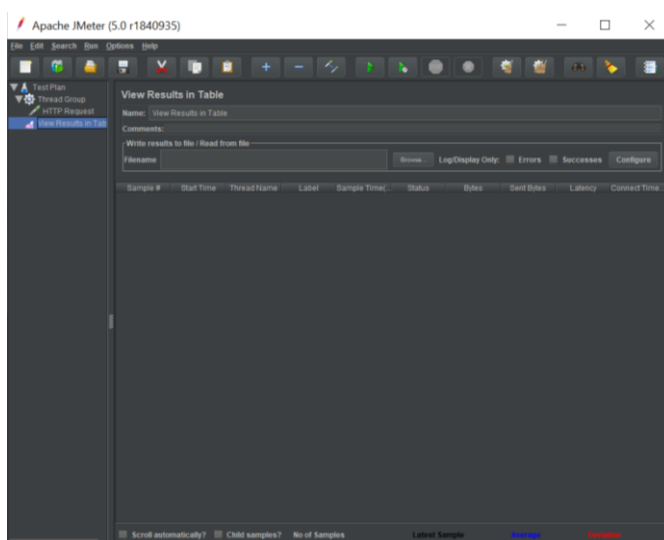
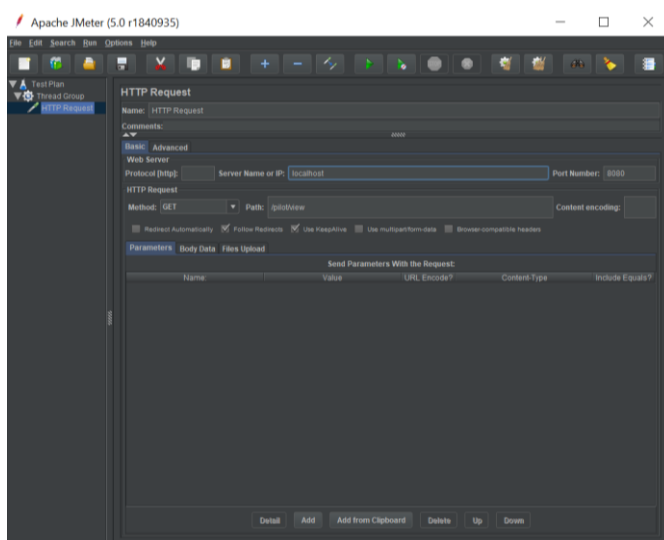
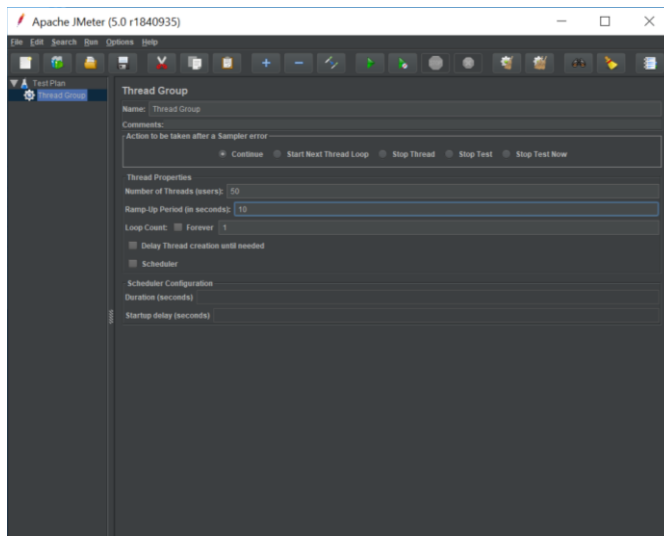
  
Memeriksa apakah flightNumber saat melakukan view flight cocok dengan flightNumber dari object flight (json berfungsi untuk mengambil bagian json yang diperlukan)
7. Jelaskan anotasi @ResponseBody yang ada pada route “/flight/view”  

```
@RequestMapping(value = "/flight/view", method = RequestMethod.GET)
private @ResponseBody FlightModel view(@RequestParam(value = "flightNumber") String flightNumber, Model model) {
    FlightModel archive = flightService.getFlightDetailByFlightNumber(flightNumber).get();
    return archive;
}
```

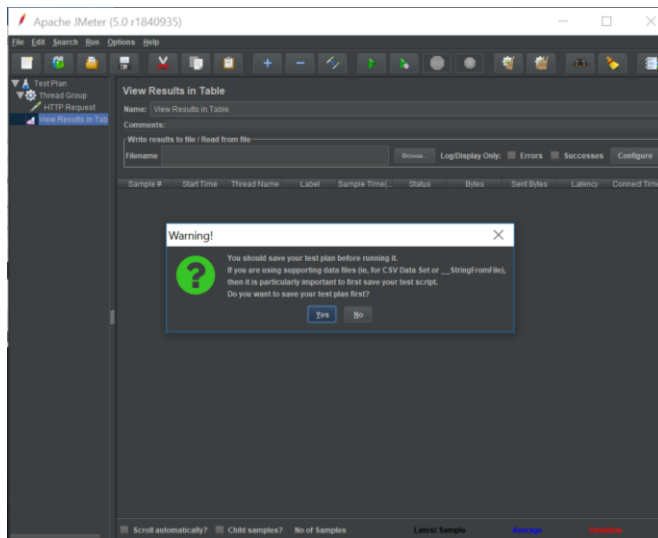
  
Anotasi tersebut berfungsi untuk memberitahu controller bahwa object yang direturn sudah otomatis diterjemahkan ke json dan dikirim kembali menjadi object httpresponse.

### Menjalankan testing pada Spring Boot

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Sample #	Start Time	Thread Name	Label	Sample Time	Status	Bytes	Sent Bytes	Latency	Connect Time
19	21:15:15.089	Thread Group	HTTP Request	2009	Success	2741	0	0	2004
20	21:15:15.263	Thread Group	HTTP Request	2004	Success	2741	0	0	2003
21	21:15:15.432	Thread Group	HTTP Request	2006	Success	2741	0	0	2005
22	21:15:15.582	Thread Group	HTTP Request	2004	Success	2741	0	0	2004
23	21:15:15.880	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
24	21:15:16.054	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
25	21:15:16.268	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
26	21:15:16.489	Thread Group	HTTP Request	2004	Success	2741	0	0	2004
27	21:15:16.714	Thread Group	HTTP Request	2002	Success	2741	0	0	2002
28	21:15:16.891	Thread Group	HTTP Request	2004	Success	2741	0	0	2004
29	21:15:17.065	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
30	21:15:17.295	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
31	21:15:17.484	Thread Group	HTTP Request	2012	Success	2741	0	0	2012
32	21:15:17.713	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
33	21:15:17.891	Thread Group	HTTP Request	2003	Success	2741	0	0	2003
34	21:15:18.065	Thread Group	HTTP Request	2007	Success	2741	0	0	2007
35	21:15:18.295	Thread Group	HTTP Request	2007	Success	2741	0	0	2007
36	21:15:18.514	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
37	21:15:18.716	Thread Group	HTTP Request	2004	Success	2741	0	0	2004
38	21:15:18.913	Thread Group	HTTP Request	2003	Success	2741	0	0	2003
39	21:15:19.090	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
40	21:15:19.293	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
41	21:15:19.515	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
42	21:15:19.682	Thread Group	HTTP Request	2003	Success	2741	0	0	2003
43	21:15:19.889	Thread Group	HTTP Request	2003	Success	2741	0	0	2003
44	21:15:20.115	Thread Group	HTTP Request	2005	Success	2741	0	0	2005
45	21:15:20.315	Thread Group	HTTP Request	2003	Success	2741	0	0	2003
46	21:15:20.493	Thread Group	HTTP Request	2007	Success	2741	0	0	2007
47	21:15:20.714	Thread Group	HTTP Request	2002	Success	2741	0	0	2002
48	21:15:20.891	Thread Group	HTTP Request	2003	Success	2741	0	0	2003
49	21:15:21.093	Thread Group	HTTP Request	2006	Success	2741	0	0	2006
50	21:15:21.284	Thread Group	HTTP Request	2007	Success	2741	0	0	2007

HTTP Request

Name: HTTP Request

Comments:

Basic Advanced

Web Server

Protocol (http): Server Name or IP: localhost Port Number: 8080

HTTP Request

Method: GET Path: /api/view Content encoding:

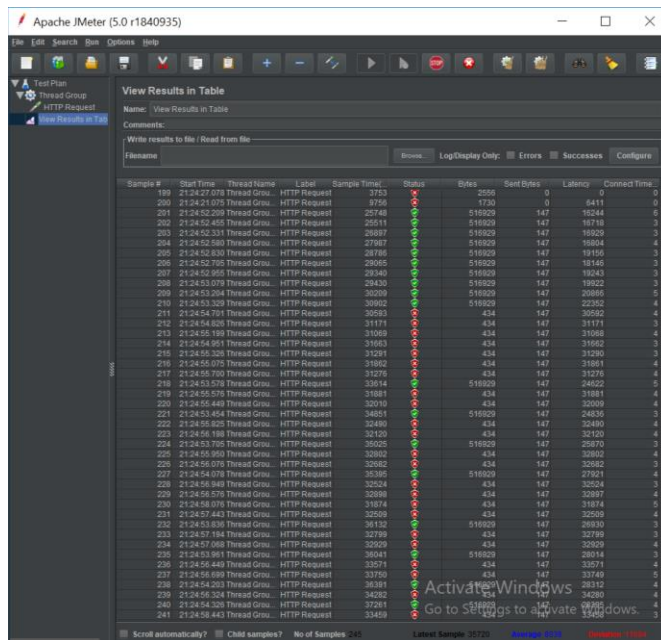
Parameters Body Data Files Upload

Seed Parameters With the Request:

Name	Value	URL Encode?	Content-Type	Include Equals?
pageNumber	1234	<input checked="" type="checkbox"/>	text/plain	<input checked="" type="checkbox"/>

Detail Add Add from Clipboard Delete Up Down

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Apache JMeter (5.0 r1840935)

View Results in Table

Name: View Results in Table

Comments:

Write results to file / Read from file:

Filename: Browse Log/Display Only: Errors Successes Configure

Sample #	Start Time	Thread Name	Label	Sample Time	Status	Bytes	Sent Bytes	Latency	Connected Time
189	21:24:27.078	Thread Group	HTTP Request	3753	✖	2555	0	0	0
200	21:24:21.075	Thread Group	HTTP Request	9795	✔	9730	0	6411	0
201	21:24:52.209	Thread Group	HTTP Request	27740	✔	518029	147	15244	5
202	21:24:52.455	Thread Group	HTTP Request	25511	✔	518029	147	16718	3
203	21:24:52.331	Thread Group	HTTP Request	28037	✔	518029	147	16828	3
204	21:24:52.580	Thread Group	HTTP Request	27987	✔	518029	147	16804	4
205	21:24:52.830	Thread Group	HTTP Request	28786	✔	518029	147	19156	3
206	21:24:52.795	Thread Group	HTTP Request	28055	✔	518029	147	18146	3
207	21:24:52.855	Thread Group	HTTP Request	28340	✔	518029	147	18243	3
208	21:24:53.079	Thread Group	HTTP Request	29430	✔	518029	147	19822	3
209	21:24:53.044	Thread Group	HTTP Request	30208	✔	518029	147	20886	5
210	21:24:53.329	Thread Group	HTTP Request	30902	✔	518029	147	22382	4
211	21:24:54.091	Thread Group	HTTP Request	26593	✔	434	147	36592	4
212	21:24:54.620	Thread Group	HTTP Request	31171	✔	434	147	31171	3
213	21:24:55.189	Thread Group	HTTP Request	31089	✔	434	147	31088	4
214	21:24:54.851	Thread Group	HTTP Request	31663	✔	434	147	31662	3
215	21:24:55.320	Thread Group	HTTP Request	31291	✔	434	147	31290	3
216	21:24:55.075	Thread Group	HTTP Request	31862	✔	434	147	31861	4
217	21:24:55.790	Thread Group	HTTP Request	31276	✔	434	147	31276	4
218	21:24:53.578	Thread Group	HTTP Request	33614	✔	518029	147	24022	5
219	21:24:55.576	Thread Group	HTTP Request	31881	✔	434	147	31881	4
220	21:24:55.449	Thread Group	HTTP Request	32010	✔	434	147	32009	4
221	21:24:53.454	Thread Group	HTTP Request	34851	✔	518029	147	24836	3
222	21:24:56.820	Thread Group	HTTP Request	32490	✔	434	147	32490	4
223	21:24:56.188	Thread Group	HTTP Request	32120	✔	434	147	32120	4
224	21:24:53.785	Thread Group	HTTP Request	35025	✔	518029	147	25870	3
225	21:24:55.980	Thread Group	HTTP Request	32863	✔	434	147	32862	4
226	21:24:56.076	Thread Group	HTTP Request	32682	✔	434	147	32682	3
227	21:24:54.078	Thread Group	HTTP Request	25395	✔	518029	147	27821	4
228	21:24:56.949	Thread Group	HTTP Request	32524	✔	434	147	32524	4
229	21:24:56.576	Thread Group	HTTP Request	32888	✔	434	147	32887	4
230	21:24:56.076	Thread Group	HTTP Request	31874	✔	434	147	31874	5
231	21:24:57.443	Thread Group	HTTP Request	32508	✔	434	147	32508	4
232	21:24:53.636	Thread Group	HTTP Request	34132	✔	518029	147	28930	3
233	21:24:57.184	Thread Group	HTTP Request	32789	✔	434	147	32789	3
234	21:24:57.068	Thread Group	HTTP Request	32929	✔	434	147	32929	4
235	21:24:53.981	Thread Group	HTTP Request	28241	✔	518029	147	28814	3
236	21:24:56.449	Thread Group	HTTP Request	33571	✔	434	147	33571	4
237	21:24:56.689	Thread Group	HTTP Request	33750	✔	434	147	33749	5
238	21:24:54.030	Thread Group	HTTP Request	36391	✔	518029	147	28312	4
239	21:24:56.324	Thread Group	HTTP Request	34282	✔	434	147	34280	4
240	21:24:54.328	Thread Group	HTTP Request	37281	✔	434	147	37280	4
241	21:24:56.443	Thread Group	HTTP Request	33458	✔	434	147	33458	3

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Status hijau menandakan tes yang berhasil, dan status merah menandakan tes yang gagal. Tes gagal disebabkan karena performa komputer yang kurang memadai untuk jumlah percobaan yang dilakukan.